8th

CBIBM

2023

SCHEDULE OF PRESENTATIONS

SESSION 1

Session: 1 (A) Date 06-12-2023 Time: 9:00 – 10:30 Room No. Committee Room Session Chair: Dr. Farah Naz & Mrs. Tahreem Sadiq Economics and Accounting & Finance Room Coordinator: Dr. Muhammad Usman			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Ayesha Akhtar	University of Central Punjab, Lahore	Key-Driving Factors of Return Reversal Effect: Evidence from Pakistan Stock Exchange (PSX)
2	Muhammad Hammad	University of Central Punjab, Lahore	Impact of SUKUK Issuances and Corporate Social Sustainability on Stock Price Crash Risk
3	Dr. Farah Naz Sumiya Tahir	Kinnaird College for Women University, Lahore	The Nexus of Fiscal Leverage and Technological Advancements: A Pinnacle Exploration into Shaping Corporate Investment Paradigms
4	Dr. Farah Naz Abeeha Waqas	Kinnaird College for Women University, Lahore	Driving Financial Excellence: A Thorough Analysis of How Bank- Specific Factors Influence GCC Banks Performance
5	Maryum Asif Khan	Kinnaird College for Women University, Lahore	Navigating the Fintech Landscapes in Pakistan: Analyzing the Influence of Data Security, Social Media, Customer Trust, Mobile Penetration, and Financial Literacy on Fintech Adoption with Fintech Promotion as a Mediator

Session: 1 (B) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 43 Session Chair: Dr. Talat Islam & Mr. M. Idrees Marketing and Management Room Coordinator: Dr. Samar Rahi			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Dr. Raja Irfan Sabir Maryam Ansar Sundus Riaz	University of Central Punjab, Lahore	Product Placement and Sponsorship Leading towards Aggressive Buying Behavior and Conspicuous Consumption: Mediating Role of Compulsive Buying Disorder
2	Zobia Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Examining the Impact of Corporate Social Responsibility towards Corporate Image and Sustainable Purchase Intention
3	Afra Zafar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Brand Heritage and Experiential Marketing on Customer Loyalty: Mediating Role of Brand Equity
4	Fazeela Shabbir	Hailey College of Banking & Finance, University of the Punjab, Lahore	Understanding Factors Influence Consumer Attitude to Use Drone Enabled Food Serving Restaurants
5	Rimsha Waheed	Hailey College of Banking & Finance, University of the Punjab, Lahore	Comparative Study on Personality Traits, Emotional Regulation and Psychological Distress in Psychology and Medical Students

Session: 1 (C) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 44 Session Chair: Dr. Naveed ul Hassan & Dr. Samar Rahi Marketing and Management Room Coordinator: Mr. Muhammad Idrees			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**

1	Zaib Nazar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Social Media Influencers on Impulse Buying Behavior as Mediating Role of Para-Social Relationship
2	Muhammad Masood	Hailey College of Banking & Finance, University of the Punjab, Lahore	How Brand Image and Social Media Marketing Activities Affect Customer Loyalty through Customer Satisfaction
3	Muhammad Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Factors Effects Online Shopping Intention of Customers
4	Rabia Ishfaq	Hailey College of Banking & Finance, University of the Punjab, Lahore	of Team Conflicts on Perceived Team Performance: The Moderating Role of Task Complexity
5	Areeb Nisar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Social Media and International Business Model: View and Conceptual Framing

Session: 1 (D) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 45 **Session Chair: Dr. Hassnain Abbas Naqvi & Mr. Asad Ejaz** **Finance** **Room Coordinator: Mr. Iftikhar Ahmed**			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**

1	Aiza Butt	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Financial Inclusion on Disposable Income: The Moderating Role of Financial Literacy
2	Talmeez Fatima	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Cultural Intelligence on Cross-Cultural Team Building in Multinational Organizations
3	Simra Zubair	Hailey College of Banking & Finance, University of the Punjab, Lahore	Socio-Economic Determinants of Environmental Degradation: A Panel Study of SAARC Countries
4	Khurram Shahzad	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Capital Structure and Working Capital Management on the Financial Performance of Selected Non-Financial Firms in Pakistan
5	Riffat Sabir	Hailey College of Banking & Finance, University of the Punjab, Lahore	Big Data Analytics and Firm Performance: A Moderated - Mediated Model
6	Komal Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	ESG Unveiled: Enhancing Financial Performance in Investment Portfolios

Session: 1 (E) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 06
Session Chair: Dr Farhan Sarwar & Dr. Waqas Baig
Management
Room Coordinator: Dr. Bilal Ahmed

SR#	Presenter's Name	Institute	Title of the Paper
1	Fatima Tul Zahra	Lahore School of Aviation, University of the Lahore,	Elevating Tourism: The Impact of Air Transport Performance on Tourist Arrivals in Leading Destinations

		Lahore	
2	Alishba	Hailey College of Banking & Finance, University of the Punjab, Lahore	Usage of Artificial Intelligence (AI) Influence Students Engagement: The Mediating Role of User Satisfaction and Cognitive Absorption
3	Muhammad Umar	Jamia Darul Uloom Al Islamia	Exploring the Impact of Religiosity on Management and Organizational Behavior: An In-depth Analysis
4	Omer Ali	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Job Stress on Employee Performance Mediating Role of Employee Motivation and Moderating Role of Organization Commitment: A Study of National School of Public Policy (NSPP) of Pakistan
5	Abdul Hannan Anwar Muhammad Naeem Riaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Servant Leadership on Project Success

Session: 1 (F) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 07 Session Chair: Dr Adnan Sial & Dr. Affaf Marketing Room Coordinator: Dr. Waqas Baig			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Aqsa Talib	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigation the Impact of Service Quality on Customer Satisfaction through Customer Loyalty. A Conceptual Model.

2	Gohar Fatima	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Green Marketing Strategies on Consumers' Purchase Intention in Addressing Greenwashing
3	Sania Nadeem	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Visual Reviews on Consumers' Purchase Intention: Evidence from Daraz.pk
4	Abdullah Shafiq	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring the Dynamics of Customer Loyalty: Unravelling the Influence of Performance Expectancy, Effort Expectancy, and ECRM with Customer Satisfaction as a Mediator and Hedonic Motivation as a Moderator
5	Adeel Humayoun Aqsa Ashraf	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Green Brand Image on Customers' Green Loyalty: The Mediating Role of Customers' Green Trust in the Pakistani Baking Industry

Session: 1 (G) Date 06-12-2023 Time: 9:00 – 10:30 Room No. Lecture Theatre
Session Chair: Dr. Binish Mughal & Dr. Siddique
Entrepreneurship & Management
Room Coordinator: Ms. Fareeha Waseem

SR#	Presenter's Name	Institute	Title of the Paper
1	Sumbal Idrees Malik	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Rich on Entrepreneurial Exit Intentions through Perceived Barriers: The Moderating Role of Gender – (A Conceptual Paper)

2	Sadia Saleem	Hailey College of Banking & Finance, University of the Punjab, Lahore	Mediating Role of Confidence and Risk Taking Propensity between Financial Knowledge and Entrepreneurial Intention in Public Sector Business Students of Pakistan
3	Noor Fatima	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Women Empowerment on Entrepreneurship
4	Rameen Nafees	Hailey College of Banking & Finance, University of the Punjab, Lahore	Factors Affecting Women Entrepreneurship: A Study of Impact of Women Entrepreneurship and Labor Force Participation on Economic Development of Pakistan
5	Salman Shahzad	Hailey College of Banking & Finance, University of the Punjab, Lahore	Measuring the impact of human Resource development (HRD) practices on employees performance

Session: 1 (H) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 39
Session Chair: Dr. Unbreen Arif
Banking
Room Coordinator: Dr. Usman Sarwar

SR#	Presenter's Name	Institute	Title of the Paper
1	Iqra Yawar Bushra Akhtar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Does Career Resilience Promote Work Engagement through Work-Family Enrichment and Career Shocks in the Banking Sector of Pakistan?
2	Mehnaz Liaqat	Hailey College of Banking & Finance, University of the Punjab, Lahore	Factors Influencing User Satisfaction to Continue Use of M-Commerce: Extension of Expectation Confirmation Model

3	Muhammad Adnan Riaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Deposit Money over Banking Performance
4	Muqadas Manzoor Fiza Mughal	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Mobile Banking on the Adoption of New and Innovative Mobile Applications and Service Delivery Methods
5	Mahad Sheraz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring the Influence of Workforce Diversity on Employee Performance; A Study on Banking Sector of Pakistan
6	Dr. Unbreen Arif	University of Education, Lahore	Role of Environment, Social & Governance (ESG) Factors in optimal investment Decisions

Session: 1 (I) Date 06-12-2023 Time: 9:00 – 10:30 Room No. 42
Session Chair: Dr. Muhammad Usman
Accounting and Finance
Room Coordinator: Dr. Zargham Ullah Khan

SR#	Presenter's Name	Institute	Title of the Paper
1	Chen Anqi	East China Jiaotong University	Digital Technology Innovation, Market Value and Total Factor Productivity: An Empirical Study of Listed Companies in China
2	XuJiayu	East China Jiaotong University	Analysis of the new audit report's effects on Chinese corporate risk-taking
3	Huo Mengmin	East China Jiaotong University	Auditors' Great Famine Experience and Stock Price Crash Risk

4	Wang Jinlin	East China Jiaotong University	Has the New Audit Report Reduced Agency Costs?
5	Xu Feixiang	East China Jiaotong University	The Influence of Family Cultural Capital on Depression Tendency of College Student

SESSION 2

Session: 2 (A) Date 06-12-2023 Time: 11:00 – 12:30 Room No. New Committee Room
Session Chair: Dr. Usman Sarwar & Dr. Zia-ur-Rehman Rao
Economics and Finance
Room Coordinator: Mr. Asad Ejaz Sheikh

SR#	Presenter's Name	Institute	Title of the Paper
1	Saad Bin Ahad	Lahore school of Aviation, University of Lahore, Lahore	Analyzing the Nexus: Air Transport Performance, Economic Factors, and Foreign Direct Investment in SAARC Countries (1995-2022)
2	Ume Rubab	Lahore school of Aviation, University of Lahore, Lahore	Assessing the Relationship Between Air Transport Performance and Trade Dynamics in Developing Economies
3	Muhammad Sohail Javed	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring the Non-Linear Impact of Money Market Rate on the Profitability of Banks

4	Fariha Ishtiaq Arooj Alvi	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Dynamic Linkage between Information and Communication Technology, Human Development Index, and Economic Growth
5	Muneeza Iqbal	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Role of Individual Investor Behaviors on Financial Decision Making: Moderating Role of Emotions
6	Muhammad Zulqarnain	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigate the Impact of Sustainable Practices on Consumer Purchasing Decisions with Mediating Role of Consumer Trust: Evidence from The E Commerce Industry

Session: 2 (B) Date 06-12-2023 Time: 11:00 – 12:30 Room No. Committee Room Session Chair: Dr. Muhammad Sajid Organizational Behavior Room Coordinator: Mr. Asad Ejaz Sheikh			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Waseem Sajjad		The Effect of Unstable Job on Employees Turnover Intention
2	Taseer Fatima	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Training and Development on Organizational performance: A Study on Old Age Employees
3	Amina Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Influence of Role Conflict on Turnover Intention: The Mediating Role of Work Related Stress and Moderating Role of Career Growth
4	Nimra Younas	Hailey College of Banking & Finance, University of the Punjab, Lahore	Sustainability Champions: The Impact of Eco-Centric Leadership and Perceived Organizational Support towards the Environment on Fostering Employees Green Behaviors
5	Muhammad Bilal		Factors that Influence Employees Creativity within the Organization

Session: 2 (C) Date 06-12-2023 Time: 11:00 – 12:30 Room No. 44
Session Chair: Dr. Adnan Hushmat
Management & Sustainability
Room Coordinator: Mr. Muhammad Idrees

SR#	Presenter's Name	Institute	Title of the Paper
1	Ayesha Noor	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigation the Role of Influencers towards Millennial Gen ZE Entrepreneurial Intentions
2	Adia Tallat	Lahore Business School, The University of Lahore, Lahore	From Values to Action: Understanding Pro-environmental Behavior and Energy Saving in Organizations Facing an Energy Crisis
3	Rabbia Zaheer Fatima Majid	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Role of Green Intellectual Capital in Increasing Business Sustainability with the Help of Adaptive Cycle
4	Zia Ur Rehman	Hailey College of Banking & Finance, University of the Punjab, Lahore	Relationship between AI and Loan Facilities to Women with the Moderating Role of International Policies
5	Muhammad Hassaan Ibrar Khan	Hailey College of Banking & Finance, University of the Punjab, Lahore	Adoption of Electric Vehicles in Pakistan
6	Ayesha Noor aslam	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the role of influencers towards Millennial and generation Z e-entrepreneurial intention

Session: 2 (D) Date: 06-12-2023 Time: 11:00 – 12:30 Room No. 45
Session Chair: Dr. Bilal Ahmed
Management & Innovation
Room Coordinator: Mr. Iftikhar Ahmed

SR#	Presenter's Name	Institute	Title of the Paper
1	Zunaira Aleem	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigate the Career Counselling Factors Effecting Career Choices: A Conceptual Model
2	Abdullah Hassan	Hailey College of Banking & Finance, University of the Punjab, Lahore	Adoption of Electric Vehicle
3	Komal Arif	Hailey College of Banking & Finance, University of the Punjab, Lahore	Family Incivility and Employee Thriving: A Moderated Mediated Model Psychological Distress and Cross Self-evaluation.
4	Dr. Bashir Ahmad	Business School, Government College University Faisalabad	An Empirical Study on the Linkages between Income Inequality, Co2 Emissions and Innovation
5	Divesh Kataria	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring Factors Influencing Online Learning by Virtue / Owing to Social Distancing

Session: 2 (E) Date: 06-12-2023 Time: 11:00 – 12:30 Room No. 06
Session Chair: Dr. Talha Zubair Ahmad Khan
Marketing
Room Coordinator: Dr. Bilal Ahmed

SR#	Presenter's Name	Institute	Title of the Paper

1	Zeeshan Mushtaq	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Effect of Pester Power on Parent's Buying Intention: A Focus on the Toy Industry in Pakistan
2	Iqra Saleem	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Green Marketing Components on Purchase Intention: The Mediating Role of Brand Image
3	Muhammad Subhan	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Green Marketing on Environmental Effect with Moderating Role of Value Creation
4	Areej Shaukat Aniqa Sheraz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Unravelling the Threads: Impact of Social Media Influencers on Pakistan's Youth (Generation Z) Buying Behaviour and Lifestyle
5	Sameen Shiraz Khan	Hailey College of Banking & Finance, University of the Punjab, Lahore	Social Media Marketing, Customer Purchase Intention, Trust on Influencers Posts.

Session: 2 (F) Date 06-12-2023 Time: 11:00 – 12:30 Room No. 07 Session Chair: Dr. Aqeel Ahmed & Dr. Zargham Ullah Khan Organizational Behavior Room Coordinator: Dr. Waqas Baig			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**

1	Khadija	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Transformational Leadership on Employee Loyalty in Private Sector. The Role of Reward and Work Performance: A Conceptual Model
2	Zuha Abdul Wahid	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring the Nexus: The Interplay Role of Leader-Member Exchange, Organizational Embeddedness, Job Organizational Satisfaction and Organization Performance: A Conceptual Model
3	Syed Anwar Husain Naqvi	Hailey College of Banking & Finance, University of the Punjab, Lahore	Banking Leadership: Impact of Transformational Leadership on Employee's Performance: Mediated by Motivation and a Work Environment
4	Mayram Mubashar	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Mediating Role of Employee Burnout: Work-Life Balance and Employee Wellbeing in the Banking Sector
5	Qandeel Mehndi	University of the Punjab	Measuring the Impact of Inclusive Leadership in Fostering an Environment that Maximizes the Positive Impact of Workplace Diversity on Team Performance

Session: 2 (G) Date 06-12-2023 Time: 11:00 – 12:30 Room No. Lecture Theatre
Session Chair: Dr. Farah Naz Naqvi & Dr. Ghulam Abid
Marketing
Room Coordinator: Ms. Fareeha Waseem

SR#	Presenter's Name	Institute	Title of the Paper
1	Hira Sarfraz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Customer Retail Experience on Customer Satisfaction

2	Uzair Bin Siddique	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Social Media Marketing on Customer Purchase Intention through Trust
3	Adil Zubair	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Online Retail Experience on Customer Satisfaction
4	Nabeela Noor	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Service Quality on Customer Loyalty through the Mediating Role of Customer Satisfaction: A Study of Online Shopping from Pakistani Women Clothing Brands
5	Sadia Younis	Hailey College of Banking & Finance, University of the Punjab, Lahore	Blue Finance in Pakistan: Exploring Opportunities, Combating Challenges, and Addressing Urgency

Session: 2 (H) Date 06-12-2023 Time: 11:00 – 12:30 Room No. 39
Session Chair: Dr. Hassan Danish & Dr. Muhammad Gulzar
Insurance & Finance
Room Coordinator: Dr. Usman Sarwar

SR#	Presenter's Name	Institute	Title of the Paper
1	Mehran Ahmad	Hailey College of Banking & Finance, University of the Punjab, Lahore	Consumer Acceptance toward Takaful and Conventional Insurance in Lahore City of Pakistan: An Application of Diffusion of Innovation Theory

2	Sayyed Muhammad Bilal Madeeha Rauf Dr. Shrafat Ali Sair Dr. Saeed Ahmad Sabir Dr. Muhammad Sabeeh Iqbal	Economic Department, National University of Modern Languages, Multan National College of Business Administration & Economics, Lahore Hailey College of Commerce, University of the Punjab, Lahore	A Quantitative Examination of the Variables Influencing the Selling Price of Opulent Residences in Vietnam
3	Muhammad Raza Zafar, Muhammad Hasnain Ali	Bahauddin Zakariya University, Multan	Assessment of Retail Investors Behaviour through Mediating Effect of Financial Literacy and Moderating Effect of Risk Tolerance
4	Dr Shaheera Amin Dr Aamir Sohail Muhammad Hasnain Ali	University of Sahiwal Thal University Bhakkar Bahauddin Zakariya University Multan	The Role of Business Analytics Capabilities in Bolstering Firms' Agility and Performance: A Study from Manufacturing Industries of Pakistan
5	Dr Shaheera Amin Muhammad Hasnain Ali Muhammad Raza Zafar Dr. Rao Zia-ur-rehman	University of Sahiwal Bahauddin Zakariya University Multan University of Education, Lahore	The Adoption of Blockchain Technology on Supply Chain Finance to Better Organizational Performance: Pakistan Industrial Sector Context

ONLINE SESSIONS

Session: 2 (I) Date 06-12-2023 Time: 11:00 – 12:30 Room No. 42 Session Chair: Ms. Fareeha Waseem Economics and Finance Room Coordinator: Dr. Zargham Ullah Khan			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Faisal Hanif Tayyaba Jameel	Capital University of Science and Technology, Islamabad.	Ethical Leadership and Employee Creativity: Mediating Role of Psychological Empowerment and Moderating Role of Creative Self Efficacy
2	Deng Shiliang	East china Jiaotong University	Do Key Audit Matters Promote Innovation in Listed Companies?
3	Li Danfeng	East China Jiaotong University	EVA Assessment, Institutional Environment and Audit Quality

4	Li Xinrui	East China Jiaotong University	Does Communication of Critical Audit Matters in the Audit Report Inhibit Corporate Tax Avoidance Evidence from China
5	Dr Swati Jain	University of Allahabad, India	Infrastructure Financing Gaps and SDGs in South Asia

Session: 2 (J) Date 06-12-2023 Time: 11:00 – 12:30 Room No. 43
Session Chair: Mrs. Sadia Ahmed & Mr. Iftikhar Ahmed
Economics and Finance
Room Coordinator: Dr. Samar Rahi

SR#	Presenter's Name	Institute	Title of the Paper
1	Qin Yuting	East China Jiaotong University	Audit Report Mode Reconstruction and Stock Price Crash Risk-1
2	Wang Tian	East China Jiaotong University	Enterprise Digital Transformation and Systemic Risk
3	Syed Bilal Shah	Institute of Management Studies, University of Peshawar	Charting a Sustainable Course through Financial Storms: The Transformative Role of CSER in Global Crisis Management
4	Muhammad Murtaza	Kohat University of Science and Technology, Kohat	The Impact of Corporate Governance on Dividend Payouts: New Evidence from Dynamic Common Correlation under Generalized Method of Moments

SESSION 3

Session: 3 (A) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 42
Session Chair: Dr. Fouzia Hadi Ali
Management
Room Coordinator: Dr. Zargham Ullah Khan

SR#	Presenter's Name	Institute	Title of the Paper
1	Iraj Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Evaluation of Digital Social Responsibility and Green Purchase Intention: Mediating Role of Green Trust and Green Purchase Value
2	Bisma Sajjad Amna Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Nexus of Workplace Gossip, Task Interdependence and Organizational Culture: Unraveling the Threads Impacting Task Performance
3	Aaima Ramzan	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Remote Working on Part-Time Employees' Productivity through Social Support: The role of Technology Literacy
4	Maryam Hamid	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Social Media on Business Performance

5	Abeer Paracha	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Business Intelligence on Perceived Firm Performance

Session: 3 (B) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 43 Session Chair: Dr. Syed Nauman Ahmed Organizational Behavior Room Coordinator: Dr. Samar Rahi			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Hiba Ali	Hailey College of Banking & Finance, University of the Punjab, Lahore	Unveiling the Nexus of Ethical Leadership: The Mediating Role of Moral Awareness and the Moderating Influence of Moral Decision Making.
2	Yusra Shukrallah	Hailey College of Banking & Finance, University of the Punjab, Lahore	Work-Life Balance and its Influence on Career Development among Women Bankers: The Mediating Role of Creativity and Moderating Effect of Family Support: A Conceptual Study
3	Noor Fatima	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Team Leadership Inclusiveness on Taking Charge by the Team Members: The Mediating Role of Thriving at Work and the Moderating Role of Regulatory Focus
4	Abdul Rahim Butt	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Work-Family Benefits on Job Satisfaction and Employees' Productivity
5	Salwa Saleem	Hailey College of Banking & Finance, University of the Punjab, Lahore	Determination of Job Satisfaction Through Ambidextrous Leadership

Session: 3 (C) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 44 Session Chair: Dr. Majid Ali Marketing Room Coordinator: Mr. Muhammad Idrees			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Talal Hassan	Hailey College of Banking & Finance, University of the Punjab, Lahore	A Study Which is Conducted on Daraz, Pakistan that Determine the Importance of Electronic Word of Mouth in Building both Brand Trust and Brand Attitude
2	Dr.Muhammad Usman Hajra Bibi	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring the Impact of Food Quality and Price/Value on Consumer Behavioral Intensions Mediating the Role of Customer Satisfaction: A Case Study of FoodPanda
3	Aqsa Ashraf Dr. Muhammad Usman	Hailey College of Banking & Finance, University of the Punjab, Lahore	A Study on the Variables Influencing the Intention to Continue Using Mobile Payment Services with the Mediating Role of Customer Attitude in Pakistan
4	Syeda Huma Noor Fatima Kausar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigating the Impact of Environmental Corporate Social Responsibility on Customer Engagement through Green Purchase Intentions in Local Food Chains of Pakistan: A Conceptual Study
5	Zain Mehmood	Hailey College of Banking & Finance, University of the Punjab, Lahore	Customer's Satisfaction after Adoption of Islamic Banking System by Faysal Bank Limited

Session: 3 (D) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 45
Session Chair: Dr. Ramzan & Mrs. Anam Masood
Organizational Behavior
Room Coordinator: Mr. Iftikhar Ahmed

SR#	Presenter's Name	Institute	Title of the Paper
1	Noor Fatima	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Leadership Styles on Employee Performance: A Moderating Role of Employee Resilience
2	Hiba Shuaib Alina Shahbaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Training and Development on Employees Performance and Productivity through Employee Engagement: A Case Study of Packages Limited Lahore City, Punjab, Pakistan
3	Sidra Arif	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Relation of Work-Life Conflict and Employee Performance: A Research Study on Hospitality Employees
4	Alisha	Hailey College of Banking & Finance, University of the Punjab, Lahore	Investigate the Impact of Leadership Styles on Young Employee Turnover in Departmental Stores: The Moderating role of Motivation and Organizational Commitment (A Conceptual Study)
5	Bilal Malik	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Leader Inclusiveness on Taking Charge: The Moderating Role of Regulatory Focus on Employee

Session: 3 (E) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 06
Session Chair: Dr. Tehmina Fiaz Qazi & Dr. Sharafat Sair
Management
Room Coordinator: Dr. Bilal Ahmed

SR#	Presenter's Name	Institute	Title of the Paper
1	Muzammil Ismail	Hailey College of Banking & Finance, University of the Punjab, Lahore	Policy Adherence Assessment of Affiliated Colleges in Pakistan: A Comprehensive Study
2	Fareeha Waseem	Hailey College of Banking & Finance, University of the Punjab, Lahore	Automation and Artificial Intelligence's Effects on the Cognitive Abilities of White-Collar Employees
3	Sehrish Umer	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Adoption of Technology and Productivity Impact on the Performance of the Textile Industry: The Role of Supply Chain Disruption
4	Shakaib Qadir Dr. Amiya Bhaumik Dr. Shrafat Ali Sair	Faculty of Business and Accountancy, Lincoln University College, Malaysia Hailey College of Banking & Finance, University of the Punjab, Lahore	Impacts of Artificial Intelligence on Human Resource Digitalization in Industry 4.0: A Sectoral Study in Development, Healthcare and Administration
5	Sayyed Muhammad Bilal Madeeha Rauf Dr. Shrafat Ali Sair Dr. Muhammad Sabeeh Iqbal Dr. Saeed Ahmad Sabir	Economic Department, National University of Modern Languages, Multan National College of Business Administration & Economics, Lahore Hailey College of Commerce, University of the Punjab, Lahore	Quantitative Research and Reflexivity

Session: 3 (F) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 07 Session Chair: Dr. Muhammad Usman (HCC) & Mrs Rabia Saleem Finance Room Coordinator: Dr. Waqas Baig			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Dr. Muhammad Usman Raza Ali	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Financial Leverage on Firm's Profitability: Proof from Coke and Refined Fuel Sector of Pakistan
2	Namra Ahsan Hajra Hassan	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of Process Innovation on Performance Of SMEs Considering the Mediating Role of Financial Resources
3	Dr. Muhammad Usman Aqsa Ashraf	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Behavioural Biases on Perceived Market Efficiency: Empirical Evidence from Pakistan Stock market

4	Dr. Muhammad Usman Zeeshan Iqbal	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Effect of External Factors on Stock Market Performance: Evidence from the Pakistan Stock Exchange (PSX)

Session: 3 (G) Date 06-12-2023 Time: 01:30 – 03:00 Room No. Lecture Theatre Session Chair: Dr. Nisar Ahmed & Dr. Aamir Malik Economics & Finance Room Coordinator: Ms. Fareeha Waseem			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Hafiz Muhammad Adnan	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Exchange Rate Fluctuation on the Performance of Manufacturing Industry in Pakistan
2	Bilal Jamshed	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Corporate Governance on Firm's Performance
3	Irfan Haider	Hailey College of Banking & Finance, University of the Punjab, Lahore	Role of Foreign Resources in Boosting Domestic Productive Capacity: A Case of Developing Countries

4	Tayyaba Rafique	Hailey College of Banking & Finance, University of the Punjab, Lahore	Disaggregated Economic Growth on Social Development under Kuznets Curve Hypothesis: Moderating Role of Green Technology
5	Syed Zain Ul Abedeen	Hailey College of Banking & Finance, University of the Punjab, Lahore	Role of FinTech in Increasing ommercial Banking Penetration – A Global Assessment

Session: 3 (H) Date 06-12-2023 Time: 01:30 – 03:00 Room No. 39
Session Chair: Dr. Faisal Qadeer & Dr. Waqas Farooq
Management & Sustainability
Room Coordinator: Dr. Usman Sarwar

SR#	Presenter's Name	Institute	Title of the Paper
1	Samra Irfan Dr. Muhammad Usman	Hailey College of Banking & Finance, University of the Punjab, Lahore	Reporting of Corporate Sustainability with Linkage of Corporate Transparency and Performance Determinants
2	Momina Nasir	Hailey College of Banking & Finance, University of the Punjab, Lahore	Green Talen Management and Innovative Work Behavior: A Moderated Mediation Model
3	Mehr-un-nisa Imtiaz	Hailey College of Banking & Finance, University of the Punjab, Lahore	Understanding the Adoption of Industry 4.0 Technologies in Improving Environmental and Economical Sustainability and Challenges to Adopt Industry 4.0

4	Muhammad Abubakar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Goodwill on Industry
5	Momina Nasir	Hailey College of Banking & Finance, University of the Punjab, Lahore	Unveiling Sustainability: Green Talen Management's Impact on Innovative Work Behavior: Mediated by Green Talent Development and Moderated by Green Transformational Leadership

SESSION 4

Session: 4 (A) Date 06-12-2023 Time: 3:30 – 05:00 Room No. 42
Session Chair: Dr. Waseem & Dr. Rab Nawaz Lodhi
Accounting, Finance & Economics
Room Coordinator: Dr. Zargham Ullah Khan

SR#	Presenter's Name	Institute	Title of the Paper
1	Muhammad Raza Zafar	Institute of Banking and Finance Bahauddin Zakariya University Multan	Assessment of Retail Investors Behaviour through Mediating Effect of Financial Literacy and Moderating Effect of Risk Tolerance
2	Abdul Basit Amiy Bhaumik Abdul Aziz Khan Niazi	Lincoln University College, Malaysia University of Engineering and Technology, Lahore, Pakistan	Strategic Management of Banks' Loan Portfolio: An Applications Resource Based View
3	Nimra Bint-e-Naeem Dr Usman Sarwar	Hailey College of Banking and Finance, University of the Punjab	Impact of Consumer Behavior on E Banking under the Moderation of Financial Literacy

4	Dr. Samia Shaukat	Institute of Administrative Sciences, University of the Punjab, Lahore	The Impact of Sehet Sahulat Card on the Access to Health Care and Financial Protection in Punjab, Pakistan

Session: 4 (B) Date 06-12-2023 Time: 3:30 – 05:00 Room No. 43
Session Chair: Dr. Muhammad Gulzar
Management
Room Coordinator: Dr. Samar Rahi

SR#	Presenter's Name	Institute	Title of the Paper
1	Amna Ahmed Ansari Laibah Hassan Muhammad Hasnain Abbas Naqvi	University of Management and Technology, Lahore	Relationship between Employee Empowerment, Job Satisfaction, Employee Engagement, Green Human Resource Management and Organizational Performance
2	Laibah Hassan Anoshia Mazhar Farooqi Khadija Javaid Butt Minahil Fayyaz	University of Management and Technology, Lahore University Sultan Zainul Abidin, Malaysia University of Management and Technology, Lahore	Investigating the Nexus of Employee Satisfaction, Dedication and Involvement in Shaping Organizational Success: Unraveling the Mediating Influence of Employee Attitudes
3	Kalsoom Ahmad Umair Ali Meral Fatima	University of Management and Technology, Lahore	Unravelling the Impact of Artificial Intelligence in Higher Education: Exploring Implications and Applications

4	Rameen Sibghat Laibah Hassan Rafay Ahmad	University of Management and Technology, Lahore	Strategic Insights: Unveiling Investor Decision Dynamics and Business Sensitivities via the Betting against Beta Approach
5	Rameen Sibghat Nimra Dildar Asad Anjum Mirza	University of Management and Technology, Lahore	Examining the Influence of Mudarabah Financing on Credit Risk in Islamic Banking: Insights from the Middle East

Session: 4 (C) Date 06-12-2023 Time: 3:30 – 05:00 Room No. 44 Session Chair: Dr. Ijaz Hussain Bukhari Management Room Coordinator: Mr. Muhammad Idrees			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Zainab Jamil	University of Management and Technology, Lahore	Impact of Cybercrime, Gender and Trust on the Intention to Purchase using E Commerce
2	Ahmed Ali	University of Management and Technology, Lahore	The Nexus of E-Commerce and Customer Satisfaction, Loyalty and Trust: Does Gender Matter?
3	Lubna Khalid	Hailey College of Banking & Finance, University of the Punjab, Lahore	Factors Preceding Purchase Intention: A Mediated Model
4	Muhammad Asif	Hailey College of Banking & Finance, University of the Punjab, Lahore	Examining Impact of High Performance Work System, Psychological Empowerment and Leadership towards Employee Work Engagement and Organizational Performance: The Moderating Effect of Employee Voice

Session: 4 (D) Date 06-12-2023 Time: 3:30 – 05:00 Room No. 45
Session Chair: Dr. Ammar Abid & Dr. Leena Anum
Marketing
Room Coordinator: Mr. Iftikhar Ahmed

SR#	Presenter's Name	Institute	Title of the Paper
1	Ayesha Naveed	Hailey College of Banking & Finance, University of the Punjab, Lahore	Customer's Hesitation towards Online Shopping: A Survey Review on Empirical Evidence from Pakistan
2	Zulqarnain Ali		Reluctance to Use ATM Cards by National Savings Customers an Investigative Approach
3	Usman Javaid	Hailey College of Banking & Finance, University of the Punjab, Lahore	Understanding Factors Impact Customer Behavior to Adopt Robot Service in Banking Sector of Pakistan
4	Anzal Ilyas Laiba Abid	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Impact of AI on Purchase Intention of Customers in an Online Fashion Store
5	Syed Tayyab Raza	Hailey College of Banking & Finance, University of the Punjab, Lahore	Exploring the Impact of Social Media on Student Well-being and Academic Success

Session: 4 (E) Date 06-12-2023 Time: 3:30 – 5:00 Room No. 06
Session Chair: Dr. Imran Shafique & Dr. Hina Saleem
Banking & Finance
Room Coordinator: Dr. Bilal Ahmed

SR#	Presenter's Name	Institute	Title of the Paper
1	Amna Ali	Hailey College of Banking & Finance, University of the Punjab, Lahore	Financial Ratio Analysis: A Comparative Study of Islamic and Conventional Banks' Performance in Pakistan
2	Dr. Muhammad Usman Amna Shafqat	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Mobile Banking Retention on Performance of Banking Sector: Evidence from Pakistan
3	Samra Naseer Saira Anwar	Hailey College of Banking & Finance, University of the Punjab, Lahore	Factors Affecting the Digital Financial Adoption: The Moderating Role of Customers Experience
4	Tehmina Fiaz Qazi Abdul Aziz Khan Niazi Maryam Aziz Hira Tanweer Butt	Hailey College of Banking & Finance, University of the Punjab, Lahore University of Engineering and Technology, Lahore, Pakistan	Structural Changes Required to Facilitate Knowledge Culture in Banks
5	Tehmina Fiaz Qazi Abdul Aziz Khan Niazi Ifra Aziz Khan Niazi Hira Tanweer Butt	Hailey College of Banking & Finance, University of the Punjab, Lahore University of Engineering and Technology, Lahore, Pakistan University of Central Punjab, Lahore University of Engineering and Technology, Lahore	Optimizing the Beneficiations of Credit Information for Banks

Session: 4 (F) Date 06-12-2023 Time: 3:30 – 05:00 Room No. 07 Session Chair: Dr. Fahmeed Idrees & Dr. Ashfaq Ahmed Management & Marketing Room Coordinator: Dr. Waqas Baig			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Dr. Shrafat Ali Sair Dr Aamir Sohail Muhammad Hasnain Ali	Hailey College of Commerce, University of the Punjab Thal University Bhakkar Bahauddin Zakariya University, Multan	An Empirical Study to Investigate the Impact of Enterprise Social Media on Employees' Performance using Social Exchange Theory: Mediating and Moderation Mechanism
2	Muhammad Waqar Zafar Atif Saeed Hamza Arshad	NLC, Quetta	Sustainable HR and Entrepreneurship Success with Mediating Role of Entrepreneurial Readiness using Job Demand Resource Theory

3	Tehmina Fiaz Qazi Abdul Aziz Kha Niazi Saira Zahid	Hailey College of Banking & Finance, University of the Punjab, Lahore University of Engineering and Technology, Lahore	A Comparative Study of Fashion-Apparel Buying Behavior of Generation X, Y and Z
4	Tehmina Fiaz Qazi Abdul Aziz Khan Niazi Ifra Aziz Khan Niazi Maryam Aziz	Hailey College of Banking & Finance, University of the Punjab, Lahore University of Engineering and Technology, Lahore University of Central Punjab, Lahore University of Engineering and Technology, Lahore	What are Core Issues of Women Cotton Pluckers in Pakistan? How are they Woven?
5	Ehtesham Tariq Khan	Hailey College of Banking & Finance, University of the Punjab, Lahore	How Brand Image and Social Media Mow Brand Image and Social Media Marketing Activities Affect
6	Muhammad Usman Akram Choudhry	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Influence of Workplace Bullying and Harassment on Turnover Intentions: The Moderating Role of Leader-Member Exchange

Session: 4 (G) Date 06-12-2023 Time: 3:30 – 05:00 Room No. Lecture Theatre Session Chair: Dr. Abdul Aziz Khan Niazi Economics, Accounting and Finance Room Coordinator: Ms. Fareeha Waseem			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Tehmina Fiaz Qazi Abdul Aziz Khan Niazi Ifra Aziz Khan Niazi Maryam Aziz	Hailey College of Banking & Finance, University of the Punjab, Lahore University of Engineering and Technology, Lahore University of Central Punjab, Lahore University of Engineering and Technology, Lahore	Role of Credit Documentation in Performance of Banks: A Theoretical Research Study
2	Nabeela Arshad	Department of Management Sciences, Lahore College for Women University, Pakistan	Trade Policy Shifts and Financial Market Resilience: A Study of Pakistan's Economic Landscape
3	Amna Shafqat Dr. Muhammad Usman	Hailey College of Banking & Finance, University of the Punjab, Lahore	Pakistani Banks: Evaluating Pre and Post Pandemic Performance via Corporate Governance and CSR Reporting
4	Dr. Muhammad Usman Zeeshan Iqbal	Hailey College of Banking & Finance, University of the Punjab, Lahore	Analyzing the Accrual Anomaly: Evidence from Pakistan Stock Exchange "KSE 30"
5	Tehmina Fiaz Qazi Rimsha Ali	Hailey College of Banking & Finance, University of the Punjab, Lahore	Examining the Impact of Workplace Ostracism on Turnover Intentions

Session: 4 (H) Date 06-12-2023 Time: 3:30 – 05:00 Room No. 39 Session Chair: Dr. Burhan Rasheed & Dr. Hira Aftab Marketing & Management Room Coordinator: Dr. Usman Sarwar			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**

1	Zara Imran Dr. Shrafat Ali Sair Dr. Irsa Mehboob	Lahore Business School, The University of Lahore Hailey College of Commerce, University of the Punjab Independent Researcher	Is Packaging "Voice or Face" of Product? A Study Explaining Perspective of Consumer Psychology
2	Anam Javaid	University of Management and Technology, Lahore	The Role of Human Capital in Strengthening Energy Mix-Climate Change Relation: A Study of Selected Low and High Vulnerable Economies
3	Syed Sajjad Haider Kazmi	Hailey College of Banking & Finance, University of the Punjab, Lahore	Green Human Resource Management
4	Fatima Zahra	University of Management and Technology, Lahore	Exploring the Nexus of Entrepreneurship: The Role of Institutional Pressure and Political Stability in Subjective Well-Being and Psychological Functioning
5	Malika Aiman	University of Management and Technology, Lahore	Media Used: The Influence the Cyber Protection Behavior among People

SESSION 5

Session: 5 (A) Date 07-12-2023 Time: 3:30 – 05:00 Room No. 42
Session Chair: Dr. Sadia Farooq & Dr. Syed Salman Rizavi
Management & Finance
Room Coordinator: Dr. Zargham Ullah Khan

SR#	Presenter's Name	Institute	Title of the Paper

1	Sawaira Ashraf	University of the Punjab, Gujranwala Campus	The Effect of Work-Related Depression, Anxiety and Stress to Employee Performance during COVID-19? The Mediating Role of Job Burnout and Mental Health
2	Rida	University of the Punjab, Gujranwala Campus	Bullying of Hotel Employees: Moderating Role of Self-Compassion and Mediating Role of Psychological Distress
3	Faiza	University of the Punjab, Gujranwala Campus	The Impact of COVID-19 Pandemic on the Stock Returns: The Moderator Role of Financial Stability
4	Tehmina	University of the Punjab, Gujranwala Campus	The Impact of CSR on the Firm Performance: The Moderator Role of Dividend Policy and CEO Education
5	Bisma	University of the Punjab, Gujranwala Campus	The Impact of CSR on the Financial Performance the Moderator Role of Media Attention and Earning Management
6	Sonia	University of the Punjab, Gujranwala Campus	Exploring the Impact of Green Intellectual Capital on Green Corporate Image with Green Core Competence as Mediator and Green Innovation as Moderator in Pakistan Entrepreneurial SMEs

Session: 5 (B) Date 07-12-2023 Time: 3:30 – 05:00 Room No. 43
Session Chair: Dr. Mudassar Ghafoor & Hafiz Abdur Rasheed
Management & Finance
Room Coordinator: Dr. Samar Rahi

SR#	Presenter's Name	Institute	Title of the Paper
1	Mushba	University of the Punjab, Gujranwala Campus	The Impact of Financial Performance on Financial Stability of Commercial Banks: The Moderator Effect of Managerial Expertise

2	Talha	University of the Punjab, Gujranwala Campus	The Impact of Political Connections on Firm Performance: The Moderating Role of Board Gender Diversity
3	Momna Asif	University of the Punjab, Gujranwala Campus	Impact of E-Satisfaction on Customer Re Purchase Intention in B2C Online Segment
4	Mahrukh Ikram	University of the Punjab, Gujranwala Campus	The Impact of Public Sector on Green Financing and Green Firms: The Moderator Role of Central Banking
5	Usama Nabeel	University of the Punjab, Gujranwala Campus	ESG Impact on Firm Leverage: Exploring the Moderating Roles of Firm Flexibility and Financial Constraints
6	Mudassir	University of the Punjab, Gujranwala Campus	Unlocking Success: Investigating the Influence of Zero Debt and CEO Traits on Firm Performance.

Session: 5 (C) Date 07-12-2023 Time: 3:30 – 05:00 Room No. 44 Session Chair: Dr. Rizwan Qaiser Danish & Dr. Naveed Iqbal Management Room Coordinator: Mr. Muhammad Idrees			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Unaiza Ashraf Rizwan Qaiser Danish Yufan Shang Samreez Safdar	Institute of Business Administration, University of the Punjab, Lahore	Impact of Green HRM Practices on Environment Friendly Attitude and Behavior at Work

2	Mahnoor Feroz Rizwan Qaiser Danish	Institute of Business Administration, University of the Punjab, Lahore	The Influence of Ebullient Supervision on Employees' Proactive Service Performance: Mediating Role of Work Engagement and Moderating Role of Psychological Capital
3	Rehab Khan Waqas Shakir Dr. Rizwan Qaisar Danish Dr. Rab Nawaz Lodhi	Superior University, Lahore Institute of Business Administration, University of the Punjab, Lahore Hailey College of Commerce, University of the Punjab	An Empirical Investigation of the Entrepreneurial Intention and Start-Ups through Moderating Role of Covid-19 and Family Support: Findings from Business Graduates
4	Waqas Shakir Rehab Khan Dr. Rizwan Qaiser Danish	Superior University, Lahore Institute of Business Administration, University of the Punjab, Lahore	Consumer Participation with Brands and Loyalty: A Social Commerce Perspective
5	Ibrar Mansoor Meryum Rehman Eman Fatima Fatima	University of Education, Lahore	Factors Affecting Compulsive Buying Behavior through Panic Behavior Disorder in the Pakistani Market

Session: 5 (D) Date 07-12-2023 Time: 3:30 – 05:00 Room No. 45 Session Chair: Dr. Tanti Handriana Management & Organizational Behavior Room Coordinator: Mr. Iftikhar Ahmed			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Waqas Shakir Rehab Khan Dr. Rizwan Qaiser Danish	Superior University, Lahore Institute of Business Administration, University of the Punjab, Lahore	Perceived Insider Status and Thriving at Work: The Moderated Mediation Role of Employee Engagement
2	Waqas Shakir Rehab Khan Anum Dr. Rizwan Qaiser Danish	Superior University, Lahore Institute of Business Administration, University of the Punjab, Lahore	Green Banking Development in Pakistan: A Way Forward
3	Dr. Rizwan Qaiser Danish Asbah Shujaat	Institute of Business Administration, University of the Punjab, Lahore	Trickle Down Effects of Abusive Supervision & Supervisors Knowledge Hiding on employees' Wellbeing: Role

			of Political Skill
4	Prof. Dr. Muqqadas Rehman Dr. Rizwan Qaiser Danish Muhammad Zunair	Institute of Business Administration, University of the Punjab, Lahore	Impact of Social Media Marketing on Purchase Intention: Moderating Role of Para-Social Relationship and Mediating Role of Brand Identity
5	Warda Ahmed	Hailey College of Banking & Finance, University of the Punjab, Lahore	Effects of Digitalization of Marketing on Sales Performance with Moderation of Artificial Intelligence: A Case Study of Gul Ahmad Textiles. LTD

Session: 5 (E) Date 07-12-2023 Time: 3:30 – 5:00 Room No. 06 Session Chair: Dr. Bushra Usman & Dr Sarfraz Khalil Marketing and Organizational Behavior Room Coordinator: Dr. Bilal Ahmed			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Rehab Khan Waqas Shakir Dr Rab Nawaz Lodhi Dr. Rizwan Qaisar Danish	Superior University, Lahore Hailey College of Commerce, University of the Punjab Institute of Business Administration, University of the Punjab, Lahore	An Empirical Investigation of Transformational Leadership (TL) and Innovative Work Behavior (IWB)
2	Nadia Kiran Dr. Omar Masood	Government College University, Lahore University of Lahore, Lahore	Investment Performance of Mutual Fund in Pakistan
3	Waqas Baig Ishfaq Ahmed Rizwan Qaiser Danish	Hailey College of Commerce, University of the Punjab Institute of Business Administration, University of the Punjab, Lahore	Effect of Ethical Climate on Employee Green Behavior: Through Moderated Mediation Mechanism
4	Dr. Rizwan Qaiser Danish Nosheen Pervaiz Awan Maria Pervaiz Awan	Institute of Business Administration, University of the Punjab, Lahore	Effect of Halal Certificate, Brand Reputation and Brand Loyalty on Customer Satisfaction: A Moderated Mediation Approach in the Restaurants of Abbottabad

5	Adan Nasir Faiza Rashid	Hailey College of Banking & Finance, University of the Punjab, Lahore	Impact of Green Training on Perceived Organizational Performance through Environmental Sustainability

Session: 5 (F) Date 07-12-2023 Time: 3:30 – 05:00 Room No. 07 Session Chair: Dr. Usman Yousaf & Dr. Noor ul Ain Management Room Coordinator: Dr. Waqas Baig			
SR#	**Presenter's Name**	**Institute**	**Title of the Paper**
1	Dr. Hafiz Ahmed Ullah Dr. Rizwan Qaiser Danish Dr. Waqas Baig	Institute of Business Administration, University of the Punjab, Lahore	Factors Affecting the Taxpayer's Interest in Using Electronic Tax Application
2	Rizwan Qaiser Danish Muhammad Yousaf	Institute of Business Administration, University of the Punjab, Lahore	Role of Green Human Resource Management in Determining the Employees` Innovative Behavior in the Service Sector of Pakistan
3	Muhammad Amer Rizwan Qaiser Danish	Institute of Business Administration, University of the Punjab, Lahore	Unleashing the Power of Shared Leadership: Examining the Effects of Climate for Initiative and Climate for Psychological Safety on Taking Charge
4	Noor Fatima	Institute of Business Administration, University of the Punjab, Lahore	Unraveling the Dual Factor Theory: Investigating the Mediating Role of Customer Social Responsibility and Green Confusion in the Relationship between Green Brand Image and Green Purchase Intention in the Context Of Pakistan
5	Muhammad Haseeb	Hailey College of Banking & Finance, University of the Punjab, Lahore	The Influence of Corporate Social Responsibility and Business Ethics on Brand Fidelity: The Importance of Brand Love and Brand Attitude

Session: 5 (G) Date 07-12-2023 Time: 3:30 – 05:00 Room No. Lecture Theatre Session Chair: Dr. Sania Zahra Malik & Hafiz Rana Fawad Finance Room Coordinator: Ms. Fareeha Waseem			
SR#	**Presenter’s Name**	**Institute**	**Title of the Paper**
1	Hassan Akram Adnan Hushmat	Bahria University, Lahore	Moderating Effect of Loan Concentration on Liquidity Creation and Credit Risk: A Cross Country Perspective
2	Sadaf Shaharyar Shaharyar Saddique Mughal	Bahria University, Lahore	Discovering the Relationship between Managing Remote Teams and Software Project Success: Evidence from Software Houses of Pakistan

3	Ubaid Ullah Muhammad Sajid	Bahria University, Lahore	Examining the Effect of Hedonic Value and Electronic Word-of-Mouth on Impulse Buying with the Mediating Role of Emotional Arousal and the Moderating Role of Perceived Risk: Evidence from Apparel Industry
4	Mohammad Abdullah Adnan Hushmat	Bahria University, Lahore	Maximizing Business Project Success using AI Strategies
5	Mohammad Abdullah Adnan Hushmat	Bahria University, Lahore	Assessing the Multifaceted Impact of Artificial Intelligence on Financial Intelligence

Session: 5 (H) Date 07-12-2023 Time: 3:30 – 05:00 Room No. 39
Session Chair: Dr. Ishfaq Ahmed & Dr. Muhammad Ashfaq
Management
Room Coordinator: Dr. Usman Sarwar

SR#	Presenter's Name	Institute	Title of the Paper
1	Dr. Muhammad Ashfaq	IU International University of Applied Sciences, Germany	A Qualitative Enquiry on the Challenges for Central Bank Digital Currency (CDBC)
2	Usama Zafar	Institute of Business Administration, University of the Punjab, Lahore	Green Purchase Behavior in the Beverages Industry in Pakistan: A TPB Perspective with Moderating Role of Government and Media Exposure
3	Fatima Batool	Institute of Business Administration, University of the Punjab, Lahore	Reshaping Habitual and Complex Buying Behaviour through Social Media Strategies of Apparel Brands: Taking Brand Image Layers in Account

4	Sumbal Shahid Dr. Majid Ali Dr. Rizwan Qaiser Danish	Hailey College of Commerce, University of the Punjab Institute of Business Administration, University of the Punjab, Lahore	Effects of Talent Management on Workplace Adaptability: Moderating Role of Perceived Organizational Support and Mediating role of Organizational Learning
5	Iqra	Government College University, Faisalabad	Targeting Virtue Snack Foods in Shape of Customer Impulsive Buying Behavior Using Cue Utilization Theory and Classical Attitude Behavioral Model

Key-Driving Factors of Return Reversal Effect: Evidence from Pakistan Stock Exchange (PSX)

Ayesha Akhtar

Dr. Marriam Rao

University of Central Punjab, Lahore

Abstract:

The return reversal effect in the Pakistan Stock Exchange (PSX) has been a subject of considerable academic interest and it is being reported as controversial and inconclusive due to different structure of Pakistan Stock Exchange (PSX) in contrast to the developed markets. The present research brings novelty by examining the entire non-financial sector (including both manufacturing and service firms) of the Pakistan Stock Exchange (PSX) using the most recent monthly dataset and advanced statistical models. It embraces two new variables; First, a country-level governance factor, recognizing the pivotal role of political stability and governance in the stock market. Second, a new reversal proxy factor that would help to examine the impact of long-run reversal effect in its entirely in the Pakistan Stock Exchange (PSX).

Impact of Sukuk Issuances and Corporate Social Sustainability on Stock Price Crash Risk

Muhammad Hammad

University of Central Punjab, Lahore

Abstract:

Sukuk market has seen as a supreme development all over the world in the past years. The investors have long been concerned about the stock price crash risk (CR), a sudden drop in stock prices caused by the circulation of negative news about a firm. Sukuk issuances (SI) can be taken as religious motivation of the firm that in turn discourages the negative news hoarding. This study examined the impact of SI and corporate social sustainability (CS) on CR to see whether these factors had a mitigating effect. Furthermore, the role of CS as a mediator was also examined. We deliberated that SI can impact the CR in three different ways. Firstly, following the Islamic principle of no Riba that reduces the credit stress. Secondly by following the Islamic principles of no Gharar that maximizes the disclosures. Thirdly it engages new stakeholder in the list of existing stakeholders that increases in the examination and reduces the chances of news hoarding. In this study the down-to-up volatility (DUV) approach was used to determine CR, while frequency, volume, and tenure were used to calculate SI. CS was determined by using the framework of Global Reporting Initiative. The data was taken from 39 sukuk issuing firms that are listed on Bursa Malaysia. Time line was from 2011 to 2022, producing a sample size of 468 observations. Descriptive statistical analysis and GMM regression analysis were employed in this study. The results showed that increase in SI reduce the CR. The findings showed that the influence of SI factors on CS and CR varied. SI had a positive relationship with CS and a negative relationship with CR. While all three CS components, economic, social, and environmental, had a negative impact on CR. The findings were robust across alternatives measurements and econometric tests. Although SI is recent phenomena than bonds, henceforth has lesser research on it. This study is unique in its contribution to the literature as it has shown the relationship of SI with the CR for the first time.

Keywords: Sukuk issuance, Stock price crash risk, Credit Stress, Gharar, Corporate social sustainability.

The Nexus of Fiscal Leverage and Technological Advancements:

A Pinnacle Exploration into Shaping Corporate Investment Paradigms

Sumiya Tahir

Dr. Farah Naz

Department of Accounting & Finance, Kinnaird College for Women, Lahore

Abstract:

This study conducts a meticulous exploration of the intricate interplay between financial leverage and technological advancements within the Chemical and Pharmaceutical Sector of Pakistan. The research reveals complex discoveries by using a strong empirical approach and quantitative assessments carried out over a predetermined length of time. These findings have the ability to significantly influence business strategy, direct financial decision-making, and assist in the development of customized policies that address the particular opportunities and problems faced by Pakistan's chemical and pharmaceutical sector. The initial findings demonstrate dynamic interactions, highlighting the importance of the research in managing the changing financial-technological nexus in this particular industrial setting. This research adds a great deal to the body of knowledge by providing specific insights into the complex links between financial leverage, investment decisions, and technological advancement with a focus on Pakistan's chemical and pharmaceutical industry.

The initial findings demonstrate dynamic interactions, highlighting the importance of the research in managing the changing financial-technological nexus in this particular industrial setting. This research adds a great deal to the body of knowledge by providing specific insights into the complex links between financial leverage, investment decisions, and technological advancement with a focus on Pakistan's chemical and pharmaceutical industry. Secondary data technique has been obtained from annual reports from 2016 TO 2021. Hence, a random model has been used to determine the relationship among the variables such as investment, financial leverage, technology innovation Profitabilty. The results indicate that financial leverage has a negative and significant relationship with investment. On the other side, investment has an insignificant relation with technological innovation.

Keywords: Financial leverage, R&D investment, Technology innovation, Profitabilty

Driving Financial Excellence: A Thorough Analysis of How Bank-Specific Factors Influence GCC Banks' Performance

Dr. Farah Naz

Abeeha Waqas

Department of Accounting & Finance

Kinnaird College for Women

Abstract:

This study aims to investigate the determinants that drive the profitability of banks operating in the GCC (Gulf Cooperation Council) countries, namely Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman. The four key bank-specific factors that motivate this research include capital adequacy, bank size, credit risk, and audit quality. Key performance indicators, Return on Assets (ROA) and Return on Equity (ROE) are utilized for this paper to gauge the financial health of these financial institutions. This study adds to the existing literature by providing a comprehensive understanding of the unique dynamics of the bank-specific elements and their influence on the profitability of the GCC banks. The study employs an unbalanced panel data approach which incorporates a diverse sample of 57 GCC banks, covering an 8-year time period from 2022 to 2015. Furthermore, this research contributes to the relevant literature by facilitating in shaping of the banking industry's landscape as well as providing valuable insights into the latest evolving economy. Additionally, it has the potential to provide useful information into the domains of finance, economics, and risk management, ultimately benefitting global financial stability. The findings of this research can be useful in assisting investors in evaluating the attractiveness of the GCC banks along with offering aid to policymakers, regulators, and bank management in developing policies that improve GCC banks' resilience, profitability, and stability in dynamic and changing economic circumstances.

Navigating the Fintech Landscape in Pakistan: Analyzing the Influence of Data Security, Social Media, Customer Trust, Mobile Penetration, and Financial Literacy on Fintech Adoption with Fintech Promotion as a Mediator

Syeda Fizza Abbas – (Corresponding Author) – Assistant Professor, (Head of Department Accounting & Finance), Kinnaird College for Women, Lahore.

Maryum Asif Khan– Research Scholar - Department of Accounting & Finance, Kinnaird College for Women, Lahore.

Naila Sadiq- Co-author- Lecturer – Department of Accounting and Finance, Kinnaird College for Women, Lahore.

Abstract:

Purpose:

In the evolving landscape of Pakistani commercial banks, this research endeavors to unravel the intricate dynamics influencing the adoption of Fintech services. Despite the surge in Fintech innovation, the study recognizes the existing gaps and aims to address them by examining the direct impact of Customer Trust (CU), Mobile Penetration (MP), Data Security (DAS), Social Media Influence (SMI), and Financial Literacy (FL) on Fintech adoption intention with Fintech promotion (FP) as a mediator. The investigation employs the Technology Acceptance Model (TAM) to provide a structured analysis. By understanding these variables, the research contributes to the enhancement of Fintech promotion strategies, shedding light on the factors pivotal for fostering acceptance and usage of Fintech services among banking consumers in Pakistan.

Design Approach/Methodology:

The study employs a quantitative approach, utilizing a self-administered survey to collect data from 400 users of banking services in Pakistan. Adopting a cross-sectional research design, the research employs Partial Least Square (PLS)-Structural Equation Modeling (SEM) as the analytical technique. This approach allows for a comprehensive investigation into the complex relationships among the identified variables.

Practical Implications:

The findings have theoretical implications, shedding light on the crucial role of these variables in shaping Fintech adoption. Practically, the strategic incorporation of Fintech-related factors, coupled with targeted information dissemination and the establishment of trust, emerges as a crucial approach to promote Fintech adoption. Leveraging the expansive reach of social media serves as a dynamic mechanism for increasing awareness and engagement with Fintech services. The pervasive penetration of mobile technology becomes instrumental, ensuring broad accessibility and usability of Fintech offerings. Moreover, a concerted effort to enhance financial literacy proves indispensable, empowering users with the knowledge required to make informed decisions and fostering confidence in the adoption of Fintech solutions. The orchestrated integration of these elements is imperative for comprehensive Fintech promotion, cultivating an environment of trust and accessibility that is conducive to widespread adoption and utilization.

The study emphasizes the importance of Fintech innovators prioritizing data security, addressing customer concerns, and building trust. While limitations exist, future research opportunities include exploring organizational-level factors and extending the study to other sectors beyond banking. Consideration of demographic parameters and longitudinal studies can provide valuable insights into the evolving landscape of Fintech adoption in Pakistan.

Originality/Value:

This research contributes to the existing body of knowledge by providing empirical insights into the adoption dynamics of Fintech services in the context of Pakistani commercial banks. By integrating elements such as Customer Trust, Mobile Penetration, Data Security, Social Media Influence, and Financial Literacy, the study offers a nuanced understanding of factors influencing Fintech adoption. The application of the TAM framework enhances the theoretical foundation, contributing to both academic literature and practical implications for the Fintech industry.

Keywords: Customer Trust, Mobile Penetration, Data Security, Social Media Influence, Financial Literacy, Fintech Adoption Intention, Fintech Promotion, Commercial Banks.

Product Placement and Sponsorship Leading Towards Aggressive Buying Behavior and Conspicuous Consumption; Mediating Role of Compulsive Buying Disorder

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Abstract:

Customers are targeted using two types of promotional campaigns, i.e., Overt, which are easily seen, understood and perceived consciously by the customers. And Covert, which are hidden, unable to be understood and perceived by the customers easily and targets customers' subconsciousness and unconsciousness. Results of such covert messages are deep with strong and long-lasting effect on customer perceptions, decision making, and behavior. These hidden messages and advertisements have the ability to develop compulsive buying behaviour which may transform into aggressive behaviour as well as lead towards Conspicuous Consumption. Researches have pointed out that around 5.8% of the general public is addicted with this disorder and 80% of them are women. This research has tried to analyze the connection between Product Placement and Sponsorship with Compulsive Buying Disorder leading towards Aggressive Behavior and Conspicuous Consumption. Findings reveal that Product Placement is one of the factors to develop CBD and leads towards Aggressive Behavior and Conspicuous Consumption. On the other hand, Product Sponsorship does lead to Aggressive Behavior and Conspicuous Consumption but does not develop CBD.

Keywords: Compulsive Buying Behavior; Aggressive Behavior; Conspicuous Consumption; Product Placement; Product Sponsorship.

Examining The Impact of Corporate Social Responsibility Towards Corporate Image and Sustainable Purchase Intention

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Abstract:

The purpose of this study is to investigate influence of corporate social responsibility on corporate image and consumer sustainable purchase intention. In this study dimensions of corporate social responsibility are taken as predictor factors to measure corporate image and sustainable purchase intention. In addition to that moderating effect of culture is conceptualized between corporate image and sustainable purchase intention. The research model is developed in such a way that the dimensions of CSR have shown direct impact on corporate image and sustainable purchase intention. This study targets consumer of fashion industry in Pakistan and therefore convenience sampling approach will be used. Data will be collected through survey questionnaire. Moreover, sample size will be selected by using prior power analysis. To test the relationship between latent variable the partial least square based structural equation model (PLS-SEM) approach will be used. A large number of studies are directed towards the corporate social responsibility and corporate image but the literature on sustainable purchase intention is limited. Therefore, this study is unique and contributes to body of knowledge and examines factors which boost corporate image and enhance sustainable purchase intention.

Keywords: Dimensions of corporate social responsibility; corporate image; sustainable purchase intention; culture

Impact of Brand Heritage and Experiential Marketing on Customer Loyalty: Mediating Role of Brand Equity

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Abstract:

In this era of globalized markets, a significant pressure is being faced by the brands and reason is the proper and consistent communication of corporate identity to customers. Therefore, a brand having an established past considers it an important resource to gain competitive edge in markets. Another approach is experiential marketing, which is not only selling products and services but also creating memorable and multisensory experiences to get long lasting relationships. Customer experience and brand heritage play an important part in enhancement of customer loyalty. This study determines the effect of both on customer loyalty with mediating role of brand equity. Data was collected from 270 respondents (n=270) through cross-sectional survey using a structured questionnaire. Customer experience, brand heritage were found to have a positive effect on customer loyalty. Brand equity was found to mediate the effect between experiential marketing, brand heritage and customer loyalty. These results contribute to existing knowledge of study. This study will help brand managers to understand the role of experiential marketing and brand heritage in building emotional attachment and unbreakable ties with customers. It directs brands to create and maintain emotional linkages using marketing programs, which trigger passion and affection to establish customer connections with brands. Managers are recommended to consider customer experience and brand heritage while designing strategies to increase the customer loyalty.

Understanding Factors Influence Consumer Attitude to Use Drone Enabled Food Serving Restaurants

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Fazeela Shabbir

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Abstract:

Due to technology innovation, the restaurant business has significantly improved during the past ten years. The competition in hospitality industry restaurants are now relying innovation and novelty in food delivery services. Consequently, the purpose of this study is to investigate factors that impact consumer attitude and behavioral intention to use drone-based food serving restaurants. It is conceptualized that attitude positively influences customer behavioral intentions backing by perceived innovativeness and consumer motivation. The study will be carried out using the positivist paradigm, and responses will be gathered regarding variables that impact consumer attitude and behavioral intention to utilize drone-based food serving restaurants. This research will use sample of 300 customers from restaurant restaurants. The survey questionnaire will be sent to respondents via email. Structural equation modeling will be used to compute components such as perceived innovativeness, functional consumer motivation, hedonic cognitive motivation, and social motivation for data analysis. This study is important since it discusses cutting-edge technology in food sector and looks at how consumers feel about using and accepting innovative food serving patterns.

Comparative Study on Personality Traits, Emotional Regulation and Psychological Distress in Psychology and Medical Students

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Esha Irfan

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Abstract:

Psychology and medical students are known to experience high levels of stress and psychological distress, which can have negative impacts on their well-being and academic performance. This study aimed to investigate the relationships between personality traits, emotional regulation, and psychological distress among psychology and medical students. Emotional regulation has effect on psychological well-being of both medical and psychology students. Personality traits and emotional regulation are significant predictor of psychological distress. Psychological distress is found to be higher in psychology students than medical students. Gender differences were also observed, and Women have higher levels of psychological distress as compared to men. These findings suggest that personality traits and emotional regulation may have an impact on psychological distress among psychology and medical students, with potential implications for interventions and support services for these populations.

Keywords: Psychological distress, Emotional Regulation, Personality traits, Students

Impact of Social Media Influencers on Impulse Buying Behavior As Mediating Role Of Para-Social Relationship.

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Abstract:

The aim of this study is to investigate the impact of social media influencers on impulse purchase behavior, examining the influence of personality and content characteristics. In addition, the study examines the mediating role of parasocial interactions and considers moderation effects based on gender and income. Using the existing literature, a conceptual framework describing the relationship between social media influencers, personality and content characteristics, parasocial interactions, and impulsive purchase behavior is proposed the study takes a quantitative approach, using survey and statistical analyses used to test hypothesized relationships. Expected findings include the significant influence of influencers on impulse buying. A socially similar interaction between personality and content will have a positive effect, which in turn is associated with impulsive

purchase behavior. These relationships are supposedly moderated by gender and income. This study remains speculative, without empirical evidence. The potential for response bias and the lack of cultural context in the survey data represent limitations. Future research could examine cultural influences further and validate the findings through empirical research. Companies can use insights to develop more effective influencer marketing strategies, tailored to specific personality types and content preferences. Acknowledging the mediating role of para social communication can guide the development of authentic relationships between influencers and consumers.

Keywords: Social Media Influencers, Impulsive Buying Behavior, Para social Interactions, Gender, Income.

How Brand Image and Social Media Marketing Activities Affect Customer Loyalty Through Customer Satisfaction

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Ehtesham Tariq Khan

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Abstract:

This study describes the importance of brand image and social media marketing activities and their impact on customer loyalty through customer satisfaction. This study was conducted in super markets in Pakistan. In addition, this paper aims to investigate whether brand image and social media marketing activities influence customer satisfaction and to what extent customer loyalty. Brand image is the modern perception of products by customers, and social media marketing is one of the most important influencing factors in creating customer satisfaction. We have conducted exploratory research. The data collected was primary and information was collected from our population through a questionnaire. The results concluded that consumers can achieve satisfaction in supermarkets with reasonable product prices, availability of quality products, timely service delivery, accurate information acquisition shortening of the checkout process.

Key Words: Brand Image, Customer Loyalty, Super Market, Customer Satisfaction

Investigating Factors Impact Consumer Behavioral Intention to Continue Use of Banking Services.

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H.M.Abou Bakar

Research Student at Hailey College of Banking and Finance,

Punjab University Lahore, Pakistan

Abstract:

The aim of this research is to investigate how Perceived Quality (PEQ), Brand Awareness (BAW), Brand Emotional Attachment (BEA), Risk aversion (RAV), Brand Association (BAA), and Social Responsibility impact Brand Love (BRL) in the context of banking. Second, this study investigates the influence of Brand Loyalty towards the Intention to Continue use of Banking Services (INB) with the moderating impact of Brand Trust (BTR). Data will be collected from existing customers of Islamic banks in Pakistan using a structured questionnaire. Around 200 to 250 questionnaires will be distributed among customer to take their opinions. Then responses will be further analyzed and hypotheses will go through testing by structural equation modeling techniques using SPSS and Smartpls. Previously, few studies have been conducted on this topic. Therefore, this research will make an addition to the existing knowledge and will explore how perceived quality, brand awareness, brand association, brand emotional attachment, risk aversion, and social responsibility enhance Brand Love.

Keywords: Brand Emotional Attachment; Brand Association; Perceived Quality; Brand Awareness; Risk aversion; Social Responsibility; Brand Love; Brand Trust; Intention to Continue use of Banking Service

Impact of Team Conflicts On Perceived Team Performance: The Moderating Role of Task Complexity

Rabia Ishfaq

Yousra Khalil

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Hailey College of Banking & Finance, University of the Punjab, Lahore.

Abstract:

This study explores the complex relationship between team conflict and team performance, exploring the moderating influence of task complexity. Team conflict is a common phenomenon in organizational settings, and its effect on performance has been the subject of extensive research. However, the significant interaction between conflict and task complexity is relatively unexplored. The research takes holistic approach, combining insights from the organizational psychology and management literature. Through a synthesis of existing theories, the study aims to explore how conflict within teams, from work-related disagreements to interpersonal tension, can enhance or obstruct overall team performance. The focus is on understanding the various manifestations of conflict and their impact on various aspects of team functioning. An important element of this investigation is the consideration of task complexity as a moderating factor. Task complexity is recognized as an important variable that influences how teams respond to conflict. The study investigates whether the impact of conflict on team performance depends on the nature and complexity of the tasks at hand. By considering task complexity as a moderating variable, research aims to contribute to a more nuanced understanding of the conditions under which conflict may have positive or negative outcomes. The methodology involves a combination of quantitative analysis, survey data from a variety of organizational contexts, and qualitative insights gathered through interviews and case studies. This mixed-methods approach allows for a comprehensive exploration of research questions, capturing both statistical patterns and rich contextual detail. The findings of this study are expected to provide practical implications for managers and organizational leaders attempting to improve team performance in the face of unavoidable conflict. By recognizing the moderating role of task complexity, organizations can tailor conflict resolution strategies to better meet the specific demands of their tasks and foster a more adaptive and flexible team environment.

Key words: Team conflicts, Team cohesion, Task complexity

Social Media and International Business Model: View And Conceptual Framing

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Zoya Akbar

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Abstract:

This paper aims to enhance understanding of social media in international business contexts by integrating existing views and providing a framework for scholars and decision-makers. A conceptual study using a systematic literature review method was conducted, revealing marketing as a dominant area of discussion and that many firm functions where social media plays a role have received little attention. The study also found that the positive features of social media in international activity are more widely acknowledged than the potentially problematic aspects. The research limitations include a small number of articles analyzed, and the study emphasizes the need for managers to be cautious when using social media in international markets. The authors hope that this study will guide future research and accelerate its emergence.

Impact of Financial Inclusion On Disposable Income: The Moderating role of financial Literacy

Aiza Butt

Arifa Iqbal

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Abstract:

Financial inclusion has emerged as a critical driver of economic development, aiming to bring marginalized populations into the formal financial system. This study investigates the complex interplay between financial inclusion, financial literacy, opportunity effect, and disposable income. Drawing on a diverse sample, our research employs a comprehensive theoretical framework that considers financial literacy as a moderator and opportunity effect as a mediator in the relationship between financial inclusion and disposable income. The methodology involves surveying individuals across various demographic groups to measure and analyze these variables. Preliminary findings suggest that financial inclusion positively influences disposable income, with financial literacy playing a crucial role in shaping this relationship. Furthermore, opportunity effect is identified as a mediator, elucidating the pathways through which financial inclusion affects disposable income. The implications of these findings extend to policymakers, financial institutions, and educators, emphasizing the importance of holistic strategies that encompass financial education and capitalize on economic opportunities. This research contributes to the existing literature by offering insights into the nuanced dynamics of financial inclusion and its impact on individual financial well-being.

Keywords: disposable income, poverty alleviation, economic growth, income equality, financial inclusion, demand-side perspective

Investigating the Impact of Cultural Intelligence on Cross Cultural Team Building in Multinational Organizations

Talmeez Fatima

Halima Arshad

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Abstract:

The main purpose of this paper to examines the complex dynamics of cultural intelligence, aiming to its impact on cross-cultural team building. The study proposes a conceptual framework that integrates cultural intelligence, communication quality, and cultural diversity and examines their interactions in organizational teams. By Taking theoretical approach, the paper integrates existing literature on cultural intelligence and team Building. It proposes a model in which cultural intelligence acts as a catalyst for effective cross-cultural teams, mediates positive interactions, and facilitates cultural diversity. The paper highlights that improved cultural intelligence in teams positively influences their ability to manage Cross-cultural challenges. it also suggests that the relationship is strengthened through positive communication. The study also raises the idea that the effect of cultural intelligence on team building depends on the degree of cultural diversity within the team. Future research should conduct empirical experiments to support the proposed model. Furthermore, the concept does not include all potential moderators and mediators, providing avenues for further research. Organizations stand to gain by developing cultural intelligence and emphasizing effective communication across teams. Management of different cultures enables managers to tailor cross-cultural strategies based on the unique internal structures of their teams.

Key Words: Cultural Intelligence, Cross-Cultural Team Building, Effective Communication, Cultural Diversity, Organizational Behavior.

Socio-Economic Determinants of Environmental Degradation, A Panel Study of SAARC Countries

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Hailey College of Banking and Finance, University of the Punjab, Lahore.

Abstract:

This research has been conducted to find out the socio-economic determinants of environmental degradation, a panel study. Panel Data is used in this research. This study is conducted for SAARC countries which include Bangladesh, India, Nepal, Pakistan and Sri Lanka. Dependent variable for this study is carbon dioxide emission which is used to measure environmental degradation. Urbanization, energy consumption and Industrialization are used as independent variables. Carbon taxes is used as mediator while economic development is used as moderator. In this panel study, considering carbon taxes as a mediator and economic growth as a moderator enables a comprehensive analysis of how policy interventions and differing economic conditions influence the relationships between socio-economic factors and CO_2 emissions within the SAARC countries. Measures should be taken to reduce pollution. As the economy is growing pollutant emission is also rising which is alarming. Measures including sustainable development goals, renewable energy resources, focusing on green economy, less use of plastic, focus on recycling should be considered to save our environment.

Key Words: degradation, interventions, carbon dioxide emission, Urbanization

Impact of Capital Structure and Working Capital Management on The Financial Performance of Selected Non-Financial Firms in Pakistan

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Abstract:

Capital structure is the proportions of debt instruments, preferred stock and common stock on company's balance sheet. Business entities choose different combinations of equity, debts and other options for the purpose of financing their assets. Some businesses choose more financing from the equity and less from debts, while others rely more on debts and less on equity financing depending upon nature of their business, industry and risk. Firms mostly go for that combination of debt and equity that optimizes their cost of capital and risk. Perfect combination of capital structure and working capital enhance the profitability and financial performance of the firms.

Key Words: Capital Structure, Financial Performance, Working Capital Management.

Big Data Analytics and Firm Performance: A moderated - Mediated Model

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Abstract:

Purpose: this study will examine the mediating role of decision-making quality on the casual chain linking Big Data Analytics and firm performance in the fashion industry (retailer and whole seller). It will also examine the moderating effect of data analytics capabilities (business analytics capability and customer relationship management (CRM) analytics) that was almost ignored in previous studies.

Design/methodology/approach: The target population consisted of managerial employees (designer IT experts and managerial executives) in fashion industry. Data will be collected using a survey questionnaire from 800 respondents (350 from retailers and 450 from whole sellers) in fashion industry will be subjected to the PLS-SEM for analysis.

Findings: The empirical result will show that big data analytics will have a positive impact on firm performance, decision making quality mediate the relationship and positive moderating effect of data analytical capabilities (business analytics capability and analytical CRM Capability). Moreover, it will also improve that the big data analytics played a key role to improve the decision-making quality (effectiveness and efficiency), which positively contributed towards firm performance in fashion industry.

Practical implications: This study will provides guidelines required by fashion industry to strengthen their big data capabilities to improve decision making quality and firm performance.

Originality/value: The proposed model will provide an insights look at dynamic capabilities theory in the domain of big data analytics to tackle the firm issues in fashion industry. The current study is the novel addition in the literature and it identified that big data analytics are envisioned to be a game changer player in decision making quality and improve firm performance in fashion industry.

Keywords: Big Data Analytics, Decision Making Quality (Decision making effectiveness + decision making efficiency), Firm performance, Data Analytical capability (business capability and CRM Capability).

ESG Unveiled: Enhancing Financial Performance in Investment Portfolios

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Abstract:

This comprehensive study delves into the intricate interplay between Environmental, Social, and Governance (ESG) factors and the financial performance of investment portfolios. Informed by an extensive literature review spanning from the 1970s to recent 2023 findings, the research sheds light on a prevailing positive association between ESG considerations and portfolio returns.

The significance of sustainable investment practices is underscored by the consistent trend identified in the literature, showcasing portfolios with robust ESG strategies yielding enhanced financial returns. Despite this, there exists a need for a nuanced understanding of the mediating impact of Corporate Social Responsibility (CSR) policies and the moderating influence of investor behavior on the relationship between ESG and portfolio performance.

This study introduces three hypotheses. The first hypothesis posits a positive relationship between ESG factors and the financial performance of portfolios, corroborated by literature emphasizing the potential for sustainable investment practices to yield positive outcomes. The second hypothesis explores the mediating impact of CSR policies, showcasing their role in further enhancing the positive influence of ESG, especially during crises and in developed economies. The third hypothesis delves into the moderating impact of investor behavior, underlining the significance of tailored strategies aligning with investor preferences.

Anticipated results, grounded in a mixed-methods approach and a pragmatism paradigm, suggest a positive correlation between ESG factors and financial performance. This is reinforced by the mediating role of CSR policies and the moderating influence of investor behavior. These findings contribute to the evolving landscape of sustainable investment practices, offering valuable insights for both socially responsible and traditional investors, and guiding decision-makers toward aligning financial goals with broader environmental and social objectives.

Elevating Tourism: The Impact of Air Transport Performance on Tourist Arrivals in Leading Destinations

Fatima Tul Zahra

Hassan Farooq Mufaz

Roshan Ali Rana

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Mubeen Ahmed Paracha

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Abstract:

Efficient air transport performance significantly influences tourism development by enhancing accessibility, attracting tourists, and stimulating economic growth. A well-functioning air transport system facilitates global connectivity, leading to increased tourist flows, economic benefits, and a more resilient tourism industry. So, the main objective of this study is to test the impact of air transport performance on tourist arrivals for the top ten tourist countries from 1995 to 2022. We have estimated a composite index using Principal Component Analysis (PCA) on the basis of Air transport freight (million ton-km), Air transport (passengers carried), and Air transport registered carrier departures worldwide. It is given the name Air Transport Performance Index. The results have been estimated using the Feasible Generalized Least Square model, and for robustness, the Driscoll and Kraay model is also applied. Our findings have validated that air transport performance is significantly increasing tourist arrivals. Among the controlling factors of the model world's income, official exchange rate, population, and environmental performance are all the increasing factors of tourist arrivals.

Key Words: Tourist Arrivals, Sustainable Tourism, Air Transport Performance

Usage of Artificial Intelligence (Ai) Influence Students Engagement: The Mediating Role of User Satisfaction and Cognitive Absorption

Seerat Fatima

Alishba

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Abstract:

This study explores the relationship between artificial intelligence (AI) and student engagement mediating by the cognitive absorption and user satisfaction. The ``AI" technology will first promote the innovation of various teaching elements, including activating high-definition, dynamic, and effective learning resources, building a ubiquitous and intelligent learning space, catalyzing the production of portable and intelligent teaching tools, and improving the quality of teachers and students' engagement. Artificial intelligence (AI) directly influences the student's engagement. Through a synthesis of existing theories, the study aims to explore how online learning affects the student's engagement. The focus is on understanding the efficiency and effectiveness of students in their engagement using learning through artificial intelligence (AI). The importance variable in this study is students' engagement, it has been defined as "students' willingness, need, desire, and compulsion to participate in, and be successful in the learning process. User satisfaction and cognitive absorption play the mediating role in this study. They both are affected positively and negatively on student engagement. The methodology involved in this study are both qualitative analysis and quantitative analysis, this survey data collected from the university's students by questionnaire and observations method. This study guides the universities management on how they will enhance the online system for students. Artificial intelligence (AI) has become widely viewed as the tutor of education.

Keywords: Artificial intelligence, online learning, cognitive absorption, user satisfaction and student engagement.

Exploring the Impact of Religiosity on Management and Organizational Behavior: An In-depth Analysis

Muhammad Umar

Jamia Darul Uloom Al Islamia

Abstract:

This research investigates the multifaceted interplay between religiosity and management/organizational behavior. In a world where diverse belief systems coexist, understanding how religious convictions shape managerial decisions and influence overall workplace dynamics becomes paramount. Through an exhaustive examination of literature, empirical studies, and real-world case analyses, this study aims to unveil the subtle yet profound ways in which religiosity permeates the realms of leadership, decision-making, and team dynamics within organizations.

The research adopts a comprehensive approach, considering varying degrees of religiosity and its manifestations across different cultural and organizational contexts. By exploring individual and collective impacts, the study seeks to provide insights into the challenges and opportunities that arise when religious beliefs intersect with professional responsibilities. Furthermore, the research addresses potential implications for workplace diversity, inclusion, and the creation of supportive environments that accommodate varying belief systems.

In shedding light on these intricate connections, this study not only contributes to academic discourse but also offers practical implications for managers, organizational leaders, and policymakers seeking to foster inclusive and culturally sensitive work environments. Ultimately, the research aims to enhance our understanding of the complex interrelationship between religiosity and the management and organizational behavior landscape, fostering a more nuanced and informed approach to leadership in our diverse global society.

Keywords: Religiosity, Management, Organizational behavior, Workplace dynamics, Leadership, Decision-making

Impact of Job Stress on Employee Performance mediating role of Employee Motivation and moderating role of Organization Commitment: A study of National School of Public Policy (NSPP) of Pakistan

Waqar ul Hassan

Omer Ali

Prof. Dr Muhammad Bilal

Abstract:

The present topic is always a current because it focuses on different area of study like management, Leadership, job performance and job satisfaction which have direct relation with stress in public sector institutions. Regarding the background of the research, the researcher analyzed the public sector institution like NSPP, which is a premier institution for civil servants of Pakistan. I tried my best to focus the stress level in the institution. The analysis of this study is there is less of stress in NSPP, because many of the employees are graduates. On the other hand, stress has been on the rise in recent years, especially in the workplace. The background of this study primarily focused on the level of stress in NSPP. Many of the employee do not cope. with the environment, the culture of the organization, resultantly stress is created. amongst employees. The researcher defined the all facets of stress and it impact on job performance in detail in this project. The finding of my research study is that the researcher has adopted behavioral. approach for this research because our area of study is public sector organizations in Pakistan (NSPP) and it the environment of the public sector which influences the working condition, personal lives, and behavioral responses / reactions of public servants working therein. Occupational stress remained a main focus toward my study. because in public sector organization, occupational stress has been seen particularly in developing country like Pakistan. HRM ensures the satisfaction of employees for their maximum contribution to achieve organizational objectives. The findings of this papers are no one can avoid from stress. 80% people have stress without nothing. Many of them could not manage the stress but NSPP has started to train its employees to learn I.T Skill and those who have less knowledge, they can improve their I.T Skills, in this way stress can be managed. easily. My other findings are if the level of job satisfaction is high in public sector thelevel of stress would be less, and the performance level of employees would be atoptimum level. No one can avoid from it because it is a universal and common. challenge to the organizations it may be public or private. Stress has direct link towards employee productivity as well as performance. It has been observed that most of the employees in the organizations have to deal with stress. A stressful work environment can have a detrimental impact on an employee productivity because of feelings of depression and dissatisfaction. Their workplace stress may be exacerbated by ambiguous shifts, long hours, and a bad working environment. Angry and dissatisfied. workers may also be a result of management actions. A lack of open communication between employees and the company senior management can lead to discontent withtheir work and an overall poorer level of performance. At the end of the paper, I havedrawn some recommendations for future plans.

Keywords: Job Stress, Stress Factors, Employees Performance, Employee Motivation, Organization commitment

The Impact of Servant Leadership on Project Success

Muhammad Naeem Riaz

Abdul Hannan Anwar

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Abstract:

Leading in a changing world is still a mysterious endeavor, leading to constant research into different leadership models. The field of servant leadership is a developing field that is crucial to these investigations. Across GLOBE cultural groups, fairness, moral integrity, empowerment, empathy, and humility are essential elements of good leadership. Furthermore, our research goes beyond theories of leadership and investigates project success variables in the context of project management.

We uncover key success indicators—project management plans, responsibility assignment matrices, and diligent monitoring—by comparing successful and unsuccessful projects, highlighting the fine balance between success and failure in project implementation. All things considered; our thorough investigation is a light in the constantly changing field of leadership studies. Looking ahead, we support more sophisticated instruments and comprehensive viewpoints when characterizing success, recognizing the complex fabric that represents successful project management and effective leadership. In an effort to distil the most important information from the data, this abstract combines a variety of viewpoints into a coherent story that emphasizes the importance and subtleties of servant leadership and project success variables in modern organizational paradigms.

Keywords: Leadership Style, Leadership, Project Management, Project Success

Investigation the Impact of Service Quality on Customer Satisfaction through Customer Loyalty. A Conceptual Model

Aqsa Talib

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Abstract:

The purpose of research is to evaluate customer satisfaction in banking sector based on customer perception regarding service quality. It is important to understand impact of service quality on customer satisfaction. Due to increasing market competitiveness, no one can deny the significance of service quality. Therefore, it is challenging for bankers to meet customer expectations. This research will find a relationship between customer satisfaction and the quality of service provided by banks and how quality can improved in service firms. For this purpose, a Sample of 150 employees will selected from bank by using convenient sampling techniques. The quantitative research method will used to conduct this study. The selection of primary studies will done by conducting interviews in a bank as a professional service industry. The Quantitative findings will derive from SPSS analysis. To improve performance systems companies should focus more on introducing employee-oriented policies by establishing a service culture followed by a strong strategy in place and by removing gaps between management – employees and its customers. It will be found that through proper planning and constant monitoring, firms can develop effective strategies to improve quality levels and retain their existing and future customers.

Keywords: Customer Satisfaction, Service Quality, and Customer Loyalty.

The Impact of Green Marketing Strategies on Consumers' Purchase Intention in Addressing Greenwashing

Gohar Fatima

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Abstract:

This study explores the impact of green marketing strategies i.e.; green advertising receptivity (GAR), non-deception (ND), green brand image (GBI), and transparency (TR) on consumers' purchase intention (PI) with a special emphasis on greenwashing. Earlier the data was collected from Vietnamese respondents. Now several hypotheses are being tested using the Self Determination Theory. Data is collected using online surveys from 250 Pakistani respondents. Data is analyzed using structural equation modeling (SEM) technique with the help of SmartPLS. The results show a positive impact of green marketing strategies on purchase intention. Moreover, the study deals with the mediating role of green brand loyalty, showing its significance in enhancing the positive effects of green marketing strategies on purchase intention. The findings of this study provide an understanding of the theory and the vital managerial implications for effectively dealing with the execution of green marketing strategies. Although previous studies have examined how consumers perceive greenwashing, this study examines the impact of green advertising receptivity (GAR), non-deception (ND), green brand image (GBI), and transparency (TR) on green brand trust (GBT) and subsequently the impact of GBT on consumers' purchasing intentions (PI) using the Stimulus Organism Response (SOR) framework. No empirical study has simultaneously encompassed both green brand loyalty as a mediator and the Self Determination Theory in this process. For future research, it would be exciting to test this framework in a cross country or cross-cultural context to see the similarities and differences in consumers' perceptions of greenwashing. Future studies can use different theoretical frameworks such as the theory of social exchange or the theory of reasoned action.

Keywords: Green advertising, green brand image, green brand loyalty, greenwashing, consumers' purchase intention, theory of self-determination

Impact of Visual Reviews on Consumers' Purchase Intention: Evidence from Daraz.pk

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Abstract:

The purpose of this study is to examine the relationship between visual reviews and consumers' purchase intention, and how factors like visual review's quantity, types & peer consumers mediate this relationship by conducting a survey through social media platforms. Former researches have been done on a broad spectrum involving different factors at once. The focus of this study is to just focus on relationship of visual reviews and purchase intention. A close ended questionnaire addressing the volume, kinds, and relative efficacy of visual reviews compared to seller-provided data and peer reviews gleaned from social media platforms, targeting a sample size of 170 will be conducted. Correlation analysis and TAM (Technology Acceptance Model) will be used to further understand the link between these variables. The results seem to give a positive response, prompting that Visual review quantity, types, effectiveness and peer consumer pressure mediates the intention to buy.

Key words: E-WOM, E-COM, Visual Reviews, Purchase Intention, Daraz.pk, Social media.

Exploring the Dynamics of Customer Loyalty: Unravelling the Influence of Performance Expectancy, Effort Expectancy, and ECRM with Customer Satisfaction as a Mediator and Hedonic Motivation as a Moderator

Abdullah Shafiq

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Abstract:

Today, electronic devices and technological advancement are accessible to everyone through which they communicate their queries to different brands. Thus, it is important for brands to establish electronic relationships with their customers. Therefore, this study aims to measure the impact of electronic customers' relationship management (ECRM), performance expectancy, and efforts expectancy on customer's loyalty. Additionally, mediating role of satisfaction towards ECRM will be focused. By recognizing the multi-dimensional nature of user motivation, we further examined the moderating impact of hedonic motivation on this relationship.

This quantitative research, grounded in the positivist paradigm, explores the intricate relationships among key variables influencing loyalty of social network users. G. Power Software was used to select the sample size of 400 in this paper. The inclusion criteria included social network users. Additionally, respondents' hedonic motivation is assessed to understand how these intrinsic pleasures influence the relationship between the independent variable and loyalty.

Implications of this research extend to the development of targeted strategies for businesses seeking to enhance customer loyalty in the dynamic realm of social networks. Understanding the mediating role of Customer Satisfaction and the moderating influence of Hedonic Motivation provides actionable insights for designing effective customer relationship management strategies. This study, while focusing on future results, sets the groundwork for businesses to proactively adapt to the evolving landscape of digital interactions, ultimately fostering stronger and more enduring customer relationships.

Keywords: ECRM, Performance expectancy, Effort expectancy, Customer satisfaction, Hedonic Motivation, loyalty

Investigating the Impact of Rich on Entrepreneurial Exit Intentions through Perceived Barriers: The Moderating Role of Gender –

(A Conceptual Paper)

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Abstract:

This conceptual paper seeks to explore the intricate relationship between Responsible and Impactful Corporate Human Resource Practices (RICH) and Entrepreneurial exit intention (EEI), with a specific emphasis on the moderating influence of gender. The study's motivation stems from the desire to add to the body of knowledge by examining how RICH practices influence entrepreneur's dedication to entrepreneurial activities and taking perceived impediments into account. The research fills a notable vacuum in the literature on sustainable business practices in this particular environment by concentrating on Pakistan.

Research on the dynamics of sustainable and responsible business practices in Pakistani organizations is conspicuously lacking, despite the global trend towards this direction. The study aims to address this gap by conducting interviews with 200 persons who are actively working in distinct organizational settings across Pakistan. Convenience sampling will be the sample technique used, as it is the most accessible and feasible method of collecting data from this particular demographic.

The unit of analysis in this quantitative research project will be the individual employee, enabling a detailed investigation of the complex interactions among perceived barriers, entrepreneurial exit intention (EEI), and Responsible and Impactful Corporate Human Resource Practices (RICH). The main analytical instrument used to carefully break down and understand these intricate linkages will be structural equation modelling (SEM), which offers a strong methodological foundation for identifying the underlying dynamics influencing sustainable workplace practices.

This study is important because it can clarify the complex relationships between RICH practices and entrepreneurial exit intention, illuminating the obstacles that workers in Pakistani workplaces perceive.

Additionally, the study looks into the potential moderating role that gender may play in determining this link. This study fills a research vacuum in Pakistan and offers useful information for companies looking to improve their sustainability efforts in this particular organizational and cultural context.

Keywords: RICH, Entrepreneurial exit intention, perceived barriers, gender, sustainability, corporate human resource practices, Pakistan, conceptual paper.

Mediating Role of Confidence and Risk taking propensity between Financial Knowledge and Entrepreneurial Intention in Public Sector Business Students of Pakistan

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Zainab Amir

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Abstract:

The purpose of this study is to examine the relationship among confidence, risk taking propensity, and financial knowledge and how they relate to entrepreneurs' intention among business students of public sector universities in Pakistan. Prior research has conflicting views on Financial literacy-Entrepreneurial Intent relationship. This article attempts to acknowledge the multidimensional nature of financial literacy (financial knowledge, financial attitude and financial behavior) and just focus on the financial knowledge component of financial literacy. A closed-ended self-administered structured questionnaire covering financial knowledge, confidence and risk taking propensity with entrepreneurial intent will be collected from business students of public sector universities. The random sample technique will be employed, targeting a sample group of 179 business students. Factor analysis, reliability, and regression and correlation analysis will be used to analyze the links between the study variables. The results are expected to show a positive relation of financial knowledge with entrepreneurial intent. Moreover, Risk taking propensity and confidence is expected to strengthen this relationship. The study will show that financial knowledge, confidence and risk taking propensity among youth significantly elevate the likelihood of fostering entrepreneurial intent.

Keywords: Financial Knowledge, Entrepreneurial Intention, Confidence, Risk-taking Propensity, Business Students

Impact of Women Empowerment On Entrepreneurship

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Abstract:

This article is written to enlighten women empowerment in entrepreneurial area. Women empowerment, shedding light on challenges, progress, and the imperative for inclusive policies. It emphasizes the complex roles women play beyond traditional expectations, addressing global disparities and violence they encounter. The article advocates for feminist movements, recognizing their historical impact on securing women's rights. It delves into the crucial roles of education, supportive workplaces, and inclusive policies in fostering women's empowerment. Moreover, the article underscores the significance of economic empowerment, linking it to GDP and highlighting the economic consequences of gender inequality. It discusses the impact of health literacy on women's well-being, emphasizing the need for clear communication and educational initiatives. The article also addresses the pivotal role of caregiving responsibilities in gender equality and advocates for government investment in universal childcare to generate jobs and break intergenerational cycles, so that women can grow in their professional fields. In essence, the article contends that empowering women requires a holistic approach, encompassing education, economic opportunities, health literacy, and supportive policies. It emphasizes the extensive benefits of women's empowerment, not only for individual women but also for families, communities, and the overall socio-economic development of nation.

Factors Affecting Women Entrepreneurship: A Study of Impact Of Women Entrepreneurship And Labor Force Participation On Economic Development Of Pakistan

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Rubab Nadeem

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Abstract:

Context - Entrepreneurship plays a vital role in the economic growth and development of a country. Besides men, women can also actively play their part in entrepreneurial environment if given equal rights and access to the resources. The development of a nation depends equally on the participation of both men and women in economic activities. However, in developing countries like Pakistan, women are discriminated on the basis of traditional socio-cultural norms and values such as provision of less education, gender inequality, lack of support and social protection, cultural standards, financial factors etc. All these social problems faced by the population lead to the production of various economic problems for the country such as unemployment, poverty, decline in growth etc.

Purpose - The purpose of this paper is to investigate the impact of women entrepreneurship on economic development of Pakistan.

Significance – Previous research shows that women entrepreneurship is an important variable that affects the economic growth of a country but developing countries like Pakistan have an adversely low level of women entrepreneurship and labor force participation. This implies the significance of the study.

Gap – Little research has been carried out on this issue in developing countries before and solutions to the problem have not been addressed significantly.

Design/methodology/approach – This study examines the following variables: women entrepreneurship, education and gender gap. In this study, the authors examine the impact of these variables on the economic growth of Pakistan and propose suitable solutions to overcome the issues faced by women entrepreneurs. The study will adopt a quantitative approach to address the problem at hand. Secondary data will be collected from existing databases and articles. Regression analysis will be performed to analyze the data.

Measuring the impact of Human Resource Development (HRD) practices on Employees Performance

Salman Shahzad

Muhammad Ramzan

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Abstract:

The purpose of this paper is to examine the impact of human resource development practices on employee performance in small and medium scale enterprises. A cross-sectional study design was applied using a structured questionnaire developed for the collection of primary data. Purposive sampling was applied in the selection of SME's. The data for this study will be collected using a self-generated questionnaire. The results will indicate that some human resource development practices impact employee performance. The research will undertaken in small and medium scale enterprises, and the analysis based on cross-sectional data which cannot be generalized across a broader range of sectors. The findings of the study will help stakeholders, policy makers and management of SME's in espousing appropriate and well-articulated HRD practices to improve employee competencies and enhance organizational effectiveness. This study extends the literature by empirically adducing evidence that, human resource development practices impact employee performance of small and medium scale enterprises.

Keywords: SEM, Employee performance, Training and Development, Career Development, HRD practices, Compensation

Does Career Resilience Promote Work Engagement through Work-Family Enrichment and Career Shocks in the Banking Sector of Pakistan?

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Bushra Akhtar

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Abstract:

In today's globalized world, economic pressures, rapidly growing markets, and technological advancement have placed employees in a challenging work environment, characterized by shifting work demands, role ambiguity, and increasing levels of job insecurity. To cope with this turbulence, employees need to demonstrate resilience and a capacity to adapt to changing workplace demands. This study will explore the concept of career resilience, and work engagement in bankers, and examine how the mediating influence of work-family enrichment contributes to individuals' ability to bounce back from challenges. Additionally, it will investigate the moderating role of career shocks in shaping the relationship between career resilience and work engagement. Very few people explored career shocks in the past, so we will explain this term in detail. It will also provide different aspects of career shocks in a negative and positive sense. We will collect data through convenience sampling. The research aims to provide valuable insights into the complex interplay of these factors, offering a nuanced understanding of how individuals navigate and thrive in their careers amid various influences. Embracing these challenges can foster resilience and open doors to innovative opportunities, shaping dynamic and diverse career trajectories within the ever-evolving landscape of research.

Keywords: Career resilience, work engagement, work-family enrichment, career shocks

Factors Influencing User Satisfaction to Continue Use of M-Commerce: Extension of Expectation Confirmation Model

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Abstract:

Despite the remarkable growth and promising future of mobile commerce, research has paid little attention so far to the factors that determine its perceived value across developing countries. This study advances marketing literature, focusing on technology by expectation confirmation, perceived usefulness, accessibility, convenience, e-trust across developing countries. The moderating role of consumer innovativeness was also investigated. The sample of the current study was comprised of 200 participants (100 male and 100 female). The results revealed that expectation confirmation, perceived usefulness, accessibility, convenience and e-Trust influence on the customer satisfaction and customer satisfaction also impact on the m-commerce. Further it was also explored that consumer innovativeness moderate the relationship between customer satisfaction and m-commerce. The results further showed that value positively affects actual usage, and strengthened by consumer innovativeness.

Keywords*:* User Satisfaction, M- Commerce, Expectation Confirmation Model, Perceived Usefulness, Accessibility, Convenience, E-Trust, Consumer Innovativeness

Impact of Deposit Money over Banking Performance

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Abstract:

This paper investigates the impact of bank deposits over the bank's performance in the entire world of commercial banks. Basically, its main purpose is to examine the effects of over or under deposits in banking sector. It explains that how banks tackle over deposit charges and interests on deposits to customers as well as under deposit challenges in the market. Coefficient of Correlation is used to find out the relation between net interest margin, cost to income ratio, CASA ratio, Return on Investment and Bank overheads individually with banks performance, while t-test is utilize for testing hypothesis. Regression model explains the relation among proposed variables graphically and Enova Table. Quantitative cross sectional data of commercial banks collects for the study. This study highlights the consequences of movement in deposits on performance by using secondary data. The findings of the study is that over or under deposits have positive as well as negative relation with performance, where different proposed variables study as performance indicator. This study explains the pros and cons of under or over deposits in banks and either which type of deposit favorable for banks. Here the researcher discusses either over or under deposits is better for banks or they should be aware of both situations. It can be concluded that movement in deposits has great impact on performance in the long run by influencing the banks intermediary work. This paper helps the banks to stand strongly and strategically at the time of tight monetary policy when deposits increase by informing the inverse impact of this monetary tool in sense of CRR with central bank. This paper also helps in both situations how the banks can act to control future financial issues like satisfaction of customers, loans, investments and many more related to banks' financial structure.

Keywords: Correlation, CASA Ratio, Bank Overhead, Regression, Cross Section Data, Variable, Monetary Policy, CRR.

The Impact of Mobile Banking on The Adoption of New and Innovative Mobile Applications and Service Delivery Methods

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Abstract:

Mobile banking is a service provided by banks that allows customers to access their account information and conduct financial transactions using their Mobile Phone. The main objective of this research is to examine the impact of innovations on the adoption of mobile banking in Pakistan. The more mobile banking innovations increase, the better technology makes it easier for customers. Innovations enable organizations to meet customer expectations. The purpose of this study is to investigate the relative outcomes of mobile banking adoption by gender. Using the TAM and TPB methods, the researcher develops and predicts individual consumer intentions. Using the model, the researcher developed that TAM predicts the adoption of SN that strongly influences the female segment. Or the TPB predicts the adoption of PBC that strongly affects the male segment. This study will be helpful for the banking sector and provide comprehensive insight into individual intentions to adopt m-banking as a genre but does not include an individual's age and qualification.

Key Words: Mobile Banking, Innovations, IT Adoption

Exploring the influence of workforce diversity on employee performance; A study on Banking Sector of Pakistan.

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Nimra Amir

Nimra Asghar

Fahass Ahmed

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Abstract:

The goal of this study is to determine how employee performance and workforce diversity relate to each other in the context of Pakistan's banking sector. While there are many variables that can affect an employee's performance, this study only looks at the most important ones, such as the employee's age, gender, experience, and educational background, as predictors of employee performance in the Pakistani banking industry. The data will be collected from banks in Lahore. The study will be contributes to existing literature on workforce diversity and its impact on employee performance, particularly within the specific context of banking industry of Pakistan. As diversity continuous to shape organizational dynamics, insight from this study can inform strategic management practices and foster a more inclusive work environment. The study focus on front desk employees of the banks within the Lahore Region. The data will be collected from 200 front desk employees. Convenience sampling will be employed to gather data. Primary data will be used in the study. SMART PLS 4.0 will be used to assess the data.

Keywords: Workforce diversity, Employee performance, Banking sector

Role of Environment, Social & Governance (ESG) Factors in Optimal Investment Decisions

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Abstract:

Purpose: - The financial markets are moving towards transparent practices to address climate risk and to ensure sustainability of returns. The environment, Social and Governance (ESG) analysis while selecting stock and constructing portfolio has become significant part of investment analysis process. The current study's objective to assess the firm's compliance to ESG Factors and to empirically analyze the portfolio returns under ESG consideration in perspective of emerging economy like Pakistan.

Design / Methodology / Approach: -For the purpose of the analysis firm's ESG compliance was assessed through sustainability reports and corporate publications using NLP python library of ML approach. The firms stock prices, sustainability and financial data were utilized from 2016-2023 for the purpose of analysis. The ESG compliance portfolio return and volatility was analyzed with beta, Sharpe Ratio, Jensen Alpha and Treynor ratio.

Findings: -The empirical findings of the study suggests that the firms have reported their concerns and compliance towards ESG to address environmental hazards and to opt for green practices. The identification of ESG compliance stock to construct optimal portfolios for sustainable investments can be achieved via assessment of corporate commitment and adherence to ESG.

Practical Implications: - The study contribute in the existing literature of ESG and portfolio returns and the results of the study are useful for fund managers, regulatory bodies and investment Managers.

Originality / Value: - In context of emerging economy where the ESG data is difficult to assess, this study contributes to provide an AI approach to extract firm level ESG data and to incorporate in ESG factors in investment analysis.

Keywords: ESG, optimal portfolio, Green Investment, Machine Learning, Corporate disclosure, Supervised Learning, Unsupervised Learning, sustainable investment practices.

Digital Technology Innovation, Market Value And Total Factor Productivity: An Empirical Study of Listed Companies in China

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Abstract:

Chinese listed companies face unprecedented challenges and opportunities as digital technology develops rapidly, with digital innovation playing an increasingly important role in corporate competition, but its relationship with market value and total factor productivity is not yet clear. The study examines the relationship between digital technology innovation, market value, and total factor productivity of Chinese listed companies from 2008 to 2021, as well as the moderating role of market value in this relationship. This study looks at the direct connection between digital technological innovation and total factor productivity, followed by the moderating effects of market value, and then a robust test is conducted. The relationship between digital technology innovation and total factor productivity in Chinese listed companies is found to be significantly and positively related to 22,284 selected observations, and market value moderates the relationship significantly. This study is designed to provide strategic guidance for Chinese listed companies in the digital era, as well as to explore the relationship between digital technology innovation and total factor productivity. Further, the study provides policymakers and academics with empirical evidence on the relationship between innovation in digital technology, market value, and total factor productivity. This study has limitations in terms of data and methodology, and future research in this area will be necessary to better understand how companies are developing in the digital age.

Keywords: Total factor productivity; Digital technology innovation; Market value.

Analysis of The New Audit Report's Effects On Chinese Corporate Risk-Taking

XuJiayu

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Abstract:

Enterprise risk-taking is crucial to enhancing its own value. China has also accelerated the implementation of the new audit requirements while maintaining pace with the rest of the world. This study examines the disclosure of significant audit problems and its effects on the level of risk-taking of listed businesses by starting with the implementation of the new audit standards. The empirical findings demonstrate that there is a significant positive correlation between the exposure to critical audit matters and the degree of enterprise risk-taking, which results in the enterprises choosing projects with high expected income when making investment and financing decisions following the implementation of the new audit reporting standards; And the positive relationship of the enterprises audited by "non-top ten" firms is more obvious; Additionally, the report will contain more data and have higher-quality information if more significant audit problems are disclosed. the more effectively it can encourage risk-taking inside the business; Further investigation will likely demonstrate that by encouraging businesses to take risks, their value grows as a result of the exposure of important audit problems. This study has aided in completing the pertinent literature on the financial effects of important audit issues and also serves as a theoretical guide for future firm value development.

Auditors' Great Famine Experience and Stock Price Crash Risk

Huo Mengmin
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Abstract:

This paper investigates the causality between auditors' Great Famine Experience and stock price crash risk. We use Chinese stock market data over the period 2007-2021. We find that the Great Famine Experience will affect stock price crash risk. Auditors who experienced the Great Famine in their childhood, will become more conservative. Our paper illustrates that auditors' Great Famine Experience will decrease stock price crash risk. Our results are more significant when the auditors are Big N audit firms (compared to non-Big N audit firms), partners, high-educated people, and industry experts. We also find gender differences, and female auditors are more easily affected by the experience.

Keywords: Great Famine Experience; stock price crash risk; auditor

Has the New Audit Report Reduced Agency Costs?

Wang Jinlin
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Abstract:

To promote capital market reform, the Chinese government has introduced a new audit reporting standard, i .e. the addition of a key audit matter paragraph in the audit report, which provides a new way to reduce information asymmetry. This paper empirically investigates the impact on agency costs in the new auditor's reporting standard using the propensity score matching method and the double difference model (PSM-DID) for the analysis of A-share and A+H-share listed companies, using a sample of pre-pilot companies that have not implemented the key audit matter and a sample of A+H-share companies that have implemented the standard for the first time. The results show that when key audit matters are disclosed in the audit report, the effect on agency costs is reduced, and the higher the number of key audit matters disclosed, the more significant the effect on agency costs is. It was further found that the reduction in agency costs was mainly due to the reduction in information asymmetry through the disclosure of key audit matters, and that the reputation of the accounting firm also had an impact on this reduction.

Keywords: Audit Report;Agency Costs;Audit Matters, Accounting Firm;The Information Asymmetry.

The Influence of Family Cultural Capital on Depression Tendency of College Student

Xu Feixiang
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Abstract:

In order to explore the internal relationship between parents' education level, family cultural habits, family cultural expectations and college students' depressive tendencies in family cultural capital, 1089 Chinese college students were investigated with PHQ-9 depression screening scale and family cultural capital scale, and regression analysis was carried out. The results found that: parents' education level can negatively predict the depression tendency of college students; the better the family culture habits, the less the chance of college students' depression tendency; the higher the expectation of family culture, the negatively promote the depression tendency of college students. Based on this, it can be seen that generous family cultural capital can alleviate the depression tendency of college students, so it is recommended that parents should pay attention to the creation and accumulation of family cultural capital in their children's early stages; colleges and universities should increase the degree of attention to the mental health of students who are relatively lacking in family cultural capital; The government needs to strengthen the publicity of depression to promote the correct understanding of depression among the public.

Keywords: Family Cultural Capital; Depression Tendency; Parents' Education Level; Family Cultural Habits; Family Cultural Expectations.

Analyzing the Nexus: Air Transport Performance, Economic Factors, and Foreign Direct Investment in SAARC Countries (1995-2022)

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Adil Shahzad

Mubasher Iqbal

Mubeen Ahmed Paracha
University of the Lahore

Abstract:

Efficient air transport performance positively influences foreign direct investment (FDI) by enhancing global connectivity, reducing time-related costs, and fostering accessibility, thereby making a location more attractive to investors. So, the main objective of this study is to test the impact of air transport performance on FDI for SAARC countries from 1995 to 2022. We have estimated a composite index using Principal Component Analysis (PCA) on the basis of Air transport freight (million ton-km), Air transport (passengers carried), and Air transport registered carrier departures worldwide. It is given the name Air Transport Performance Index. The results have been estimated using the Feasible Generalized Least Square model, and for robustness, the Driscoll and Kraay model is also applied. Estimated results have validated the significance of air transport performance in enhancing FDI. Among control variables, economic growth and infrastructure have been validated as FDI-promoting factors. On the other hand, education and the labor force are reducing it.

Key Words: FDI, Foreign Direct Investment Inflows, Air Transport Performance

Assessing the Relationship Between Air Transport Performance and Trade Dynamics in Developing Economies

Ume Rubab

Muhammad Soban Asif

Ali Hassan

Mubasher Iqbal

Mubeen Ahmed Paracha

University of the Lahore

Abstract:

This study aims to test how air transport performance affects trade for selected developing countries. As trade openness is vital for developing countries, fostering economic growth through increased exports, job creation, and technology transfer. It enables diversification, reduces dependency, attracts foreign investment, and promotes cultural exchange. So, air transport performance is incorporated as an index based on different air transport indicators. It is a composite measure designed to assess and quantify the global air transport industry's overall performance and activity levels. This index considers three key indicators: Air transport freight (million ton-km), Air transport passengers carried, and Air transport registered carrier departures worldwide. Our study covers the time from 1995 to 2022, and panel ARDL (Pooled Mean Group) is incorporated as an econometric approach. It has been confirmed that the volume of trade is affected by air transport performance following a U-shaped pattern. Among the controlling factors of the model, domestic and foreign incomes are increasing, while inflation and environmental deterioration are responsible for reducing the trade volume.

Key Words: Trade Volume, Economic Globalization, Air Transport Performance, Panel ARDL

Exploring The Non-Linear Impact of Money Market Rate On the Profitability Of Banks

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Abstract:

The point and motivation behind this examination are to break down the impact of loan cost (KIBOR) hesitancy on the benefit of the banks working in Pakistan by the reviewed yearly reports of commercial banks from the official site of the State Bank of Pakistan for the year 2013 to 2023. Financing cost is the principal factor here, which decides and portrays the benefits of the banks. Banks make money by accepting cash deposits from their customers in return for interest payments and then investing that money elsewhere. The bank's profit is the difference between the interest they pay their depositors and the yield they make through investing. Higher interest rates increase the yield on their investments. Interest rates can go too high. If they reach a level that makes businesses and consumers hesitate to borrow, the lending side of banking starts to suffer. The impact of loan loss provisions of the banks on the performance of the banks operating in Pakistan. Moreover, the other factors that affect banking profitability have been discussed in this study. Our results show that the loan loss provision of the banks is of paramount importance in affecting its profitability. A well-managed bank is perceived to have of lower loan loss provision and such an advantage will be translated into higher profitability. In addition, banks advances and deposits which represent a vital role in the determination of banking profitability. Finally, with regard to nonfinancial variables, political instability in the previous period has a more significant effect on the present bank's profitability than the political instability at the present period. This study has used panel data analysis to explore the quadratic role of KIBOR on commercial bank profitability by allowing the exposure factor. The results of the study will be instrumental in identifying the conditions that determine the positive or negative effect of KIBOR in banks

The Dynamic Linkage Between Information and Communication Technology, Human Development Index, And Economic Growth

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Arooj Alvi

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Abstract:

The impact of ICT on economic growth is more powerful in developed countries as compared to developing countries as their level of HDI is high. HDI is pivotal for mobile phones and internet usage which ultimately gives rise to the economic growth of a country. This study concentrates on the effect of Information communication technology (ICT) and the Human development index (HDI) on the economic growth (GDP) of developing and developed countries. The research findings revealed that in developed countries the rate of HDI (measure GNP) is much higher which causes a strong significant impact on their economic growth. By gathering data from developed and developing countries it can be constructed that the ICT index from mobile (CEL) and internet (NET) has a significant impact on the economic growth of developing countries.

Keywords: ICT (Information and Communication Technology), HDI (Human Development Index)

Investigating the role of Individual Investor behaviors on Financial Decision Making: Moderating Role of Emotions

Rukhsar Zulfiqar

Muneeza Iqbal

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Assistant Professor,
Hailey College of Banking & Finance,
University of the Punjab, Lahore.

Abstract:

This study investigates the intricate relationship between individual investors and their influence on business outcomes, focusing on the role of behavioral biases as an independent variable, decision-making processes as the dependent variable, and the moderating effects of various situations and perceptions. The financial landscape is inherently influenced by the decisions made by individual investors, whose behaviors often deviate from rationality due to cognitive biases. By employing a comprehensive research framework, this study aims to elucidate the multifaceted connections between these key elements. The independent variable, behavioral biases, is a critical determinant of how individual investors interpret information, assess risks, and make financial decisions. Psychological factors such as overconfidence, loss aversion, and herding behavior may significantly impact investment strategies, thereby shaping the trajectory of the businesses involved. Understanding the nature and extent of these biases is paramount in predicting and explaining the dynamics of individual investor influence on business. The dependent variable, decision-making, forms the crux of this investigation, as it reflects the ultimate manifestation of individual investor behavior. The study examines how various behavioral biases contribute to decision-making processes, exploring the implications of these decisions on business performance, market trends, and overall economic stability. By dissecting decision-making within the context of individual investors, the research aims to unveil patterns and trends that can inform businesses and policymakers alike.

Recognizing the nuanced nature of individual investor influence, this study introduces the moderating variables of different situations and perceptions. Different situations, such as market volatility or economic downturns, may amplify or mitigate the impact of behavioral biases on decision-making. Perceptions, encompassing individual attitudes, beliefs, and risk tolerance, further contribute to the complex interplay between investors and businesses. Through a meticulous analysis of these moderating factors, the study seeks to provide a nuanced understanding of how the broader context shapes the relationship between individual investors and business outcomes.

Investigate the Impact of Sustainable Practices on Consumer Purchasing Decisions with Mediating Role of Consumer Trust: Evidence from The E-Commerce Industry.

Muhammad Zulqarnain

Wahab Ahmed

Hassan Ali Tarar

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Abstract:

This main objective of this study is to investigate the impact of sustainable practices in the e-commerce industry, focusing on packaging, logistics practices, employment practices, and ethical sourcing, and its impact on consumer purchasing decisions as the mediating role of consumer trust. Data will be collected through a self-designed questionnaire using a cross-sectional survey method using a quantitative approach to investigate the relationship between sustainable practices (including packaging, logistics, employment practices, and ethical sourcing), between consumer trust and purchase decisions in the e-commerce sector by using 5-point Likert scale in which 1 assign to strongly disagree and 5 assign to strongly agree get Representative sample 292. The data collected is analyzed using the statistical tool SPSS and PROCESS macro for mediation analysis. Descriptive statistics will summarize demographic data, while inferential methods such as correlation and regression analyze test hypotheses and reveal relationships. A mediation analysis will examine the role of consumer trust in particular, to provide a better understanding of the dynamics studied. Research findings reveal a strong positive relationship between sustainable practices (packaging, logistics, employment practices, and ethical sourcing) in e-commerce and consumer trust in, and subsequently influence purchasing decisions. The study highlights the critical role that sustainability plays in shaping today’s online consumer behavior, highlighting its significant impact on different aspects of the e-commerce experience. Future research should consider the various factors and factors influencing sustainability perceptions for a more comprehensive understanding. Companies can use the findings to increase consumer confidence and drive purchasing decisions by clearly communicating their sustainability efforts. This study contributes to the existing body of knowledge by empirically examining the positive impact of several aspects of sustainable practices on consumer behavior in the e-commerce sector.

Keywords: Sustainable Practices, E-Commerce, Packaging, Logistics, Employment Practices, Ethical Sourcing, Consumer Trust, Purchasing Decisions.

The Effect of Unstable Job on Employees Turnover Intention

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Abstract:

The COVID-19 pandemic caused a significant global shock that has potentially resulted in recession and economic crisis, leading to many employees around the globe losing their jobs (1). To survive this unexpected crisis, many companies have implemented massive restructuring and downsizing. As a result, employees have suffered from an increased sense of job insecurity (2–4). Job insecurity can be defined as "the perceived threat of losing the current job in the near future" [(5), p. 65].

Previous studies have demonstrated that job insecurity is closely associated with organizational outcomes. By functioning as a severe job stressor, job insecurity has been known to significantly predict employee's poor mental/physical health, burnout, job stress, turnover intention, decreased organizational commitment/identification/trust, work engagement, creativity, and organizational citizenship behavior (3, 6–15).

Although a number of studies on job insecurity have revealed the influence of job insecurity on several important organizational outcomes, we believe that there may still be some research gaps to be examined (8, 12).

First, previous scholars have suggested there is an inconclusive link between job insecurity and organizational outcomes (8, 12, 16). Specifically, several review papers (8, 12, 16) reported that job insecurity significantly diminishes the quality of individual-level, team-level, and organizational-level outcomes. The detrimental influences are because job insecurity tends to significantly elevate the degree of employee stress and negative responses such as perceptions, attitudes, and behaviors (6, 11, 16). By contrast, other scholars have demonstrated that job insecurity is likely to promote the quality of various outcomes or performances (13, 17, 18). Based on the job-preservation motivation perspective (13, 18), These results are derived from the understanding that an unstable job would urge employees to do their best to survive in their role by achieving high levels of performance. In addition, other research has reported that job insecurity is not associated with their outcomes in an organization (19). These varied and inconclusive results are due to a lack of research on intermediating processes (i.e., mediators) and contingent/contextual factors (i.e., moderators) in the association (12, 16). Therefore, our attempt to investigate various mediators and moderators is meaningful.

Second, extant works have paid relatively less attention to employee's positive psychology–associated mediators or moderators (including meaningfulness of work, forgiveness, gratitude, and coaching leadership) when explaining the underlying processes and contextual factors between job insecurity and

organizational outcomes (8, 12, 20). In other words, those studies have mainly focused on "negative" aspects of organizational life.

Positive psychology has tried to explain a variety of organizational phenomena from the perspective of positive processes, attributes, and outcomes instead of negative ones (20). For example, previous scholars have reported that various negative variables such as threat to manifest/latent benefits of work (5), frustration of psychological needs (15), psychological contract breach (5), and injustice (21) function as critical mediators in the job insecurity–organizational outcomes relationship (8, 12). We acknowledge that negative mediators and moderators can meaningfully explain the influence of job insecurity in an organization. However, given that "real" organizational life includes both positive and negative aspects, examining the underlying mechanisms and its contingent factors from the perspective of positive psychology is required (8, 12, 22). This is the reason why the positive psychological approach has been acknowledged to possess theoretical and practical value (20).

Third, existing studies on job insecurity have underexplored the important role of leadership in the context of unstable job (8, 12, 16). Although scholars have reported a variety of boundary conditions (or contextual factors) that buffer the negative influence of job insecurity, they have mainly focused on individual-level variables including self-esteem, self-efficacy, internal locus of control, proactive personality, psychological capital, resilience, job control, and emotional intelligence; or macro-level factors including labor market insecurity, social safety networks, and macro-economic conditions (23–32). Thus, few studies have examined the moderating role of leadership (8, 12, 16). Leaders significantly influence employees' perceptions, attitudes, and behaviors by assigning tasks, evaluating them, establishing (explicit and implicit) norms within an organization (33, 34). They are also regarded as a main actor symbolizing the organization itself from the perspective of employees (35). Thus, investigating the moderating role of leadership is meaningful.

To address the described research gaps, we explore the intermediating mechanism and its contextual factor in the relationship between job insecurity and turnover intention. This concept is defined as the degree to which a member wants to leave their current job or organization to seek another one (36, 37). More specifically, this research suggests that employee's meaningfulness of work mediates the association between job insecurity and turnover intention. Furthermore, coaching leadership may buffer the harmful impact of job insecurity on meaningfulness of work by positively moderating the relationship.

To empirically test our hypotheses, we present a moderated mediation model in this paper that uses structural equation modeling (SEM) with 3-wave time-lagged data from 372 Korean workers. We expect the findings of this study will contribute to both job insecurity and turnover intention literature as follows. First, in the current paper, we try to elucidate the inconclusive relationship between job insecurity and organizational outcomes by exploring the intermediating mechanism (i.e., a mediator) and its contextual factor (i.e., a moderator) of the relationship. Second, we explore the intermediating process and its contingent variable from the perspective of positive psychology (i.e., meaningfulness of work and coaching leadership). Third, the research emphasizes the important role of leadership by demonstrating that coaching leadership, as one of the emerging leadership styles, functions as a buffering factor that diminishes the harmful effect of job insecurity on meaningfulness of work. Lastly, from a methodological point of view, this study complements the limitations of cross-sectional data by applying a longitudinal approach (i.e., 3-wave time-lagged research design).

Investigating the Impact of Training and Development on Organizational performance: A Study on Old Age Employees

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Abstract:

Training and development is great contribution in senior employee’s performance and organization productivity. There for the objective of this study to see the impact of training and development of senior employees and organization productivity. Seniors employees of the organization are an assets of the organization but the organization could never use them in good way. In past not work on senior’s employees. Our study related to senior’s employees and organization productivity. The impact of training and development programs for senior employees on organizational productivity will investigated in this study. The study will investigate that increased employee competencies, effectiveness, and productivity are mostly dependent on their knowledge, skills, and attitudes—all of which are primarily developed through training and development. In order to improve and promote organizational effectiveness, productivity, and profitability as well as to gain a competitive advantage over rivals, the paper will tell us that the primary goal of training and development programs for older employees is to cultivate the skills, knowledge, and competencies of the workforce.

The fundamental tenet of training and development is that employees' attitudes, abilities, behaviors, skills, and competencies must all be enhanced if organizational goals and objectives are to be met. This study will fill the gap because most of studies on young employees in past but were not work on old age employees in service sector. The employee of the organization is assets of the organization so, utilize these assets in good way. This study base on service sector employees of Pakistan and use conveyance sampling techniques for collecting data. Research design will base on quantitative research and data will be analyze through PLS-SEM. This study will be contributing and find out the importance of old age employees. The old employee how to perform good work for the organization in good way and contribute in organization performance because the old age employees know the environment of the organization but passage of time

and technology change they not perform well. So, this study will be find out how the performance of the organization will be crease through old age employees training & development.

Key Words: Training & Development, Employee Commitment, Training & Development Evaluation, Perceived Organizational Productivity

Influence of Role Conflict on Turnover Intention: The Mediating Role of Work-Related Stress and Moderating Role of Career Growth

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Abstract:

This research paper explores the global importance of the Information Technology (IT) industry and its specific role in Pakistan, emphasizing the critical factor of turnover intention and its potential impact on sustainability and growth. The study delves into the relationship between role conflict, work-related stress, and turnover intentions in the context of the IT sector. The research employs a quantitative approach, utilizing surveys and statistical analyses, with a focus on a case study within the IT industry in Pakistan. The study finds that role conflict, arising from disparities between assigned roles and actual performance, correlates significantly with turnover intentions. Work-related stress is identified as a mediator in this relationship, with employees experiencing stress as a result of unclear roles and responsibilities being more likely to consider leaving their organizations. Additionally, the research introduces the moderating role of career growth, suggesting that individuals with higher career growth may navigate work-related stress differently, influencing their decisions regarding turnover. The methodology involves a survey using SPSS and Smart PLS, employing a deductive approach and a random sampling technique within the IT sector. The measurements include variables such as role conflict, work-related stress, career growth, and turnover intention, assessed through Likert scales. While the study provides valuable insights, limitations include potential oversimplification and limited generalizability. Future research is recommended to adopt longitudinal designs, explore organizational interventions, consider individual differences, incorporate qualitative methods, and assess the influence of technology on the relationship between role conflict, stress, and turnover intentions. Overall, this research contributes to understanding the nuanced interplay within the IT industry and offers practical implications for effective workforce management.

Keywords: role conflict, work related stress, career growth, turnover intentions

Sustainability Champions: The Impact of Eco-Centric Leadership and Perceived Organizational Support towards the Environment on Fostering Employees Green Behaviors

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Abstract:

Organizations are increasingly steering their efforts towards fostering environmentally friendly behaviors among employees in response to the serious repercussions of environmental degradation, climate change, and global warming. Sustainability has transcended being a mere trend or buzzword; it is now considered a crucial business strategy to promote eco-friendly practices, ensuring competitiveness and relevance. Managers are tasked with contemplating and determining the environmental, social, and ethical goals that translate the organization's strategies into sustainable actions. This study specifically delves into the dynamics of eco-centric leadership and its impact on encouraging employees to engage in green behaviors (task-related and pro-active pro-environmental behaviors). The research incorporates the mediation mechanism of perceived organizational support towards the environment, drawing on the theoretical framework of the Supply and Value (S-V) fit theory. As stakeholder awareness of conservation and social responsibility grows, eco-centric leadership is identified as a key driver for achieving sustainability. Data collection for the study employed a survey questionnaire and a convenience sampling technique. The findings demonstrate a positive and significant relationship between eco-centric leadership and both task-related and pro-active pro-environmental behaviors among employees. Furthermore, the research elucidates that perceived organizational support towards the environment acts as a mediator in the positive association between eco-centric leadership and employee green behavior, encompassing both task-related and pro-active pro-environmental behaviors. These results offer meaningful insights for the development of organizational leaders and policies, emphasizing the importance of cultivating and acknowledging the eco-centric leadership style. This approach aims to create an organizational environment that champions ecological values and conservation beliefs. The study significantly contributes to a broader understanding of leadership, employee behaviors, sustainable development, and overall sustainability. It sheds light on the pivotal role played by eco-conscious leaders in driving positive changes in employee behaviors for the protection of the environment.

Factors That Influence Employees Creativity within the Organization

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Abstract:

Our study depends on four variables Knowledge Sharing, Cultural Intelligence, Management Relation towards Employee and Employee Creativity. This study is important to identify the significance of knowledge sharing in organizations. It helps in analysing the performance and creativity of the individuals due to the sharing of knowledge. Organizations performances are increased when the information is spilled among the individuals in the most appropriate way which will help an organization increase their performance. Cultural intelligence plays a very vital role as it shows the attitudes and behaviours of the individuals with different cultural backgrounds. This gives an in depth knowledge and information of variety of individuals sharing knowledge with each other. Organizations can take help from this study to enhance the individual creativity by increasing the culture of knowledge sharing in the organization. Our study comprises with the data of 100 respondents with different age groups and genders. This data was taken mainly from the individuals working in the BPO industry. We distributed around 130-150 questionnaires from which we get 100 responses. Questionnaires was based on 5 Likert square model (Strongly disagree to sternly agree). Data was interpreted with the help of SPSS from which we calculated regression and correlation. By analysing the data and results this study shows the positive relationship among the variables i.e knowledge sharing with the help of cultural intelligence and management behaviour towards employee enhances the individual creativity of employees. It shows the significant relationship among the variables. Managers of different organizations can use this study to give more importance to knowledge sharing in their teams for enhancing the performance of the individuals. For future guidance this study can be done by increasing the mediators and moderators which means check the affect of knowledge sharing by adding more mediators and moderators which will show the results from every aspect. Than the study will be more helpful to give more clear picture of the importance of knowledge sharing in the organization. The most important words of our study are mainly Knowledge spill over, cultural intelligence, management behaviour towards employee and employee creativity.

From Values to Action: Understanding Pro-Environmental Behavior and Energy-Saving in Organizations Facing an Energy Crisis

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Abstract:

During times of crisis, like an energy crisis, it becomes imperative for firm/organizations to delve deeper into the various factors that play a role in shaping employee energy-saving behaviors. This understanding can help promote sustainability and reduce energy consumption effectively. Onecrucialfactorthatcanimpactemployees'energy-saving behavior is their level of knowledge about energy-saving practices. This study aims to investigate the potential impacts of social cognition, personal biospheric values, perceived moral norms, and perceived corporate environmental sustainability on pro-environmental Behaviors. The study will explore the relationship between pro-environmental behavior, knowledge of energy saving, and employee energy-saving behavior. The mediating role of pro-environmental behavior and the moderating role of knowledge of energy saving will be examined in this context. The research will be guided by the theory of social cognition and norm action models as the theoretical framework. Quantitative data was collected from 400 employees working in major cities of Punjab, and then itwasanalyzedusingPartialleastsquare-structuralequationmodeling(PLS-SEM). The results revealed employees' social cognition, personal values, moral norms, and perception of corporate responsibility had a significant impact on pro-environmental behavior. Pro environmental behavior was directly related to energy-saving behavior. The findings also revealed that pro-environmental behavior mediated the relationship between perceived corporate responsibility and energy-saving behavior. Additionally, knowledge of energy-saving played a moderating role in the relationship between pro-environmental behavior and energy-saving during crisis situations. This research has practical implications for firm/organizations that want to encourage energy conservation and sustainability among their staff. It highlights the importance of policies and initiatives that promote environmental responsibility and knowledge sharing to improve energy saving practices, especially during times of crisis.

Keywords: Pro-environmental behavior; Social cognition; Biospheric values; Energy crisis· Energy-saving behavior

The role of Green Intellectual Capital in increasing Business Sustainability with the help of Adaptive Cycle

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Abstract:

In the last few years, many concerns regarding environmental pollution have been increased due to the growth of manufacturing industries. Environmental pollution has been increased because of industrial waste. This problem will be solved through three dimensions: Green Intellectual Capital, Energy Efficiency and Adaptive Cycle. Manufacturing organizations all over the globe are supposed to have green intellectual capital that can make correct and instant decisions regarding the adaptation of global concerns. By using energy efficiently, manufacturing organizations can produce eco-friendly goods and can stand on their responsibility for societal well-being. This study aims to determine the impact of green intellectual capital on business sustainability which is then mediated through Adaptive Cycle. To achieve the study objectives, a quantitative study will be developed, and the data will be obtained through a structured questionnaire containing the measures of the study variables. The data will be collected from employees of manufacturing industries. The collected data will be analyzed through convenience sampling technique. Collected data from them and outcome drawn will assist other in pursuing sustainable initiatives. Based on the analysis, the study will reveal there is a positive impact of green intellectual capital on business sustainability.

Key words: Green Intellectual Capital, Energy Efficiency, Business Sustainability, and Adaptive Cycle

Relationship Between AI and Loan Facilities to Women with The Moderating Role of International Policies

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Abstract:

Women entrepreneur are one face of multifaceted global economy, contributing 3 trillion $ is revenue and creating 23 million plus jobs. Despite their significant role, women face many challenges in market, one of which is qualifying for loan. This article provides a comprehensive analysis of the challenges that women-owned ventures face when accessing credit and explores the various factors that contribute to their limited financial availability. Through a review of 125 articles, the researchers aim to gain an overview of how gender biases and differences impact women-owned businesses' ability to access credit, which is crucial for their success. A quantitative study utilizing structured questionnaires will collect data from female entrepreneurs who have recently sought business loans. Analysis will include regression and moderation analysis. The research reveals that while women-owned firms face similar constraints as their male counterparts, there are unique challenges that they face due to their gender. These include risk aversion from banks, lack of financial services, inadequate collateral, and limited access to finance. Interestingly, the findings suggest that women-owned firms are often more creditworthy than male-owned firms, despite their difficulties in accessing financial markets. The main focus of the research is to evaluate how artificial intelligence and machine learning is one of the reasons of gender biasness and the mediating role of international financial service providers prioritize women-led businesses in terms of financing.

Keyword: Women-owned business, credit facility, artificial intelligence, machine learning, gender bias, loans, entrepreneurship,

Investigating The Role of Influencers Towards Millennial and Generation Z E-Entrepreneurial Intention

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Abstract:

Today, e-entrepreneurship has a significant role in the development of an economy because it motivates individuals to start their own virtual and innovative ventures. Furthermore, in the sphere of technological advancements, it is an important aspect to understand what motivates to millennial and Gen z to start involving in e-entrepreneurial activities. Thus, this study proposed an idea of examining the impact of influencers' opinion leadership, attitude homophily and parasocial relationships with influencers on social media users' intentions to initiate their own e-business. Moreover, this study will also reflect on the mediating role of Theory of Planned Behavior (TPB) factors including social media users' attitude, perceived subjective norms and behavioral control towards e-entrepreneurship. Population for this study includes millennial and gen z's social media users and sample size is 146 determined by employing g power analysis. Data for this study will be obtained through close-ended questionnaire by opting convenience sampling technique. To test the proposed model, Structural Equation Modeling (SEM) method will be used for inferential analysis. Numerous researches have been confirmed that TPB factors such as perceived subjective norms and behavioral control has significant relationship with e-entrepreneurial intentions. But none of them has emphasized on influencers as antecedents of social media users' attitude towards e-entrepreneurship (ATEE). Therefore, this study will investigate the role of influencers' as antecedent of EEI. This study has important practical and academic contribution to the body of knowledge and findings will be addressed in relation to prevailing online business trends in Pakistan by shedding lights on innovative aspirations and emerging entrepreneurs among social media users.

Keywords: e-entrepreneurship; theory of planned behavior; parasocial relationships with influencers; influencers' opinion leadership; attitude homophily with influencers; attitude toward e-entrepreneurship; perceived subjective norms; perceived behavioral control; social media users; millennial and gen z; e-business; online businesses; Pakistan

Vest iGATE The Career Counselling Factors Effecting Career Choices; A Conceptual Model

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Abstract:

The study attempts to understand students approach towards career counselling. Choosing a career is the most important and difficult phase of a student life. The concept is not very much well known. Career counselling provision has multi-fold benefits in the short and long term. At the individual level, career counselling can help with improved skills and knowledge, better participation in work, better learning, and enhanced well-being. It consequently leads to positive outcomes in student’s life as it results in better career decision. This study provides students perspective pertaining to career counselling. It aims to investigate the result of academic career counselling on career choice of students. Qualitative approach will be used to investigate the issue using survey method, a structured questionnaire will be distributed among students of private and government colleges and universities through random samples and data analysis is done using PLS-SEM. The students opt for a directionless career due to inadequate resources, lack of awareness and unavailability of trained career counsellors. Thus, we can say that lack of career counselling results in career blindness. However, universities’ students have some level of career counselling for their future. Research recommends that career counselling be made available to colleges students to provide maximum benefits to college students across the country.

Keywords: Career counselling, career choice, resources, awareness, training, career blindness

Family Incivility and Employee Thriving: A Moderated Mediated Model Psychological Distress and Cross Self-evaluation.

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Abstract:

This study extends the stress literature by exploring the relationship between family incivility and employee thriving. We examine whether psychological distress mediates the link between family incivility and employee thriving. We also investigate how core self-evaluation might moderate this mediated relationship. Data from a two-wave study indicate that psychological distress mediates the relationship between family incivility and employee thriving. In addition, core self-evaluation moderates the relationship between family incivility and psychological distress but not the relationship between psychological distress and employee thriving. The results hold while controlling for general job stress, family-to-work conflict, and work-to-family conflict. The findings suggest that family incivility is linked to employee thriving, and psychological distress and core self-evaluation are key mechanisms in the relationship.

Key Words: core self-evaluation, incivility, employee thriving, psychological well-being, workfamily conflict

An Empirical Study On the Linkages Between Income Inequality, Co2 Emissions and Innovation

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Abstract:

This research investigates the impact of income inequality on carbon dioxide emissions in Belt and Road Initiative (BRI) countries. Additionally, it explores how industrial changes, innovation, and shifts in energy patterns contribute to the CO2 emission patterns in these nations. Employing balanced panel data spanning 1994 to 2014 for 51 BRI countries, we conduct a comprehensive analysis of the short-term and long-term interactive effects of industrial changes, urbanization, innovation, and income inequality on CO2 emissions. To address endogeneity concerns, the study utilizes the system GMM estimator. The findings suggest that accounting for industrial changes and urbanization from an innovation and energy perspective in the Belt and Road Initiative region is crucial. The SYS-GMM method is employed to test the hypothesized relationships, revealing a statistically significant negative association between income inequality and carbon dioxide emissions. Furthermore, the results affirm the presence of an environmental Kuznets curve, and indicate that innovation and energy intensity significantly moderate this linear relationship. The study concludes with a discussion of its limitations and provides policy implications based on the observed results.

Keywords: Income inequality, CO2 emissions, innovation, belt and road initiative

Exploring Factors Influencing Online Learning by virtue / owing to social Distancing

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Abstract:

This study investigates the factors that influence the effectiveness of online learning, regardless of the reason for taking Distance learning or Distance classes. Students in business schools will provide information by means of an online survey that the investigator will create. The findings will reveal that curriculum, motivation, and technology will all play or not a significant role in shaping the effectiveness of online learning. Students' motivation to learn online will also be a critical factor and will be observed that it is influenced by factors such as support from instructors and peers, a sense of belonging to the online learning community, and the perceived relevance of the course material to their future goals. Access to reliable technology and a supportive home learning internet will be essential or not for effective online learning. The study's findings will provide valuable insights for educators who will be designing and implementing online learning programs.

Keywords: Education, Social Distancing, Online Class/Virtual Learning, Pandemic

The Effect of Pester Power on Parent's "Buying Intention''. A Focus on The Toy Industry in Pakistan

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Abstract:

This study explores the influence of "pester power" on parents' buying intentions, focusing on the toy industry in Pakistan. As global trends shift towards nuclear families, household structures and consumer behaviors have evolved. Children, once overlooked in family decision-making processes, are now recognized as a distinct market sector with significant influence on purchasing decisions. The changing dynamics in Pakistan's society, marked by communal customs and economic shifts, underscore the importance of understanding the impact of children on family purchasing decisions. The study delves into the various factors contributing to pester power, including higher disposable income, the rise of working women, children's exposure to technology and media, single-parent households, and the guilt parents may feel for not spending enough time with their kids.

Focusing on the toy industry in Pakistan, the study highlights its global significance and the cognitive benefits of toys on children's development. Despite a considerable demand for toys, the sector in Pakistan has often been disregarded, with a substantial portion of toys being imported, mostly from China. The emotional attachment children form with toys is explored, emphasizing the psychological importance of these attachments in children's development. The research identifies gaps in existing studies, such as age and gender disparities, cultural variations, media and technology influences, long-term effects, and parental education. The significance of this study lies in its implications for businesses and families in the Pakistani toy industry. Recognizing and utilizing pester power can be a potent marketing strategy for toy producers, allowing them to tailor their offerings to appeal to children and address parental concerns. Moreover, the study sheds light on the unique social and financial challenges faced by parents in Pakistan, providing insights into shifting family dynamics and consumer behavior.

The purpose of this research is to thoroughly investigate the impact of pester power on parents' purchasing intentions in the context of the toy sector in Pakistan. The study aims to explore the potential mediating role of children's emotional attachment to toys and the moderating effect of parental income. By doing so, it seeks to offer a comprehensive understanding of how children's persuasive strategies influence parents' decision-making processes when buying toys. This research carries implications for companies, parents, and academics interested in consumer behavior, marketing tactics, and family dynamics within Pakistan's toy industry.

Keyword's: Pester Power, Parents Buying Intention, Toys Industry, Pakistan, Emotional Attachment

Investigating the Impact of Green Marketing Components on Purchase Intention: The Mediating Role of Brand Image

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Abstract:

This is the study about the impact of green marketing and its influence on purchase intension through the green brand image. It explores the correlation between five concepts: green knowledge, environmental attitude and knowledge, green image, and purchase intention. The findings show positive relationship between practical green marketing attitudes (green knowledge, attitude, environmental knowledge, and purchase intension for green products). It is an empirical and quantitative survey used for test the hypotheses. Data were collected from respondents from Pakistan through the questionnaire, and the data analysis through the spss. this multidimensional approaches (green knowledge, attitude, and environmental knowledge) enhance positive purchase intension. the establishment of a powerful market brand was one of its basic aim. This study offers managerial implications for the development of green firms.

Keywords: green knowledge; attitude; environmental knowledge; green image; purchase intention

Impact of Green Marketing On Environmental Effect with Moderating Role of Value Creation

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Abstract:

This research explores the collision of green marketing on environmental outcomes, considering conspicuous of value creation. This study explores how business practices impact the environment by delving into the subtle changes in value created as stewards. This research aims to understand the potential for better business practices and the environment by examining the interaction between green business strategies and the value they create. The outcome of this study provides theoretical and managerial implications. The main focus of this paper is to consolidate findings on green marketing through value creation and environmental impact.

Keyword: Sustainability, Green Marketing, Environmental Effect, Value Creation, CSR.

Unravelling the Threads: Impact of Social Media Influencers on Pakistan's Youth (Generation Z) Buying Behaviour and Lifestyle

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Abstract:

Social media has revolutionized many industries including communication and networking industries and which led to an increase in usage of social media. Simultaneously it also increased the presence of different personalities on social media and their lifestyle including dressing, interacting even eating etc. Everything is on social media. So the purpose of this study is to find the impact of Social Media Influencers on young consumers – Generation Z in Perspective, specifically those belonging to Pakistan and how these things are motivating them and how they perceive these things and follow social media influencers while making lifestyle choices or buying decisions. Moreover, this will not only help the marketers and advertisers in Pakistan how to engage with young consumers more effectively but also what kind of hindrances they can face while doing so and it is also an opening door for future researchers to conduct a more in-depth study in this field.

Keywords: *Social Media Influencers, Perception, Motivation, Buying behaviour, Lifestyle Choices*

Impact on Purchase Intention through Social Media Marketing Through Different Mediated Mechanism

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Abstract:

Introduction:

In the era of digitalization, social media has emerged as a powerful tool for marketing, with influencers playing a pivotal role in shaping consumer behavior. This introduction highlights the increasing reliance on social media platforms for marketing and the specific focus on influencer posts as a means to understand their impact on consumer decisions.

Purpose:

This research paper investigates the dynamic relationship between social media marketing, trust in influencers, and its consequential impact on consumers' purchase intention. The study focuses on posts made by influencers on various social media platforms as a significant element in contemporary marketing strategies. Moreover, the study also incorporates the mediating role of trust on influencers post to analyze its impact on purchase intention. The paper employs a quantitative analysis of influencer posts.

Methodology:

To explore this complex relationship, a quantitative approach is employed. A quantitative survey is conducted to gather numerical data on consumer perceptions of influencer posts, trust formation, and subsequent purchase intention through paper questionnaires.

Limitations:

While this study contributes valuable insights, it is not without limitations. The research is confined to a specific time frame, and the rapidly evolving nature of social media may influence the generalizability of findings. Additionally, the subjective nature of trust and the dynamic landscape of influencer marketing pose challenges in capturing all relevant variables comprehensively.

Conclusion:

In summary, this research bridges gaps in understanding the intricate relationships between social media marketing, trust in influencers, and consumers' purchase intention, offering a comprehensive analysis

through a quantitative approach. The findings aim to guide marketers and researchers in navigating the evolving landscape of influencer marketing. The research is still in progress and the results are yet to be run through SEM SPSS PLS.

Keywords: Social Media Marketing, Customer Purchase Intention, Trust on Influencers Posts.

Investigating The Impact of Transformational Leadership on Employee Loyalty in Private Sector. The Role of Reward and Work Performance

A Conceptual Model

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University of the Punjab, Lahore.

Abstract:

"This article investigates the influential role of transformational leadership in shaping employee loyalty and work performance. Transformational leaders, with their charismatic and inspirational qualities, have the power to encourage employees to exceed their own self-interests for the greater good of the organization. This heightened sense of loyalty and commitment often leads to enhanced work performance, creating a positive cycle of productivity and satisfaction. The article also explores the significance of rewards in this equation. Rewards, both intrinsic and extrinsic, serve as a pivotal motivational tool, reinforcing desired behaviors and fueling the drive to excel. The interplay between transformational leadership, employee loyalty, work performance, and rewards presents a complex but fascinating landscape, offering valuable insights for organizations aiming to foster a productive and harmonious work environment." Context: The context is the relationship between these variables in an organizational setting. Significance: Understanding this relationship is important for organizations as it can impact employee satisfaction, productivity, and overall success. Gap: The existing literature lacks a comprehensive understanding of how transformational leadership influences employee loyalty and work performance, and how rewards play a role in this relationship. Methodology/Design: This study aims to address the research gap by examining the impact of transformational leadership on employee loyalty and work performance, and the role of rewards in this relationship. This is a qualitative research and require primary data to be collected.

Key Words →Independent variable (IV) : Transformational Leadership → Dependent Variable (DV) : Employee Loyalty →Mediator Variable (MV) : Work Performance →Moderator Variable (MOV) : Rewards

Banking Leadership: Impact of Transformational leadership on Employee's Performance, mediated by Motivation and a Work Environment

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Hailey College of Banking & Finance
University of the Punjab, Lahore
Syeda Anam Zehra Naqvi

Abstract:

This study will explore how transformational leadership is expected to impact favourably on employee's performance in the banking sector , with motivation and work environment serving as key mediating factors. Data will be collected through simple random sampling from a group of 800 employees, anticipating a return of around 600 valid questionnaires.The Structural Equation Modeling (SEM) with SmartPLS 4.0 is used for analysis of collected data.The expected findings of the research will suggest a positive and significant direct influence of transformational leadership on employees' performance aligned with the other studies . Additionally, research anticipate discovering an indirect effect, where transformational leadership is expected to positively influence employees' performance through the mediating factors of motivation and work environment. This dual impact is expected to emphasize the importance of factors like motivation and a supportive work environment in connecting transformational leadership to improved employee performance. Based on these anticipated results, study aim to propose a practical model to enhance employee performance in banking sector context. This model leverages transformational leadership, with motivation and work environment acting as essential mediators. By highlighting these mediating factors, the proposed model aims to offer practical insights for organizational leaders looking to boost employee performance. Moreover, researcher believe this study will serve as a helpful guide for contributing to the overall readiness of employees in the banking sector.

Keywords: Transformational Leadership, Employ

Measuring the Impact of Inclusive Leadership in Fostering an Environment that Maximizes the Positive Impact of Workplace Diversity on Team Performance

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Abstract:

This study uses a quantitative approach to investigate the organizational dynamics of technology startups to determine how inclusive leadership affects the development of an environment that maximizes the benefits of workplace diversity on team performance. The independent variable is inclusive leadership, defined as acting in a way that actively encourages diversity and inclusion. The dependent and mediating variables are team performance and workplace diversity, respectively. Data collection from employees in the technology startup sector was conducted using a cross-sectional survey approach. In order to investigate the complex relationship between these constructs, the data was statistically analyzed using different techniques: regression and correlation analysis, focusing on mediation analysis by using Process Macro Hayes. Ethical considerations took precedence throughout the study to guarantee participant confidentiality and informed consent. The study's findings are intended to significantly contribute to team dynamics, diversity management, and leadership. They also have applications for digital startups looking to improve organizational performance using inclusive leadership practices.

Keywords: Inclusive Leadership, Workplace Diversity, Team Performance, Technology Startups

Investigating The Impact of Customer Retail Experience on Customer Satisfaction

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Maha Shahid

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Hailey College of Banking & Finance,

University of the Punjab, Lahore

Abstract:

This research investigates how online experiences influence customer satisfaction, incorporating e-trust as a mediator and website quality as a moderator. With the rapid growth of e-commerce, providing a positive online shopping experience has become essential for businesses. The study employs a comprehensive framework, examining the direct impact of online experiences on customer satisfaction. Additionally, it explores the mediating role of etrust, delving into how the level of trust in online transactions influences overall satisfaction. Moreover, the research introduces website quality as a moderator, acknowledging its potential to enhance or diminish the relationship between online experiences and customer satisfaction. The research is conducted from a sample size of 200 that includes both male and female online users. The quantitative study is done through a structured questionnaire method. The research's significance lies in revealing how a positive online retail experience influences customer satisfaction, offering businesses actionable insights for improving customer relationships and online platforms in an increasingly competitive digital marketplace. Understanding these dynamics directly addresses consumer concerns, fostering trust, and enhancing the overall online shopping experience, contributing to increased satisfaction and loyalty among users.

Keywords: Online Retail Experience, Customer Satisfaction, E-trust, Website Quality

Impact of Online Retail Experience on Customer Satisfaction

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Muhammad Salman

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Hailey college of Banking and finance
University of the Punjab, Lahore.

Abstract:

This research investigates how online experiences influence customer satisfaction, incorporating e-trust as a mediator and website quality as a moderator. With the rapid growth of e-commerce, providing a positive online shopping experience has become essential for businesses. The study employs a comprehensive framework, examining the direct impact of online experiences on customer satisfaction.

Additionally, it explores the mediating role of e-trust, delving into how the level of trust in online transactions influences overall satisfaction. Moreover, the research introduces website quality as a moderator, acknowledging its potential to enhance or diminish the relationship between online experiences and customer satisfaction. The findings are derived from a diverse sample of 200, capturing various online user demographics and behaviors The outcomes of this study offer valuable insights for businesses aiming to optimize their online platforms. This study contributes to the growing body of knowledge on e-commerce and customer behavior. It also contributes to advancing the theoretical understanding of these relationships and offering practical guidance for businesses to better cater to the evolving needs and expectations of online shoppers in an increasingly competitive digital marketplace.

Keywords: Online Retail Experience, Customer Satisfaction, E-trust, Website Quality

The Impact of Service Quality on Customer Loyalty through the Mediating Role of Customer Satisfaction: A Study of Online Shopping from Pakistani Women Clothing Brands

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Nabeela Noor

Hailey College of Banking & Finance, University of the Punjab, Lahore

Abstract:

In the highly competitive landscape, understanding the factors that drive customer loyalty is crucial. This research paper aims to explore the relationship between service quality and customer loyalty, specifically in the context of Pakistani women clothing brands. It further investigates the mediating role of customer satisfaction in this relationship. Through a comprehensive analysis of various women clothing brands in Pakistan. This paper has analyzed the impact of service quality on customer satisfaction and customer loyalty of Pakistani women clothing brands. For this purpose, this paper has used five dimensions of service quality- tangibles, reliability, assurance, empathy and responsiveness, as proposed by Parasuraman, Berry and Zeithaml (1991). The needed data for the study has been collected using a structured questionnaire from the customer of women clothing brands. Using the multiple retrogression analysis, this paper finds the significant positive impact of all the service quality confines on customer satisfaction and loyalty. Furthermore," Reliability" is the strongest dimension of service quality that impacts customer satisfaction, whereas" Empathy" is the strongest dimension of service quality for impacting customer loyalty. In addition, this paper also finds" Customer Satisfaction" as the important factor for making customer loyal towards the service provided by the brands. Therefore, this paper concludes that service quality is the most important factor that makes customer satisfied and loyal. The findings of this research will provide valuable insights to Pakistani women clothing brands, enabling them to enhance their service quality and strengthen customer loyalty. By identifying the key drivers of customer satisfaction and loyalty, brands can implement strategies to improve their customer relationships and gain a competitive edge in the market. Overall, this research paper aims to contribute to the existing body of knowledge in the field of marketing and consumer behavior, while providing practical guidance to Pakistani women clothing brands on how to build customer loyalty through service quality and customer satisfaction.

Blue Finance in Pakistan: Exploring Opportunities, Combating Challenges, and Addressing Urgency

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Abstract:

This paper inquiries into the opportunities, challenges, and the utmost urgency related with the implication of Blue Finance in Pakistan—a systematic tool towards sustainable management of ocean and marine resources. As a littoral country with an extensive marine ecosystem and an increasing dependence on coastal resources, Pakistan exists at a crucial junction in garnering the potential advantages of Blue Finance while efficiently combating the challenges that pose threats to the survival and thriving of its oceans and related economy.

Opportunities:

Sustainable Economic Growth: Blue Finance is a critical approach for Pakistan to galvanize economic prosperity by utilizing its diverse marine resources. Investments in sustainable initiatives related to aquaculture, fisheries and related tourism can open new doors for jobs and profit generation.

Biodiversity Conservation: Carefully handled Blue Finance tools can assist in marine biodiversity conservation that could result in a continuous survival of oceanic ecosystems and protection of endangered and scarce species.

Climate Change Resilience: Responsible coastal projects can help Pakistan build better endurance against adverse effects of changing climate such as increasing levels of sea, and other inimical weather related incidents.

Challenges:

Overfishing and Illegal Fishing Practices: Unregulated fishing practices such as overfishing, threaten the survival of Pakistan's coastal ecosystems, requiring detailed regulatory framework measures and efficient enforcement.

Pollution and Habitat Degradation: Deteriorating on pollution various pollution indices alongside habitat destruction in Pakistan puts marine life and related economy in danger. Hence, a properly planned waste management model and practices for coastal habitat revival must be made a part of Blue Finance in Pakistan.

Lack of Integrated Governance: A disconnection between public institutions and stakeholders from private sector to individuals hampers the successful implementation of Blue Finance in Pakistan. Bridging together social communities, private and public sectors on a common vision for Blue Finance is critical.

Urgency:

Climate Change Impacts: Rapid changes in weather of Pakistan are having an immediate and most pronounced effect on coastal areas such as rising sea levels. To preserve marine communities, an urgent blue finance intervention is required to mitigate these effects.

Social Communal Thought: In the race of current survival in the financial economy, the social thought in Pakistan on all individual, institutional and national levels is less focused on planning for future hence, urging the nation to pay attention towards preservation of coastal and marine life in Pakistan is difficult. One needs to elucidate the potential benefits that we can reap out of investment in sustainable practices of blue finance.

This policy brief culminates in recommendations including a call for action to prioritize the development of Blue Finance approaches that contribute to the economic wealth with environmental conservation for the benefit of today's and tomorrow's generation of Pakistan.

Key words: blue finance, economic growth, sustainable environment conservation, marine ecosystem.

A Quantitative Examination of the Variables Influencing the Selling Price of Opulent Residences in Vietnam

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Dr. Shrafat Ali Sair,
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Dr. Saeed Ahmad Sabir,
Assistant Professor, Hailey College of Commerce, University of the Punjab, Lahore
Dr. Muhammad Sabeeh Iqbal,
Assistant Professor, Hailey College of Commerce, University of the Punjab, Lahore

Abstract:

The elements influencing the selling price of upscale residences in Vietnam are examined in this article. The analysis of local and international literature reveals that the theoretical framework identifies four key elements influencing the selling price in the physical attributes, location and orientation, external environment, and standard of management and maintenance services that make up the real estate market. This paper's empirical study indicates that two more aspects should be taken into account: the real estate investor's qualities and the consumer segment's features. Based on the investigation, it was determined that each of the six previously listed characteristics has a unique, positive correlation with the price at which a high-end apartment is sold. Lastly, the piece made a few recommendations, for managers on how to maximise profit in this extremely profitable market sector by optimising the selling price.

The Role of Business Analytics Capabilities in Bolstering Firms' Agility and Performance a study from manufacturing industries of Pakistan

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Department of Business Administration University of Sahiwal
Dr. Aamir Sohail (Lecturer)
Department of Commerce, Thal University Bhakkar
Muhammad Hasnain Ali (PhD Scholar)
Institute of Banking and Finance, Bahauddin Zakariya University Multan

Abstract:

The objective of this research is to examine the impact of business analytics capabilities on firms' agility and performance. Furthermore, this research also examines the impact of Information Quality on firms' agility and performance. Lastly, the current research examines the impact of Innovative Capability on firms' agility and performance. The researcher used quantitative research design. The population of this research consisted of employees working in manufacturing companies of UK. The data for this study was obtained from a sample of 250 managerial-level workers at several firms based in the Pakistan, using a questionnaire survey as the primary data collection method. The findings of the study indicated that there is a significant and positive effect of business analytics capabilities on firms' agility and performance. Furthermore, the findings also reported that there is a significant and positive impact of Information Quality on firms' agility and performance. Lastly, the findings indicated the significant and positive effect of Innovative Capability on firms' agility and performance. This study has practical and theoretical significance for both academics and professionals.

Keywords: Business Analytics, Information Quality, Innovative Capability, Firms Agility and Firms Performance

The Adoption of Blockchain Technology on Supply Chain Finance to Better Organizational Performance; "Pakistan Industrial Sector Context."

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Dr. Rao Zia-ur-Rehman

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Abstract:

Purpose**:** The rising need for cross-industry finance has emerged as a significant roadblock to the company's expansion. This study tries to overcome this hurdle by demonstrating how blockchain technology may enhance supply chain finance and technology trust, increasing organizational performance. The current study also examines the possibility of using trade digitalization as a moderating factor in the link between supply chain finance and organizational performance.

Design/Methodology/Approach: A thorough literature review on blockchain technology, supply chain finance, trust, digitization in trade finance, and organizational performance was carried out to provide the conceptual foundation for this study. Three hundred eighty-nine supply chain professionals from the industrial sector in Pakistan contributed the sample data to validate the conceptual model. Structure Equation Modeling was utilized to evaluate the suggested conceptual framework using Smart PLS, and confirmatory factor analysis was carried out to guarantee the measures' validity.

Findings: The results of this study imply that Supply Chain Finance may be improved using Blockchain Technology, leading to improved Organizational Performance. Additionally, the trust that blockchain technology generates enhances organizational effectiveness. Further, trade digitization strengthens the link between corporate performance and supply chain finance. To forecast organizational performance, the current study substantially defines the technology adoption model and technological readiness index using blockchain technology, supply chain finance, trust, and digitization in trade finance.

Research limitations/implications**:** None of the respondents had experience with Blockchain technology up to this point. Their response is based on their knowledge of supply chains and blockchains from publicly accessible sources. Different supply networks demand various strategic choices and information

needs. The current analysis, however, supposes that all supply chain needs are equivalent. Although there is currently no legal framework for Blockchain technology, the research assumes that government regulations on the technology are advantageous. The present study's findings suggest that companies should actively work with IT companies to develop supply chain solutions based on Blockchain and spread knowledge of the technology. Managers, IT companies, and academics should collaborate to research, create a regulatory framework for Blockchain technology, and then advocate it to decision-makers.

Originality/value: This study fills a vacuum in the supply chain management literature that had not been addressed before. There have been numerous studies on the effects of IT on critical supply chain parameters. Still, none have addressed how disruptive technologies like blockchain will affect Supply Chain Finance, Trust, and Organizational Performance while identifying the role of trade digitization as a moderating variable in the context of Pakistan's industrial sector using the Technology Adoption Model and technology readiness index theory.

Keywords: Blockchain Technology, Supply Chain Finance, Trust, Digitization in Trade Finance, and Organizational Performance

Ethical Leadership and Employee Creativity: Mediating Role of Psychological Empowerment and Moderating Role of Creative Self Efficacy

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Abstract:

The goal of this research was to explore the influence of ethical leadership on creativity via mediating role of psychological empowerment and moderating role of creative self efficacy in IT Sector of Pakistan. These statistics are from a survey sent out to 213 private software company workers in the Rawalpindi and Islamabad area. Findings of the present research demonstrated that ethical leadership was substantially and positively connected with psychological empowerment and employee creativity. This study's findings also provide support to the idea that psychological empowerment serves as a moderator in the link between ethical leadership and inventiveness. Similarly, the findings showed that the connection between psychological empowerment and employee creativity was not mediated by creative self-efficacy. We also talk about what this study means for theory and practice.

Keywords: Ethical Leadership, Psychological Empowerment, Creativity

Do key audit matters promote innovation in listed companies?

Deng Shiliang
East china jiaotong university

Abstract:

For the corporate, innovation is a crucial factor to improve core competitiveness and sustainable development. So, it is necessary to explore the influencing factors of corporate innovation to help the healthy development of corporates. In this study, we explore the impacts of disclosure of key audit matters on innovation activities. To address this objective, we collected data from the listed companies that implemented the new audit reporting standards for the first time in China and empirically examined the relationships with the DID model. The results reveal that, the disclosure of key audit matters can effectively promote corporate innovation activities by increasing corporate innovation investment and reducing the degree of information asymmetry. Moreover, the number of key audit matters disclosed and the number of characters contained in key audit matters are positively correlated with the input of corporate innovation activities. The further exploration shows that the key audit matters improve corporate value and investment efficiency through promoting corporate innovation. These findings enrich the research on the economic consequences of key audit matters and provide theoretical references for relevant departments to supervise corporates and government to guide innovation development.

Keywords: key audit matters; corporate innovation; new audit report; investment efficiency; information asymmetry

EVA Assessment, Institutional Environment and Audit Quality

Abstract:

Does the EVA assessment of central enterprises affect the practice of CPA? Based on the listed companies of central enterprises from 2005 to 2015, we examined the impact of EVA assessment on audit quality. We finding after the EVA assessment, the audit quality decreased significantly, and internal control weakens the negative relationship between the EVA assessment and the audit quality, and the media supervision will significantly weaken the negative relationship between the EVA assessment and the audit quality; From the perspective of action mechanism, after EVA examination, enterprises are improving earnings management and tend to choose low quality auditors to achieve the purpose of opinion shopping; In addition, the bigger the product market competition is, the more significant the negative relationship between EVA assessment and audit quality. After the 18th CPC National Congress, the relationship between the two greatly weakened. This study means that the EVA assessment of central enterprises will have a significant impact on the quality of audit, and play an important role in the objective and comprehensive evaluation of EVA assessment.

Keywords: EVA assessment, audit quality, internal control, media supervision, operating environment.

Abstract:

To enhance the information quality of audit reports in the Chinese capital market and improve their relevance to potential users' decisions, china's Finance ministry has added this tool approved new auditing standards for certified public Accountants (New Audit reports), the main content is: communicate critical audit matters in audit reports. This paper examines the link between the disclosure of critical audit matters and the aggressiveness of corporate tax avoidance. We test and conclude that the issuance of new audit reports has effectively discouraged corporate tax avoidance by constructing a double difference model. Further, we study the relationship between the size of accounting firms and corporate tax avoidance. We find that the negative correlation is more apparent when the accounting firm issuing the audit report is one of the "top ten." This paper provides new evidence to examine the economic consequences of disclosures of critical audit matters and gives a upbeat assessment of the effect of the implementation of the new standard from the perspective of corporate tax avoidance.

Infrastructure Financing Gaps and SDGs in South Asia

Dr Swati Jain
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Abstract:

S4 trillion annual investment gaps is the urgent policy challenge for developing nations in the path of achieving Sustainable Development Goals Agenda 2030 (UNCTAD 2022). This gap was $ 2.5 trillion in 2015. There are several constraints in closing this gap ranging from national and international budget constraints, Institutional, structural technical and economic barriers. One of the important barriers is the lack of required socio-economic-technical infrastructure in developing countries. South Asia is one of the regions with huge development gaps and highest infrastructure gaps. Infrastructure needs for each 17 SDG targets under 169 sub targets are included to progress faster. SDG 9 explicitly focuses on the development of resilient infrastructure among the Sustainable Development Goals. McKinsey Global Institute's analysis suggests that increasing infrastructure investment by 1% of GDP could create substantial employment opportunities worldwide. Infrastructure itself can also become more economically efficient. McKinsey Global Institute estimates that enhancing infrastructure productivity can reduce spending requirements by 40%. Additional infrastructure investment is urgent, but it is quite rigid to flow in countries like South Asia. The reason behind the rigidity is the fact that south Asian countries, being in the middle-income group are not entirely dependent development aids but allocate a substantial amount of domestic funding towards infrastructure development. South Asian countries have wide infrastructure gaps in transport infrastructure and road density (SDG9), access to drinking water and sanitation (SDG-6), electricity (SDG-7) and ICT costing the sub-region 3-4% of GDP besides affecting achievement of other SDGs.

This paper develops an infrastructure disparity index for eight south Asian countries including 8 major infrastructure dimensions. We hypothesize that SDG scores in South Asia are significantly determined by investment for infrastructure and gross capital formation than per capita income and GDP growth. The paper uses the panel regression approach and establishes a significant positive impact of public investment for infrastructure and negative impact of bank credit on SDG scores during 2010-2022.

Keywords: Infrastructure financing gaps, panel regression, SDGs, South Asia,

Charting a Sustainable Course Through Financial Storms:

The Transformative Role of CSER in Global Crisis Management

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Abstract:

This research paper examines the pivotal role of Corporate Social and Ecological Responsibility (CSER) in crafting a sustainable pragmatic approach to the global financial crisis. It addresses the challenges posed by recurring financial crises, emphasizing the need to move beyond conventional crisis management. CSER aligns with sustainable finance, encouraging investments in renewable energy, sustainable technologies, and socially responsible enterprises. Technological innovations such as blockchain and AI enhance CSER practices, bolstering financial institution resilience. Data was collected from a diverse range of financial institutions, including banks, investment firms, and insurance companies. This study underscores the critical role of Corporate Social and Ecological Responsibility (CSER) in shaping a sustainable and pragmatic approach to managing and recovering from the global financial crisis. It recommends that Financial institutions should integrate CSER principles, including ethical conduct and sustainable finance, into their core strategies while leveraging technology for transparency and resilience. Also, global collaboration, standardized reporting, and stress testing, along with government support and educational initiatives, are vital for promoting CSER and ensuring long-term financial stability.

The Impact of Corporate Governance on Dividend Payouts. New Evidence from Dynamic Common Correlation under Generalized Method of Moments

Abstract:

This research aims to look into the role of corporate governance in determining dividend payouts in the unique institutional setup of Pakistan. The study is based on data collected from a sample of 269 non-financial firms listed on the Pakistan Stock Exchange between 2009 and 2018. To assess the desired relationship, the study has used a novel approach: Dynamic Common Correlation under the Generalized Method of Moments (DCCE-GMM). This method covers a severe limitation of the conventional GMM, which does not consider the issue of cross-sectional dependency. This study is the first in dividend literature to counter this issue, thereby reporting more robust and reliable outcomes. Results of the study reveal that dividend payouts increase with an increase in board size, meetings intensity, and audit quality, having a positive and significant relationship. On the contrary, CEO compensation and board independence are reported to have a negative and significant relationship with dividend payouts. Results of this model are also compared with the conventional GMM ignoring the cross-sectional dependency and are found to be more pronounced and in line with the objectives of the code of corporate governance 2002 of Pakistan. The study makes beneficial recommendations to managers and policymakers based on a more precise assessment of each measure's impact on dividend payouts and the implementation of corrective actions while enhancing the role of each measure by exploiting or restricting its scope for enhanced dividend performance.

Keywords: Agency theory, Dividend Payouts, Corporate Governance, GMM, Cross-Sectional Dependency

Evaluation of Digital Social Responsibility and Green Purchase Intention: Mediating Role of Green Trust and Green Purchase Value

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Abstract:

Several countries have taken proactive measures in response to the escalating realization of heightened detrimental consequences of environmental deterioration and carbon emission. Organizations are empowered through social media platforms to launch socially responsible programs that are substantial and noteworthy to the customers. This research focuses on establishing a novel framework to investigate the influence of Digital social responsibility (DSR) on green purchase intention (GPI) and identifies the insights of mediating impact of green perceived value (GPV) and green trust (GT). The self-administered questionnaire is employed to collect data from users of social media in Pakistan through convenience sampling. This study is based on a quantitative research method to measure the direct impact of DSR and the mediating impact through GT and GPV. Data is analyzed through the utilization of structured equation modeling. The findings of this study depict that DSR positively influences the GPI and a partial mediating effect has been found through GPV and GT for this study. This study provides unique insights into the relationship between DSR and GPI and the mediation of GPV and GPI. In addition, through this study, the importance of DSR in cultivating the interest towards GPI will be unfolded. Policymakers can utilize the insights of this research to establish substantial and cognizant policies. This research can benefit enterprises to interact with consumers at a minimum cost and facilitate them to enhance the effectiveness of their strategic plans through comprehending the association between the variables of this study.

The Nexus of Workplace Gossip, Task Interdependence, and Organizational Culture: Unraveling the Threads Impacting Task Performance; A Conceptual Paper

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Abstract:

The pervasive nature of workplace gossip, in both its positive and negative forms, has raised concerns regarding its potential impact on employee behavior and organizational outcomes. Negative gossip can poison the workplace, lower morale, and impede productivity, but positive gossip can build relationships and promote camaraderie. To shed light on how workplace gossip, task interdependence, organizational culture, and task performance interact and affect organizational effectiveness, this study explores these intricate relationships. Using a quantitative methodology, this study will use survey information gathered from a population of workers from the service sector in Lahore. The data were analyzed using multivariate analysis methods to identify relationships between the variables of interest. The study shows that there is a multidimensional link between workplace gossip and task performance, with positive gossip having a positive impact and negative gossip having a detrimental impact. In highly interdependent work contexts, task interdependence appears as a moderating factor that amplifies the association between task performance and workplace gossip. Furthermore, in companies with a strong culture of open communication and trust, the influence of workplace gossip on task performance is mitigated by organizational culture. This study incorporates to our understanding of workplace gossip and how it affects organizational behavior. It also offers practitioners helpful information on how to nurture a supportive and effective work environment.

Keywords: Organizational Culture, Task Performance, Task Interdependence, Workplace Gossip, Moderation, Mediation, Positive Gossip, Negative Gossip

Impact of Remote Working on Part-Time Employees' Productivity through social support: The role of Technology Literacy

Tanzila Nazir

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Abstract:

Remote is a type of work that keep employees to do their work from distance. In this research paper, the advantages and disadvantages of part-time employees on their jobs will be discussed elaborately. There are different types of remote working on part-time employees' productivity. Information and communication (LCT) had useful effects on more results, such as job happiness, performance, revenue intent, and role stress, minimum physical necessities, individual monitor over work pace, defined deliverables, a need for concentration, and a comparatively low need for communication are positive impacts of remote working. People who work from home are motivated and disciplined. pressures of time management, financial pressures or uncertainty, Loneliness from lack of colleague contact, Separation in the workplace - feeling `left out', Absence of regular routine, market yourself, Lack of sympathetic from others who choose more conformist paths are disadvantages of remote working. This paper focuses on understanding the influence of remote work on part-time student employees' productivity. To address this, the study aims to target part-time students engaged in remote work, potentially including those from Hailey University or diverse universities. Employing a stratified sampling technique will ensure a diverse representation across academic departments or experience levels. The research leans towards a quantitative approach, intending to quantify the impact of remote work, social support, and technology literacy on productivity. Data analysis will primarily involve structured methods, utilizing statistical tools like SPSS or Excel to derive insights into the relationships between variables, specifically assessing technological competence, social support networks, and perceived productivity levels in remote work settings. It addresses gaps in understanding how social support and tech skills affect productivity in remote work. Its findings will guide strategies to enhance productivity by emphasizing support networks and tech proficiency. This research is essential for optimizing remote work environments, improving skills, and boosting productivity and well-being among part-time employees.

Keywords: Remote working, Employee Productivity, part-time employees, Advantages or disadvantages of remote working

The Impact of Social Media on Business Performance

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Abstract:

Social media is an important part of today's world. It is often used in businesse organizations, and to understand current events and trends.The aim of this study is to investigate the impact of social media and to examine to what extent social media affects on organizational capabilities and business performance in food industry. The purpose of this study is to determine connection between social media and business process performance by carefully examining the food panda company whose data we analyzed. We also analyze the impact of social media on business life. This case study was conducted using on-line advertising in the on-line gaming industry, which uses the social media most. We created our research model support of food panda, an online advertising company. We analyzed the impact of using six social networks on business and marketing. We used mixed method research, including quantitative analysis based on a surveys and qualitative analysis based on interviews. We have seen that using social media can improve your business. Shared content has a huge impact on your business. Entrepreneurship has the potential to improve your business performance. Although these effects are not due to any one of the six social media tools, the success of all six social media tools in social media is due to Panda food's ability to collaborate with internal and external business.

Keywords: Social Networking Tools, Business Process Efficiency, Food Panda Case Study, General Content.

Investigating the Impact of Business Intelligence on Perceived Firm Performance

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Abstract:

To examine the relationship between business intelligence and perceived firm performance through innovativeness, this article puts forth a model. Based on information gathered from a representative sample of workers from Lahore-based IT companies; the analysis will be conducted. The study uses structural equation modeling to analyze the data. This study examines how business intelligence affects a firm that is perceived to be performing, with an emphasis on the organizational unit. The study attempts to shed light on the larger implications for company performance and competitiveness by analyzing the influence at the organizational level. The results will indicate that there is a favorable correlation between business intelligence and perceived firm performance. Business intelligence scope plays a crucial role in moderating firm performance within an organization by enabling data-driven decision-making, promoting a competitive advantage, and enhancing overall efficiency. Furthermore, it was discovered that the association between business intelligence and perceived firm performance was adversely mediated by innovation. Using old or erroneous data in business intelligence might lead to poor decision-making and incorrect conclusions. By offering a thorough examination of the connection between business intelligence and perceived company performance at the organizational level, this study adds to the body of knowledge already in existence. The purpose of the results is to educate corporate executives and decision-makers on the strategic ramifications of putting business intelligence projects into practice, which will ultimately improve organizational competitiveness and effectiveness in the fast-paced business environment. The study's uniqueness comes from its examination of the precise connection between business intelligence and perceived firm performance. By providing a focused examination on how business intelligence methods directly affect overall organizational success and competitiveness, this study aims to close a gap in the existing literature. There are a few difficulties associated with the relationship between business intelligence and perceived firm performance. By showing the direct and indirect effects of business intelligence on perceived firm performance in relation to innovativeness and BI scope, the study benefits academia as well as industry. From the findings, it can be argued that some intentions must be made to the business intelligence in innovativeness given the impact it can have on the firm's performance. Also, the business intelligence scope has a positive influence on perceived firm performance. Finally, the paper addresses its shortcomings, presents management implications, and recommends possible directions for further research.

Keywords: Business Intelligence, Innovativeness, BI Scope, Perceived Firm Performance.

Unveiling the Nexus of Ethical Leadership: The Mediating Role of Moral Awareness and the Moderating Influence of Moral Decision Making.

Hiba Ali

Tuba Javed

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University of the Punjab, Lahore.

Abstract:

The role and influence of moral attentiveness on ethical leadership outcomes continues to draw attention among management scholars. Despite this increased attention, existing literature has yielded limited insights, particularly into the impact and influence processes of moral attentiveness on ethical leadership at both the individual and organizational levels of analysis. Addressing this gap in research, we will propose and tested a multilevel model that examines the processes linking perceptions of moral attentiveness and ethical leadership at the individual and organizational levels of analysis. Data will be obtained from 10 branches of Islamic banks in Lahore Pakistan. Results from structural equation modeling analysis will reveal three salient findings. First, moral attentiveness is positively related to moral awareness and ethical leadership. Second, moral awareness partially mediates the relationship between moral attentiveness and ethical leadership. Third, the moderating role of moral decision making significantly influences the relationship between moral attentiveness and ethical leadership. These findings will indicate that moral attentiveness can have a positive impact on ethical leadership, with moral awareness playing a crucial mediating role. Additionally, the moderating effect of moral decision making highlights the importance of individual decision making processes in the context of ethical leadership. This research contributes to a better understanding of the dynamics between moral attentiveness, moral awareness, and ethical leadership in both individual and organizational settings.

Keywords: Moral attentiveness. Ethical leadership. Moral awareness. Moral decision making

The Mediating Role of Employee Burnout: Work-Life Balance and Employee Well-being in the Banking Sector

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Abstract:

A balanced work-life schedule contributes to higher productivity among bankers. Employees who feel that their personal and professional lives are in balance are more likely to be motivated, focused, and effective in their work, which eventually boosts the banking sector's total productivity. Every organization depends on its employee's well-being, which is also essential to its success. The purpose of the study is to investigate how employee well-being affects the banking industry. Data will be collected from employees working in the banking sector in Lahore Pakistan. Purposive sampling will be used to choose participants, with an emphasis on individuals actively involved in daily operations and having a minimum educational requirement of graduation. The study's purpose, to investigate employee wellbeing, will be explained to the participants. In the theoretical framework of this paper worklife balance is a dependable variable, employee well-being is an independent variable, employee burnout is a mediator while employee workload is a moderator. The paper will be going to contribute that Enhancing WLB in the banking sector in Lahore is crucial for promoting employee well-being. Organizations should address burnout issues and recognize the role of workload in shaping the impact of WLB on employees.

Keywords: Work life balance (WLB), Employee burnout, Employee workload, Employee workload

Impact of Team Leadership inclusiveness on Taking charge by the team members: The Mediating Role of Thriving at work and the moderating Role of Regulatory Focus

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Abstract:

In today's intense complex and ever changing world leaders urge their followers to take initiative and derive organizational change and effectiveness. Visionary behavior is essential that promotes organizational and individual development by taking the charge. Provide trainings to employees so that they act like bosses this is required in organizational Management. We created a mediated moderation model based on the theories of Self-determination and Social Information Processing. Much Research has been done on the factors that influence the taking charge of the employees one of them is inclusive leadership of a team. We examined the Mediating role of Thriving at work and Moderating effect of Regulatory Focus in the relationship between inclusive team leadership and taking charge behavior of the team members. We collected data from employees and managers of the firms through a questionnaire survey. Through this mechanism explaining why members are inspired to take the initiative under the guidance of inclusive leadership in a team. Specifically, the results demonstrated that inclusive leadership of a team promoted initiatives among the members of the team. Our research shows that the relationship between inclusive leadership of a team and members takeover is mediated by affective commitment. In addition to this more promotion focus were positively correlated with affective commitment and inclusive leadership for the team members who assumed leadership.

Keywords: Taking charge by Members, Team leadership inclusiveness, Thriving at work, Regulatory Focus

Impact of Work-Family Benefits on Job-Satisfaction and Employees' Productivity

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Abstract:

Purpose: The study is conducted to derive the relationship between the use of work-family benefits by the organizations, job satisfaction, and employees' productivity. As family plays significant role in one's life, so the work-to-family enrichment, and work-to-family conflict will play mediating role for the research process.

Methodology To attain the purpose of the study, the research will follow qualitative research methodology, for which it is going to gather data from 50-60 already published scholarly articles or reports of different organizations, whereas data collection and analysis will be done as per Partial Least Squares (PLS) Path Modelling.

Analysis: The findings are expected to show that Work-to-Family Enrichment shows greater relationship to the job satisfaction and employees' productivity than the Work-to-Family Conflict. Thus, the organizations can use this research as framework to invest on different work-family benefits to enhance Work-to-Family Enrichment factor and contribute to more job satisfaction and productivity of their employees.

Originality/value: To enhance the credibility and originality of the study, the research is going to use multiple mediation models to check relationship between WFE, job satisfaction and employees' productivity, and same is with WFC, whereas experts' feedback will be used to ensure credibility and avoid biased approach during the research process.

Determination of Job Satisfaction Through Ambidextrous Leadership

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Abstract:

Purpose– The purpose of this study is to look into how ambidextrous leadership in Pakistan's banking industry determines job satisfaction. The study, which is based on the social exchange theory, intends to advance knowledge of the ways in which ambidextrous leadership affects job satisfaction and output by examining the ways in which creativity demands mediate this relationship. Methodology/ approach/ design- Data was gathered using a quantitative method using a selfadministered questionnaire. There were 400 members in Pakistan's banking industry. Structural Equation Modeling (SEM) was used to test the hypothesis. Findings – The results show that job satisfaction and ambidextrous leadership have a complex relationship. Workers in banking organizations with leaders who successfully strike a balance between the exploitation (efficiency, optimization) and exploration (innovation, risk-taking) dimensions typically report higher job satisfaction. The performance of employees is directly improved by ambidextrous leadership. Additionally, the study pinpoints particular organizational procedures and leadership styles that greatly support ambidextrous leadership development and, in turn, raise job satisfaction. Research Limitations/Future Implications- One limitation is that the study's cross-sectional design prevents conclusions about causality. Self-reported measures run the risk of introducing bias from common methods. Furthermore, the results' applicability may be limited to the banking industry. Additionally, longitudinal studies can shed light on the dynamic character of ambidextrous leadership and its long-term effects. Value/ originality- The findings emphasize the value of encouraging creativity in the workplace and have practical implications for leaders looking to improve employee performance and satisfaction through ambidextrous leadership practices. Additionally, it deepens our comprehension of the dynamics of social exchange in organizational settings, especially in the banking industry.

Keywords: Ambidextrous leadership, creativity requirements, job stress, job performance

A study which is conducted on Daraz, Pakistan. That determine the Importance of electronic word of mouth in building both brand trust and brand attitude

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Abstract:

The emergence of e-commerce platform for shopping is increasing due to increase in technology. The power is now shifting from the sellers to buyers through E-wom. This study aims to investigate the influence of positive electronic word of mouth on brand attitude and brand trust and then to purchase intention on daraz. The purchasing decision on e-commerce websites or applications can be highly dependent on the reviews given by the customers who use the product. These reviews could not only shape the trust and attitude of consumer, but also the purchase decision. An online survey was conducted using Google form to see the impact of positive electronic word of mouth on brand trust and brand attitude and ultimately on online purchase of the product. The total 253 responses collected from the people who use daraz for shopping. The study limitations include time was short, responses are collected from only two cities, and resource were also limited to conduct study. The majority of respondents were students.

Keywords: E-wom, Brand Trust, Brand Attitude, online purchase intention

Exploring the Impact of Food Quality and Price/Value on Consumer Behavioral intensions mediating the role of customer satisfaction: A Case Study of Food Panda

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Abstract

In this 21st century, services of food delivery are emerging as a new wave in the food and beverage industry. Right now, we can order food with the click of one button of phone or on laptop. During this study, we analyzed those factors that influence customer behavioral intentions when using any food delivery app like Foodpanda. In the beginning of research we collected data from different sources. We conducted a survey through Google form. We distributed questionnaire among people and got response from 346 respondents. We placed this data on SPSS and run some analysis. Analysis showed that the factors (price and quality of food) of the Foodpanda application create a significant impact on customer behavioral intentions to use food delivery services. Results showed that customer satisfaction play a mediating role between price, food quality of product and behavioral intentions of consumers.

Keywords:
Consumer behavior, Food quality, Price/value, Behavioral intentions, E-commerce, Satisfaction

Investigating the Impact of Environmental Corporate Social Responsibility On Customer Engagement Through Green Purchase Intentions in Local Food Chains of Pakistan- A Conceptual Study

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Abstract:

This study delves into the impact of environmental corporate social responsibility (ECSR) on customer engagement in the context of local food chains in Pakistan. Investigating the mediating role of green purchase intentions, we explore how a company's commitment to environmental responsibility influences customers' willingness to connect with the brand. Additionally, we scrutinize the moderating effect of corporate image on the relationship between ECSR and customer engagement. Through a comprehensive analysis of local food chains, this research aims to contribute to the understanding of sustainable business practices in the Pakistani context. The findings may offer insights into how ECSR initiatives can shape consumers' environmentally conscious purchasing behavior and subsequently enhance their engagement with local food chains. The mediating role of green purchase intentions is crucial in deciphering the mechanism through which ECSR practices translate into consumer actions. Moreover, the study considers corporate image as a moderator, exploring its potential to strengthen or weaken the impact of ECSR on customer engagement. This research not only addresses the growing importance of sustainability in business but also provides practical implications for local food chains seeking to build stronger connections with environmentally conscious consumers in Pakistan.

Keywords: Environmental Corporate Social Responsibility (ECSR), Customer Engagement, Green Purchase Intention, Corporate Image

Customer's satisfaction after adoption of Islamic banking system by Faysal bank limited

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Abstract:

The revolutionary verdict by the Federal Shariah Court instructed the Pakistan banking industry to transform its commercial banking system into an Islamic banking system. SBP set a premeditated roadmap to accomplish this target until the year 2027. (SBP Strategic Plan 2023-2028) However, few banks are reluctant to adopt the Islamic banking system for fear of losing existing or potential customers who may prefer or like the convenience, diversity, and quality of commercial banking services and products. Some customers may distinguish Islamic banking as having higher costs, lower returns, lesser diversification, and less reliability than commercial banking. Some customers are not acquainted with the features of the Islamic banking system, such as profit distribution, risk sharing, social accountability, etc. Some customers may not settle with the Islamic ideologies and fundamentals that emphasize the Islamic banking system, such as prevention of interest, gambling, and speculation, keeping different opinions on the role of faith. This research aims to evaluate the role of customer relationship management within Faisal Bank, which recently adopted the Islamic banking system completely. Understanding the effectiveness of the bank's customer relationship management in addressing, inquiring about, resolving issues, and providing solutions to customers. This study will help banks and their customer risk management department, ultimately enlightening customers' perceptions, experiences, and satisfaction. The target population of this study is the bank's customer relationship officers and their customers. The sample size of the population is 280, which is the convenience sampling technique used to conduct this research. Data will be collected through questionnaires. Smart PLS will be used for the analysis of the collected data. This study will help the customer relationship management of all commercial banks to ascertain the customer's perception, experience, and satisfaction headed towards the adoption of Islamic banking structure and also help to encourage the Islamic banking culture in Pakistan which leading to the interest free economy.

Keywords: Islamic Banking, Commercial Banking, Customer Perception, Customer Experience, Customer Satisfaction & Customer Relationship Management

Impact of Leadership Styles On Employee Performance: A Moderating Role of Employee Resilience"

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Abstract:

Leadership styles have been studied by several researchers and have been a topic of interest for many. This study investigates the influence of different leadership styles on employee performance, examining the moderating role of employee resilience and the mediating role of job satisfaction. The research aims to contribute valuable insights to the fields of organizational psychology and leadership development. By investigating how leadership styles interact with employee resilience and job satisfaction, this study seeks to provide detailed understanding of the aspects shaping employee performance in contemporary workplaces. The findings aim to provide a comprehensive understanding of the intricate dynamics among leadership, job satisfaction, employee resilience, and ultimately, employee performance in organizational settings.

Key Words: leadership styles, autocratic leadership, laissez-faire, job satisfaction, employee resilience

The Impact of Training and Development on Employees' Performance and Productivity: A Case Study of Textile Company In Karachi, Pakistan

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Abstract:

The quality of human capital is a crucial determinant of any organization's success. Having employees with advanced training and development is deemed indispensable in order to gain a sustainable competitive advantage in a dynamic market, as it amplifies the knowledge and skills of the workforce. Thus, this study aimed to investigate the relationship between training and employees' productivity and performance in a particular textile company in Karachi, Pakistan. The data was gathered through personal interviews and a structured questionnaire from 125 respondents, who were chosen randomly from the company. Descriptive statistics were used to analyze the data that had been collected, and regression analysis was employed to examine the effect of training on workers' productivity and performance. The results of the study revealed that there is a significant positive impact of training and development on employees' productivity and performance. Therefore, justifying that expanding employees' access to training and development opportunities may result in enhanced productivity and performance, which consequently help the organization to achieve its goals.

Keywords: Training, Development, Employees, Performance, Productivity

The Relation of work-life conflict and Employee performance: A Research Study on Hospitality Employees

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Abstract:

This study examines the relationship between work-life conflict and employee performance, focusing on hotel employees in the dynamic and challenging environment of the hotel industry, where employees often struggle to balance work and personal responsibilities, it is important to understand the impact of productivity conflict. This study uses a mixed methods approach and explores the nuances of work-life conflict, including work-family and work-family relationships. In order to investigate this relationship, a three-stage survey was applied to three different employees of three, four, and five-star hotels in Pakistan. The research examines work-family conflict, family conflict, and work stress, examining their effects on job performance. Research results show that family conflict has a significant impact on employees and work-family conflict and family conflict are effective in stressful jobs. In addition, the study also explored the mediating role of job stress in affecting employees. The study found that job satisfaction significantly moderated work-family conflict and employee performance, but family work had no effect on job satisfaction. Demographic variables indicating changes in work-family relationships, family conflict, job stress, and work-related employees were also considered. Building on existing literature, this study provides a better understanding of the specific challenges that hospitality workers face when managing operations - life conflicts and work-related problems. These findings provide valuable implications for researchers and business professionals, laying the foundation for strategies to improve employee health and productivity in the hospitality industry. This study serves as a model for future research in this area and highlights the importance of specific research topics for unraveling the complexities of work-life balance and their impact on employee performance.

Keywords; Work-life conflict, work stress, employee performance, Hospitalities employees

Investigate the Impact of Leadership Styles on Young Employee Turnover in departmental stores, The Moderating role of Motivation and Organizational Commitment. (A Conceptual Study)

Alisha

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Abstract:

This study aims to examine the complex factors that impact the attrition of young workers in department stores, with particular attention to the vital variables of motivation, leadership styles, and organizational commitment. The retail industry, which is known for its dynamic nature, consistently struggles to hold on to young people. Also, this study will be helpful in explaining the complex interactions between these factors and how they together affect employee turnover. A quantitative approach will be used to gather information in department stores using Questionnaires in order to quantify organizational commitment, uncover motivating factors, and evaluate different leadership styles. This study will use statistical analyses, to examine how organizational commitment, motivation, and leadership styles are related to employee turnover through SEM. The results will bring significant insights to the industry, allowing department stores to customize methods that encourage a more stable, driven, and dedicated workforce, thereby reducing the difficulties related to young employee turnover.

Keywords:

Leadership Styles, Young Employee Turnover, Motivation and Organizational Commitment

Impact of Leader Inclusiveness on Taking charge: The Moderating Role of Regulatory focus on Employee

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Abstract:

The relationship between leader inclusiveness and three variables: taking charge, mediator by thriving at work, and moderation by traditionality. Leader inclusiveness, defined as the extent to which leaders involve and value the contributions of their team members, has been recognized as a crucial factor in promoting employee engagement and organizational success. The results of the study provide insights into the impact of leader inclusiveness on taking charge, mediator by thriving at work, and moderation by traditionality. The study aims to explore how leader inclusiveness influences these variables and their implications in the workplace. Through a comprehensive literature review, relevant theories and previous research findings are synthesized to provide a theoretical framework for the study. The study focuses on employees with different professions within the Lahore Region. Data will be collected from the 220 questionnaires among the employees with different professions. We have chosen a non-probability form of sampling and the technique we use is convenience and snowball sampling to fill the questionnaires. In this, we have collected the questionnaires according to the primary data collection method. SMART PLS 4.0 will be used to assess the data. Regression analysis has been used to analyse the data collected through questionnaires.

Keywords: Leader Inclusiveness, Taking Charge, Thriving at Work, Regulatory Focus.

Policy Adherence Assessment of Affiliated Colleges in Pakistan: A Comprehensive Study

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Abstract:

This study aims to reveal the compliance of affiliated colleges with regularity policies framed by HEC in the education market of Pakistan. Although, this phenomenon has been in study by several researchers such as (Khan & Hussain, 2020). However, there are limitations of scope in the literature. The previous study has certain limitations and cannot be generalized to a large population of 1900 affiliated colleges (HEC Statistical Division). This study is conducted in the affiliated colleges of leading province Punjab which has ethnic diversity. (Shah & Amjad, 2021). This study will explore the challenges and issues faced by the affiliated colleges in Pakistan and will provide recommendations and suggestions to resolve these issues. Data Collection The targeted population will be student, teaching and non-teaching staff of the affiliated colleges. There will be a prescribed proforma for each respondent in different capacity. Data Analysis This research work is based on Secondary Data collection type and the results will be analysed by using the Stata. Key Words: Policy Adherence, Affiliated colleges, Affiliation

Automation and artificial intelligence's effects on the cognitive abilities of white-collar employees

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Abstract:

Artificial intelligence and machine learning have led to automation in nearly every industry. Whether it is the robots carrying food for you or software programs taking important organizational decisions, radical changes in the employment and system processes can be obviously seen. So far, a lot of scholarly discussion has been centred on how the automation is snatching work from the working class or posing a threat to gig economy, the white collar personnels and the effects on their cognitive abilities has been largely overlooked. A machine put to rest, rusts similarly a human brain when stops, deteriorates. Just like with the advent of generative pre-trained model (GPT), students have stop critically thinking and content creators have lost jobs, will the AI pose a full stop to the cognitive abilities of white collars too? This study aims to classify these effects through quantitative data collection from 500 white collar professionals from different departments of different organization. Cognitive abilities tests (neuropsychological tests) will be run for each separate skill i.e., problem solving, decision-making, critical and logical reasoning, brainstorming. Standardized assessments with a control group will be given and results will be squeezed out using statistical techniques. Findings from this paper will be helpful as empirical inputs for future research on this topic.

Keywords: Artificial intelligence, cognitive abilities, unemployment, white collar workers, machine learning, automation

The Adoption of Technology And Productivity Impact on The Performance of the Textile Industry: The Role of Supply Chain Disruption

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Abstract:

The textile industry in Pakistan, a thriving sector, is currently grappling with a severe economic crisis. Pakistan's textile industry plays a vital role in the supply chain, contributing approximately 8.5% to Pakistan's GDP and employing a sustainable portion of the nation's workforce. This downturn has far-reaching implications not only for the industry itself but also for the broader economic landscape of the country. In this article, we delve into the critical challenges faced by the Pakistani textile sectors, constructing a narrative that explores the root causes and sets the stage for understanding the gravity of the situation. This research comprehensively analyses the intricate web of supply chain factors influencing Pakistan's textile sector. It aims to identify and address the critical challenges that have impeded its sustained growth by delving into the multifaceted dimensions of technology adoption and productivity. The study seeks actionable insights to inform policy reforms, strategic interventions, and sustainable practices. Target population. This study will focus on supply chain managers of leading textile companies listed on stock exchanges in Pakistan. Convenience sampling will be employed to gather data. Primary data techniques will be used to collect data for this study. SMART PLS 4.0 will be used to assess the data.

Keywords: Technology Adoption, Performance, Productivity, Growth Rate, Supply Chain Disruption

Impacts of Artificial Intelligence on Human Resource Digitalization in Industry 4.0: A Sectoral Study in Development, Healthcare, and Administration

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Abstract:

In the era of Industry 4.0, the integration of Artificial Intelligence (AI) and the Internet of Things (IoT) presents significant opportunities, emphasizing precision, efficiency, and flexibility. The evolving landscape prompts substantial organizational changes, particularly in the Human Resource (HR) functions. HR capability assumes a pivotal role in organizations within the development, healthcare, and administration sectors, offering a competitive edge in the paradigm of Industry 4.0. The study addresses the critical need for agility and adaptability in HR functions to navigate challenges effectively. This sectoral study explores the impact of AI on HR digitalization within Industry 4.0, with a specific emphasis on the development, healthcare, and administration sectors. Conducted among 384 HR experts in the development, healthcare, and administration sectors, the survey underscores the fundamental role of organizational analysis for sustainable growth. The study further delves into the impact of each of the five AI application areas, assessing their role in supporting adaptability and human resource capability within the context of development, healthcare, and administration. Identification of the pivotal components, such as the enhancement of well-being and safety, underlines the potential implications of AI applications in HR within the targeted sectors.

Keywords: Artificial Intelligence, Industry 4.0, Internet of things, Human Resource Digitalization, Organizational Analysis, Adaptability, Employee Well-being.

Quantitative research and Reflexivity

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Abstract:

Examining one's own presumptions, convictions, and systems of judgments and considering thoughtfully and critically how these affect the research process is the act of reflexivity. Reflexivity is a process that challenges and examines our identity as researchers and how it informs our work. It is at the center of discussions about subjectivity, objectivity, and the fundamentals of social scientific research and knowledge production. Reflexivity in the research process is one of the most obvious ways that qualitative and quantitative approaches vary from one another. The focus of qualitative research is on the individual and distinctive living experiences of the participants. As a result, training under this paradigm heavily emphasizes the need of qualitative researchers thinking about how their own distinct positionalities impact the research process. Quantitative approaches in social science and however, personality psychology in general has seen to be disconnected from this degree of reflection in general and reflexivity in particular. Three quantitative researchers who have struggled to make reflexivity work in our own research believe in this article that reflexivity has a lot to teach quantitative methodologists. We contend that reflexivity helps with the continual reevaluation of openness and transparency in psychology by forcing researchers to confront and focus their own positionalities and to interact more thoughtfully with each stage of the research process. In this article, we first argue for the integration of reflexivity into all research methodologies and then offer a "beginner's guide" with specific recommendations, practical examples, and reflexive prompts for quantitative researchers who want to interact reflexively with their own work.

Impact of Financial Leverage on Firm's Profitability: Proof from Coke and Refined Fuel Sector of Pakistan

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Abstract:

The basic reason of this revision is to examine the impact of financial leverage on ROA and EPS in Coke and Refined Petroleum Sector of Pakistan. It aims to determined that how the profitability of this sector is affected by financial leverage. For analysis purpose we selected nine companies listed in Karachi Stock Exchange. Source of data collection is secondary data collection in which we examine the financial statements of selected firms. To check the significance of financial leverage on ROA and EPS we develop hypotheses. We used descriptive statistics, correlation matrix and regression analysis to check the relationship between variables and significance of financial leverage on firms' profitability. After analysis we find out that financial leverage has significance impact on firm ROA and has not significant impact on EPS.

Key Words: Financial leverage, ROA, EPS

The Impact of Process Innovation on Performance of SMEs Considering the Mediating Role of Financial Resources

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Abstract:

SMEs face challenges in dynamic business environments, including technological advancements, globalization, and COVID-19, requiring process innovation, but limited financial resources hinder, emphasizing tailored knowledge management referring SMEs performance. The study explores the impact of process innovation on SMEs' performance and the role of financial resources, analyzing data from a sample of SMEs across various industries and examining moderating factors. Researchers will gather quantitative data from SMEs on process innovation, financial resources, and performance metrics using surveys, interviews, focus groups, and secondary data. Regression analysis would assess statistical relationships. The research will suggest a positive relationship between process innovation and SME performance, with greater financial resources leading to better performance. It will also suggest that financial resources mediate the relationship, with full, partial, or no mediation. These findings would provide valuable insights into the dynamics between innovation, financial resources, and SME performance.

Key-words: Innovation, Process innovation, financial in resources, SMEs, Performance

A Study on the Variables Influencing the Intention to Continue Using Mobile Payment Services with the Mediating Role of Customer Attitude in Pakistan

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Abstract:

Although the number of people utilizing mobile payment services has skyrocketed and their popularity has increased, many consumers eventually lose interest and stop using them. The long-term goal has gotten relatively less attention than the adoption of mobile payment services, which has been the subject of most research. Establishing a theoretical framework for comprehending the influences (obstacles, facilitators, and behaviors) on mobile payment users' inclination to use these services frequently is the aim of this study. The model was validated using 304 actual users of mobile payment apps across various cities in Pakistan. The data was analyzed using the PLS-SEM method. Price benefits, network externalities, habits, contentment, and self-efficacy all favorably influence users' long-term intent; perceived risk and unfavorable environmental factors negatively impact it, and trust has little bearing on it.

Keywords: Customer Attitude, Mobile payment, Self-efficacy, Perceived risk

The Effect of External Factors on Stock Market Performance: Evidence from the Pakistan Stock Exchange (PSX)

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Abstract:

Stock Market plays significant role in defining an economy of country. The objective of this study examines the effect of external factors on stock market performance in Pakistan, specifically focusing on the Pakistan Stock Exchange (PSX). External factors, including macroeconomic conditions, geopolitical events, and global economic trends, have a importance on stock market performance in Pakistan. Specifically, inflation, interest rates, exchange rates are expected to have a statistically significant relationship with stock market index. The study utilizes a secondary data from 2013 to 2023, covering a period of significant economic factors in Pakistan. The findings of the study showed external factors play a significance role in determining stock market performance in Pakistan. Inflation, interest rates, exchange rates are found to have statistically significant relationships with stock market returns. The study also indicates the importance of considering external factors when going for investment decisions in the PSX. This study only limited to PSX. Furthermore this study will help for researcher to study the effect of other reasons on stock market.

Key Words: PSX, Stock market, Macroeconomic variables, inflation rate, exchange rate, Exchange Rate

Impact of Exchange Rate Fluctuation on the Performance of Manufacturing Industry in Pakistan

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Abstract:

The purpose of this study is to explore the relationship between Exchange rate fluctuation and its impact on the Performance of Industrial sector of Pakistan. The performance of industrial sector will be determined through Companies Gross Profit to sales ratio, Dividend payout ratio. The study will use the US Dollar as benchmark for foreign exchange. The performance of the companies is also directly affected by the purchasing power of consumer. The Exchange rate is the main indicator to determine the Health of the Economy of any country. Various Economic and non-economic factors determine the Exchange rate value. Developed countries has the Fixed or Control Exchange rate while Underdeveloped or developing countries are more vulnerable to exchange rate fluctuations

This study will be fruitful for potential investors by understanding Market dynamics before making decisions. This study will be beneficial for those investors who diversify their portfolio by investing in shares of multiple sectors of the stock exchange.

This study will also be beneficial for the core management of the companies for policy making. This study will target Two Major Sectors of economy of Pakistan Auto Mobile Industry (Import Based Industry) Textile Industry (Export Based Industry)

For this research work, Exchange Rate Data will be collected through Government Regulator bank's (State Bank of Pakistan) website from year 2020 to 2022 of daily basis and then Weighted Average rate shall be considered for research purpose. The performance of the companies will be checked through the company's annual financial report by calculating the profitability & Dividend Payout ratio of the consecutive three years from 2020 to 2022. Inflation data of the country will fetch from Government Data base i.e. Economic survey of Pakistan of 3 years from 2020 to 2022. This research work is based on Secondary Data collection type and will draw the results by using the Stata as a data Analysis tool.

This article will enrich the body of literature by providing empirical evidences.
Direct Variable Currency Fluctuation
Indirect Variable Performance of the company
Indirect Variable Inflation Rate

Keywords: Exchange Rate, Inflation, Profitability, Performance, SBP

"Impact of Corporate Governance on Firm's Performance"

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Abstract:

This research aims to thoroughly examine the complex interactions between corporate governance, board diversity, and performance outcomes in different types of organizations. By studying the connections among these factors, the main objective is to understand how the ownership structure influences the effects of corporate governance and board diversity on financial and operational performance.

This study is really important for companies and their leaders. It helps them understand how different factors like ownership structure, corporate governance, and board diversity interact with each other. By understanding these interactions, organizations can adjust their governance practices to better suit different ownership situations. The findings from this study can be used to create more effective corporate systems that improve financial and operational performance. Ultimately, this research helps create adaptive governance strategies. Additionally, this study fills a gap in existing research by providing insights into how ownership structures affect important organizational performance indicators. This valuable knowledge is useful for scholars, practitioners, and policymakers.

The target population of this research is the companies that are listed on the Pakistan Stock Exchange (PSX) 100 Index. These companies are actively traded and can be studied using publicly available secondary data. We gather financial statements from annual reports of listed companies, including income statements, balance sheets, and cash flow statements. We collect governancerelated information from companies' annual reports, such as board structures, committee compositions, and disclosure practices. 3. Ownership Structure Data:

We obtain information on ownership structures from relevant sources, including details on major shareholders, institutional investors, and family ownership. We review existing academic literature, industry reports, and regulatory documents to enhance understanding and provide context for the analysis.

Role of Foreign Resources in Boosting Domestic Productive Capacity:

A Case of Developing Countries

Irfan Haider
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Abstract:

PRPBLEM: Growth to reach to productivity as a major goal of any economy and then talk about FDI as a source of external resource's, knowledge and skills which are potential tool to boost productivity. What factors effects on the FDI for economic growth. How economic growth, trade openness, population growth, gross domestic product of Developing countries is effected by FDI. Economic growth plays a role like blood in human body in any country. This is the essential element for the country. Control on all these independent variables is very much important in the success of any country. If all these independent variables will be higher, the country will grow more. As this economic growth has so much importance so this should have strong basis. The strong base of the economic growth primarily depends upon the exports, inflation rate, imports & tax. For the better economic growth of the country, they need to reduce the inflation rate in a country and increase the national currency rate.

PURPOSE AND MOTIVATION: The purpose of this research is to investigate the impact of FDI on Productive Capacities from 2010- 2020 of Developing countries.

APPROACH: This study will be based on panel data analysis to explore the nature of effect of FDI in productive capacity index.

RESULTS AND IMPLICATIONS: The analysis shows that the FDI has a non linear effect on the productive capacity. Countries need to regulate the inflow FDI in order to maximize the gains.

Disaggregated Economic Growth On Social Development Under Kuznets Curve Hypothesis: Moderating Role of Green Technology

Noman Arshed

Tayyaba Rafique

Syed Anwar Hussain

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Abstract:

Social development is actually a process of improving the quality of life and wellbeing of the individuals. Improved life style of citzens is the symbol of sustainable economic development of the country. It creats equity, prosoerity and stability among individual, nation and communities. Social development has now extended to the next level and it directly impact on individual's finances and community's economy; it is also a significant matter for businesses. While considering economy, it is stated that the economy's sectoral composition is crucial for attaining sustainable development goals. Kuznets' hypothesis proposes that a minimum level of economic activity is required to kickstart the trickle-down effect for social development. A Social Progress Indicator (SPI) is a multidimensional social progress indicator. This study addresses the sustainable development coming from sectoral economic growth of the countries from 2011 to 2019. This study also explores the potential of green technology in promoting sustainability in economic activity. A robust distribution panel quantile regression is estimated for the quadratic function of economic activity and the moderating role of green technology in shifting the non-linear curve. This study is instrumental in assessing national-level disaggregated economic activity sustainability and highlighting the potential of green technology.

Keywords: Non-linear effects, Panel data model, Kuznets' hypothesis, Turning points,

Role of Fin Tech in Increasing Commercial Banking Penetration – A Global Assessment

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Abstract:

Financial inclusion is one of the major goals of the IMF and World Bank. Several empirical studies have shown the merits of promoting the financial sector in the economy. It engenders heightened economic growth, facilitates capital mobilization, and fosters a conducive environment for innovation and entrepreneurship within the financial domain. This research delves into the nexus between financial technology (Fintech) adoption by the financial system and commercial banking sector penetration globally. Panel data analysis has been conducted while controlling for GDP, exchange rate, bank lending rate, and institutional quality. The focal point revolves around unraveling the contribution of Fintech in the commercial banking landscape. The anticipated contribution lies in providing nuanced insights into the transformative impact of technological advancements on the financial viability of commercial banks.

Keywords: Financial technology; Banking sector; Quantitative analysis

Reporting of Corporate Sustainability with Linkage of Corporate Transparency and Performance Determinants

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Abstract:

The study investigated sustainability disclosure of 63 Pakistani firms on the Karachi Stock Exchange with the time span from 2015 to 2021. Using CSR reports and websites, researchers found partial disclosure of ESG information, varying in degree. A moderate link between disclosure and performance indicators was noted. The Corporate Sustainability Disclosure Guidelines Determination (CSDF) showed a mediate association with firm size and water consumption while strong positive relationship with environmental conservation and GHG emission. The study stressed adherence to reporting guidelines, accurate information, and the role of reporting in stakeholder communication. Policymakers can use findings to develop guidelines for consistent and accurate sustainability reporting by firms.

Key Words: Corporate Social Responsibility (CSR), Sustainability, Performance Indicators and Corporate Disclosure.

Green Talen Management and Innovative Work Behavior: A Moderated Mediation Model

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Abstract:

Purpose: This study aims to investigate the significance of an emerging concept green talent management and its influence on employees innovative work behavior together with the moderating role of green transformational leadership and Talent Development will mediate with the context of higher education institutions both (private and public). Design/methodology/approach: Four hundred and fifty questionnaires will be administrated through the academic staff in five universities located in Punjab, Pakistan and data will be analyzed using partial least square structure equation modeling. Findings: This study will provide evidence that green talent management will exert significant influence on employee's innovative work behavior with mediating effect of talent development and moreover green transformation leadership will moderate the significant effect on employee's innovative work behavior. Research limitation or Implication: The research aims to offer theoretical and managerial insights into how leaders in higher education can leverage talent management to encourage innovative work behavior among employees. This, in turn, can contribute to achieving a sustainable competitive advantage within their respective markets which is almost ignore in previous studies and literature. Originality and value: In recent times, researchers have focused on tackling the challenge that organization leaders face: the development and retention of employees who can contribute to their organization's sustainability and ultimately achieve a competitive edge in their markets. However, there's a gap in addressing these concerns adequately. This study aims to explore the importance of a developing concept called green talent management and its impact on employees' innovative work behavior. It will delve into how talent development plays a mediating role, and further, it will consider how green transformational leadership might moderate the significant effects of innovative work behavior, specifically within educational institutions.

Keyword: Green Talent Management, Talent Development, Innovative work behavior & Green Transformation Leadership.

Understanding the Adoption of Industry 4.0 Technologies in Improving Environmental and Economical Sustainability and Challenges to Adopt Industry 4.0.

Mehr-un-Nisa Imtiaz

Asma Bibi

Ayesha Safdar

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University of the Punjab, Lahore

Abstract:

The fourth industrial revolution and the underlying digital transformation, known as Industry4.0, is progressing exponentially. This paper ,a pathway, aims to provide research guideline for understanding the significance of Industry 4.0 technologies for the sustainable economy and sustainable environment through improved and smart business sector. Industry 4.0 offers crucial opportunities for future business growth. The digital revolution is reshaping the way for individuals to live and work fundamentally. Technologies as artificial intelligence (AI), big data, machine learning (ML), Internet of things (IOT) and automation. These technologies have the potential to transform traditional manufacturing processes into smart, interconnected systems. These technologies help to create sustainable environment in the manufacturing and other sectors. Industry 4.0 technologies and crucial interrelationships through advanced technologies are expected to have a positive impact on environment In terms of environmental sustainability, Industry 4.0 offers several benefits. By leveraging IoT devices and sensors, companies can collect real-time data on energy consumption, waste generation, and resource utilization. This data can be analyzed to identify areas for improvement and implement energy-efficient practices, reducing environmental impact. Automation and robotics can optimize production processes, minimizing material waste and energy usage. As currently there is a big issue to control the industries regarding releasing the material like smoke and contaminated water that create hazardous impact on the human life and the increasing litter ratio in the society is also unsafe for the survival of the upcoming generation. This study describes the possible use of fourth industry revolution to minimize these environmental issues as well as tells how the economies can take economic advantages by eliminating these issues by adjusting increased litter ratio, industrial waste, contaminated water in an useful ways research shows that industry 4.0 provide opportunity to use litter in electricity generation. The integration of data analytics and AI enables companies to gain valuable insights into their operations, industry 4.0 is closely linked to the information and communication systems, making it more scalable, competitive and better informed that will ultimately help to improve the industries economically, this allows for better decision-making, cost optimization, and the development of innovative products and services. With enhanced productivity and efficiency. Industry 4.0 provides variety of technologies, principles and instruction for building new and

expanding existing factories, allowing consumers to choose different models at production rates through robotics, information technology and scalable communication. Moreover, the adoption of Industry 4.0 technologies can lead to the creation of new job opportunities, as companies require skilled professionals to operate and maintain these advanced systems. as well as challenge in adopting industry 4.0 the major hurdle is that it is replacing the human labor in many businesses at large due to less knowledge of industry 4.0 technologies in unskilled labor. By harnessing the power of advanced technologies, businesses can pave the way for a more efficient, eco-friendly, and prosperous future but without trained labor it is very difficult.

Keywords: Sustainability, industry, technologies, economy, environmental.

Impact of Goodwill On Industry

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Abstract:

The impact of goodwill on a business is profound, encompassing financial, operational, and reputational dimensions. Financially, goodwill represents the intangible assets derived from factors such as brand recognition, customer loyalty, and a positive corporate image. Its inclusion on the balance sheet can enhance a company's valuation and borrowing capacity. Operationally, goodwill fosters customer trust, thereby influencing purchasing decisions and driving repeat business. Additionally, it serves as a buffer during challenging times, as customers are more likely to forgive and remain loyal to a reputable brand. From a reputational standpoint, goodwill is a cornerstone of brand equity, playing a pivotal role in shaping stakeholder perceptions. Consequently, strategic efforts to cultivate and protect goodwill are integral to sustained business success, influencing market competitiveness and long-term viability. Understanding and leveraging the impact of goodwill is essential for businesses navigating the complex landscape of contemporary commerce. The impact of goodwill on a business extends beyond the surface-level metrics, delving into nuanced aspects that significantly influence its overall health. Financially, goodwill arises from intangible assets like a well-established brand, customer relationships, and a favorable corporate image. Its valuation implications go beyond mere numbers on a balance sheet, affecting the company's market capitalization and potential for mergers and acquisitions. However, the delicate nature of goodwill also means that impairment can occur, necessitating thorough assessments to ensure accurate representation. Operationally, the influence of goodwill manifests in customer behavior. A positive corporate reputation contributes to customer trust, fostering brand loyalty and influencing purchasing decisions. This dynamic plays a crucial role in customer retention, as consumers are more likely to maintain allegiance to a brand with a strong reputation, even in the face of occasional missteps. Moreover, during periods of economic uncertainty or industry challenges, goodwill acts as a stabilizing force, insulating the business from severe downturns in customer confidence. Reputation management emerges as a core component of the impact of goodwill on business. Building and preserving a positive corporate image is an ongoing process that requires strategic communication, ethical practices, and proactive engagement with stakeholders. This reputation, intricately tied to goodwill, not only influences customer perceptions but also affects relationships with investors, employees, and regulatory bodies. A tarnished reputation can have far-reaching consequences, affecting market share, stock prices, and the ability to attract top talent. In essence, the impact of goodwill on a business is a multifaceted dynamic that necessitates a holistic understanding. Recognizing its financial, operational, and reputational dimensions is vital for crafting effective business strategies, mitigating risks, and ensuring sustainable growth in today's competitive landscape. As businesses navigate the complexities of the modern marketplace, the cultivation and preservation of goodwill emerge as integral components of a resilient and thriving

enterprise. The nuanced impact of goodwill on a business transcends the realms of mere financial and operational considerations, weaving into the fabric of corporate resilience and sustainable success. Financially, goodwill embodies the intangible assets that underpin a company's valuation, extending beyond quantifiable metrics to encompass brand strength, customer allegiance, and market perception. Its inclusion on the balance sheet not only reflects the intrinsic value derived from these intangibles but also shapes the company's financial narrative, influencing investment decisions and potential strategic alliances. In navigating the dynamic landscape of contemporary commerce, businesses must not only recognize the multifaceted nature of goodwill but also adopt a proactive stance in its cultivation and preservation. The abstract concept of goodwill is, in essence, a strategic imperative, requiring businesses to craft comprehensive narratives that transcend financial spreadsheets. Understanding and leveraging the impact of goodwill emerges not just as a financial necessity but as an intrinsic element in the art of building enduring, adaptive enterprises.

"Unveiling Sustainability: Green Talen Management's Impact on Innovative Work Behavior, Mediated by Green Talent Development and Moderated by Green Transformational Leadership.

Momina Nasir

Hailey College of Banking & Finance,

University of the Punjab, Lahore

Abstract:

Purpose: This study aims to investigate the significance of an emerging concept green talent management and its influence on employee's innovative work behavior together with the moderating role of green transformational leadership and Green Talent Development will mediate with the context of higher education institutions both (private and public).

Design/methodology/approach: Four hundred and fifty questionnaires will be administrated through the academic staff in five universities located in Punjab, Pakistan and data will be analyzed using partial least square structure equation modeling.

Findings: This study will provide evidence that green talent management will exert significant influence on employee's innovative work behavior with mediating effect of green talent development and moreover green transformation leadership will moderate the significant effect on employee's innovative work behavior.

Research limitation or Implication: The research aims to offer theoretical and managerial insights into how leaders in higher education can leverage green talent management to encourage innovative work behavior among employees. This, in turn, can contribute to achieving a sustainable competitive advantage within their respective markets which is almost ignore in previous studies and literature.

Originality and value: In recent times, researchers have focused on tackling the challenge that organization leaders face: the development and retention of employees who can contribute to their organization's sustainability and ultimately achieve a competitive edge in their markets. However, there's a gap in addressing these concerns adequately. This study aims to explore the importance of a developing concept called green talent management and its impact on employees' innovative work behavior. It will delve into how green talent development plays a mediating role, and further, it will consider how green transformational leadership might moderate the significant effects of innovative work behavior, specifically within educational institutions.

Keyword: Green Talent Management, Green Talent Development, Green Innovative work behavior & Green Transformation Leadership.

Assessment of Retail Investors Behaviour Through Mediating Effect of Financial Literarcy and Moderating Effect of Risk Tolerance

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Abstract:

The descriptive status of behavioral economics theories has faced criticism about whether they may be predictive a mainstay of traditional economics. An investigation into the factors that influence individuals' financial choices is required to ensure a more efficient and stable financial market that is less vulnerable to asset pricing bubbles. Therefore, the purpose of this research study is to find out the factors affecting individual investor's investment decisions with mediating effect of financial literacy and moderating effect of risk tolerance in Pakistan Stock Exchange. More specifically, researchers examine the most important factors under the headings of organizational, personal and markets factors. The researcher considers individual investors investing in Pakistan stock exchange as population of this study. The sample size consists of those individual investors who are frequently investing in PSX within the region of Lahore stock market. The results showed that overall market factors, personal factors and organizational factors are the most important factors influencing individual investor's investment behaviour. Moreover, the results further revealed that financial literacy mediate the relationship between observed variables. Lastly, the findings indicated that risk tolerance moderate the relationship between observed variables. The research will be able to provide new insights for investors, brokerage firms, management and government, helping them to make an appropriate decision.

Keywords: Behavioral Bias, Personal factors, Market factors, Organizational Factors, Financial literacy, Risk tolerance, Individual Investors

Strategic Management of Banks' Loan Portfolio: An Applications Resource Based View

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Abstract:

This is a theoretical research paper aimed to develop a model of strategic management for banks' loan portfolio management and sustainable competitive advantage. Overall design of the study consists of review of literature and conceptual modeling based on real time bank loaning processes using elementary concepts of discrete mathematics (i.e. geometry, drawing and directed graphs). The model has been constructed on the basis of descriptive research (i.e. intensive review of literature). It has been presented in taking into consideration the theory of resource based view. As a result the study advanced a graphical strategic bank loan portfolio management model. The model has valuable practical as well as theoretical implications for commercial banks. It also provides framework for future research. It is equally beneficial for all other stakeholders (i.e. regulators, government, customers, depositors, analysts, society at large etc.) because it provides deeper understanding of the phenomena. However, the research findings should be used with caution since the study being theoretical and conceptual does not advances any statistical proof and is subject the all limitations applied the theoretical studies.

Impact of Consumer Behavior on E-Banking under the Moderation of Financial Literacy

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Abstract:

This study explains the nexus between electronic banking services and consumer behaviour in the dynamic world of digital finance through a convenient sampling method and a mono-method approach that includes surveys wherein the customers are studied in a natural setting. This study seeks to reveal how e-banking adoption is changing in the current scenario. The moderating role of financial literacy and perceived ease of use, trust, security, attitude, and customer happiness makes this research eye-catching. It uses a quantitative method under the positivism philosophy to conclude. The proposed target audience is online customers, and a sample of 320 respondents will be drawn with convenience sampling. The data will be collected using the adopted version of the questionnaire. This ongoing research will contribute to academic discourse and provide practical consequences for financial institutions, legislators, and educators trying to utilize financial literacy to improve the uptake and effectiveness of e-banking services.

Keywords: Trust, Financial literacy, security, ease of use, attitude, smart pls.

The Impact of Sehet Sahulat Card On the Access to Health Care and Financial Protection in Punjab, Pakistan

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Abstract:

On December, 15, 2015 Sehat Sahulat Program was introduced in Pakistan and researchers remarkably explains extraordinary achievement for the popularity and satisfaction of this program but the data for beneficiary socioeconomic class, gender and age is still lagging. This article is designed to explain the comprehensive data related to age, gender and socioeconomic class which is more beneficiary to Sehat Sahulat card. This study also highlights the inflation aspect and financial protection policy. This Study enrolls 264 in-ward patients from Shalamar Hospital, qualitatively assembled data by questionnaire design for patient's Demographics, SSC history, family structure, Income statement, religious sect and treatment coverage. This study explains the frequency of urbanized population, 48 (27.9%) male, 38 (41.3%) females, Age group; 40-50years, 67 (62.6%) male and 40 (37.4%) female are greater. Study shows Muslim in-patient population 225 (85.20%), non-Muslim 39 (14.80%), SSC history; once 75 (65.21%), twice 24 (20.86%) and more than twice 16 (13.91%), family members past card history, 50 (18.90%) yes, 214 (81.10%) No data found. This Study explains greater frequency for family structure, 4-6 members;147 (55.70%), salary range under 25-35k, secondary education 104 (39.40%), marital status;120 (69.8%) males and 75 (81.5%) females are greater. This study helps future researchers for yearly analysis and policy design for the expansion of this program. This study shows limitations of time constraint, funds availability and previous literature gaps but do not affect data quality.

Keywords: Health index, World Health Organization, Sehat Sahulat Program, financial protection, Health Policy

Relationship Between Employee Empowerment, Job Satisfaction, Employee Engagement, Green Human Resource Management and Organizational Performance

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Abstract:

This study investigates how the employee empowerment, job satisfaction, employee engagement and Green Human Resource Management affect the organizational performance. The study employs a structural equation modelling technique to investigate the correlation between different variables within a designated software enterprise. The data was collected from 50 employees who are employed at Digi Squad solutions located in Lahore, Pakistan. The results showed that employees with higher levels of empowerment, satisfaction, engagement and through the development of Green Human resource management used to show outstanding organizational performance, lower turnover intentions, and higher productivity. The findings also demonstrated that employee empowerment, satisfaction, engagement and green human resource management have a positive association with organizational efficiency. The investigation suggests that for enhancing employee empowerment, satisfaction, engagement and green human resource management the organization should implement various measures and enhance specific aspects of the working environment.

Keywords: Employee Empowerment, Job satisfaction, Employee engagement, Green Human Resource Management and Organizational Performance

Investigating the Nexus of Employee Satisfaction, Dedication, and Involvement in Shaping Organizational Success: Unraveling the Mediating Influence of Employee Attitudes

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Anoshia Mazhar Farooqi
PhD Scholar, University Sultan Zainul Abidin, Malaysia
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University of Management and Technology, Lahore, Pakistan
Minahil Fayyaz
University of Management and Technology, Lahore, Pakistan

Abstract:

The present study explores the relationship between the impact of employee satisfaction, engagement, and commitment on firm performance, especially in the presence of employee attitudes, which play an intervening role in the explanation of the whole procedure. After reviewing relevant literature as well as analyzing empirical data, the study provides valuable insights into how employees' psychological and emotional conditions drive their attitudes toward engagement, their commitment and how this affects the performance of the company as a whole. The results highlight the importance of positive employee attitudes as a mediator between satisfaction, engagement, commitment, and firm performance. The results also showed a positive correlation between employee satisfaction towards their jobs and organizational performance. At the same time, work engagement and organizational performance are positively correlated. This research paper highlights that employee engagement has a positive impact on organizational performance. The study concluded that there is a positive correlation between employee commitment towards their tasks and overall organizational performance. Based on these findings, employees should be rewarded and promoted by increasing their work engagement based on their skills and experience. In addition, management needs regular training and supervision to implement a culture of constructive work environment.

Keywords: Employee satisfaction, commitment, engagement, firm performance, and employee attitude.

Unravelling the Impact of Artificial Intelligence in Higher Education: Exploring Implications and Applications

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Abstract:

The objective of the study is to explore the Effects and implications of artificial intelligence(AI) in higher education. Data has been collected from students getting higher education to get their perception of AI. The augmentation of Artificial Intelligence (AI) is currently modifying the environment of higher education and, correspondingly, the future professional lives of students. This research recommends that there is an unbiased reality that there is an impact of AI on higher education students and their professional lives. It manages under the assumption that there are genuine and quantifiable impacts of artificial intelligence on Higher education students' growth opportunities in their professional lives. This study uses quantitative data analysis, the data is gathered from higher education student on their satisfaction, problems and performance as far as professional life is concerned the data collected relates to job satisfaction and career path and then the analysis has made to show AI effect higher education system as well as the career path of professional lives. The time horizon of this research is cross-sectional because the data is collected from many different individuals and variables are observed without any influence on higher education students and their professional lives. Results of the study suggest that higher education students have a positive perception of Artificial Intelligence usage and that Artificial Intelligence has a positive impact on the professional career of higher education students from the results it is also concluded that students want ease in their professional lives which they see through using different AI tools. It also recommends that universities should adopt AI tools and try to make the criteria of assessment with the involvement of AI.

Strategic Insights: Unveiling Investor Decision Dynamics and Business Sensitivities via the Betting Against Beta Approach

Rameen Sibghat

Laibah Hassan

Rafay Ahmad

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Abstract:

The effectiveness of utilizing "betting against beta" investing strategy is examined in this study with context of investor regret and market sentiment. By shorting low-beta assets and buying high-beta assets, an investor who is betting against beta is deviating from the standard risk-reward relationship. However, psychological factors like investor regret and market behaviors may have an impact on this strategy's effectiveness. Investment dissatisfaction a behavioral bias that has been extensively investigated, may have a big impact on investing choices. Investors may feel guilty for deviating from the common understanding of pursuing greater returns through greater risk when adopting the betting against beta method. The implementation and execution of the technique may be constrained by the fear of losing out on possible advantages by deviating from the conventional risk-reward ratio. The efficacy of betting against beta is not significantly influenced by investor remorse and market mood. Investors may better traverse the complexity of the approach and perhaps improve their investing results by recognizing and taking into account these issues.

Key terminologies: BAB (betting against beta),HML(High minus low),SMB(Small minus big),MRP(Market Risk Premium),LTM ,,FREG (Financial regrets),FSENT(Financial Sentiments)

Impact of Cybercrime, Gender and Trust on the Intention to Purchase Using E-Commerce

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Abstract:

Cybercrime issues across many economies are increasing at a faster rate. The rapid diffusion and penetration of the internet, as well as the processes of digitization of economic activities, have been the major catalysts. These cybercrime activities continue to pose a serious threat to e-commerce technologies and influence consumers' intention to conduct transactions using such a medium. Considering the upsurge of cyber-crime activities and the paucity of research in this domain, particularly in developing countries, this paper investigated how cyber-crime and trust affect users' intention to conduct business via e-commerce technologies. Using a survey approach, an online questionnaire was distributed and data from 350 participants was rigorously analyzed using Partial Least Square Structural Equation Modelling. The results indicate that trust in internet media, attitude towards behavior, subjective norm, perceived behavioral control and cyber-crime perceptions are significant predictors of intention to purchase using e-commerce technologies. The findings elucidate businesses and stakeholders on the impacts of trust and cybercrime perceptions on users' purchase intentions. It further brings to the fore the need to incorporate security features that reduce the vulnerability of e-commerce platforms.

Keywords: cybercrime, vulnerability, cybercrime, intention to purchase, and gender.

The Nexus of E-Commerce And Customer Satisfaction, Loyalty, And Trust: Does Gender Matter?

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Abstract:

Apart from the goal of the digital world and other benefits of e-commerce, it becomes the need of time during this COVID-19 pandemic. Successful implementation and sustainable growth of e-commerce in developing countries is a challenge. The goal of the digital world without the implementation and sustainable growth of e-commerce in developing countries is incomplete. Based on UTAUT theory, we have developed an integrated model to study the developing countries' consumers' adoption intentions towards e-commerce. We collected a valid useable sample of 270 respondents from a developing country, applied the PLS-SEM two-step hybrid approach to testing the proposed hypothesis, and ranked the antecedents according to their importance. Results revealed that Trust in e-commerce, Perceived risk of using e-commerce, Ease of use in e-commerce, Curiosity about e-commerce, Facilitating Conditions, and Awareness of e-commerce benefits influence the adoption intentions of developing countries' consumers. Sensitivity analysis results revealed that Ease of use in e-commerce platforms and awareness of e-commerce benefits are the two most crucial factors behind the adoption intentions in developing countries. The study's findings help authorities adopt sustainable e-commerce, multinational companies effectively market their goods online, and academics better understand how inhabitants of developing nations perceive e-commerce.

Keywords: Nexus of e-commerce, customer satisfaction, loyalty, trust, and gender

Factors Preceding Purchase Intention: A Mediated Model

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Abstract:

This research endeavors to examine the impact of brand image and brand trust on purchase intention, utilizing brand preference as a mediator. Our study posits that consumers' decisions in the purchase process are significantly influenced by both brand trust and brand image. Employing a survey based on questionnaires, we collected data from respondents in Pakistan using a convenience sampling method. Structural equation modeling through Smart Partial Least Squares was employed to assess the conceptual framework and test the formulated hypotheses. While the primary goal is to clarify these relationships, the study acknowledges limitations in its applicability to diverse industries, prompting further investigation across various sectors to uncover contextual nuances affecting consumer choices. Furthermore, it emphasizes the importance of considering additional influential factors like brand equity, brand awareness, and brand communication in future research to deepen insights into consumer behavior. In summary, this article not only enhances academic understanding but also provides practical insights into the complex dynamics between brand preference, brand trust, brand image, and purchase intention, providing important insights for both academic scholars and practitioners to devise brand strategies.

Customer’s hesitation towards Online Shopping: A Survey review on empirical evidence from Pakistan.

Ayesha Naveed

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Wasif Gillani
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Abstract:

Online availability in every sector is increasing rapidly and it is the most convenient way to explore everything. Likewise, it is examined that the world is shifting in online trends in all aspects. Still in this digital world most of the people are reluctant to use online shopping. This study analyze the customer concerns towards online shopping there are numerous reasons where customers consider perceived risk that changes its intentions for online shopping. This study is one of the main concerns as buyers purchase intentions got extensively studied and debated over last decades. This study emphasizes that why customers hesitates from online shopping in Pakistan. This research analyze those factors that affects customers purchase intentions which include trust issues, lack of physical interaction (consumers need for touch to the product) & product pricing. The study focuses the consumers switching the online availability to traditional shopping in Pakistan. This study employs questionnaire that tends to measures the customer purchase intentions and the factors affecting their decisions towards online shopping. The sample size contains 260 respondents. Convenience sampling will be used to collect data as this research contains primary data. The data will be analyzed with SMART PLS 4.0. This study would be helpful in promoting online shopping network.

"Reluctance to Use ATM Cards by National Savings Customers An Investigative Approach"

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Falak Shameen
Arzoo Rasheed
Maham Batool
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University of the Punjab Lahore, Pakistan.

Abstract:

Technologies are transforming at a rapid pace, yet a significant stratum of Pakistani. Society lags long behind to reap the benefits of digital era. National savings is Federal Govt. Department with a portfolio of Rs 3.4 Trillion and 4 Million Customers (National Savings Financial Report). It provides guaranteed return to its customers through sale of government securities. It also helps the government to bridge the fiscal deficit gap. National Savings introduced ATM card into 2018. Free ATM cards were offered to its customers, the customers response was extremely sluggish as compared to its expectations, it could have provided an alternate to physical banking services at National savings centers, where customers had to wait for long hours. Yet, customers did not accept it readily, which resulted in huge financial loss. This investigation/research intends to decipher all those underlying reasons for it. In this era, world is moving from dependence upon natural resourcesto sustainable alternatives as the resources are scarce and expensive, hence, society need to move from over independence over resources and material things. According to an estimate material utilization would increase by five times in 2050 which will lead to higher costs of providing services. Thus, the society needs to adapt to conservatism. If this research helped; it will serve as a base to take corrective measures. Eventually, it will help Federal Govt. in effective utilization of resources. The study focuses on Customers behavior of national savings. Convenience sampling technique will be used to gather information in this method, questionnaire based methodology will be employed to gather data from respondents about their attitude, experience or opinions. The sample size contains 280 respondents. Primary data will be used in this study. The Data will be analyzed with SMART PLS 4.0.

Keywords: Conservatism, Resources, Inclusion, Trust, Adaptability, Intangibility, Digital Literacy.

Understanding Factors Impact Customer Behavior to Adopt Robot Service in Banking Sector of Pakistan

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Abstract:

The motive of this research is to develop customer attitude towards service robots and service robot adoption in banking sector of Pakistan. In this specific research the elements of Unified theory of acceptance and use of technology theory (UTAUT) and elements of Theory of planned behavior (TPB) are used as independent variables with moderating effect of customer innovativeness. The research model consists of four factors of UTAUT theory i.e. Performance expectancy (PE), Effort expectancy (EE), Social influence (SI) and Facilitating conditions (FC). All these have influence on Attitude towards service robot in banking sectors of Pakistan. Similarly, Theory of planned behavior (TPB) has two factors i.e. Subjective norms (SN) and Perceived behavioral control (PBC) also have a direct impact on Attitude towards service robot in banking sector of Pakistan. The main population of this specific research topic is the customer of banks and data will be gather through questionnaires. The questionnaires will be based on conveniences sampling approach. Structural Equation Modeling (SEM) approach will be applied for inferential analysis. Many researches have been completed which was based on service robot adoption in hotels, restaurants and other industries but no research is conducted on service robot adoption in banking sector using UTAUT theory and Theory planed behavior. So, the current research contributes toward service robot adoption in banking sector of Pakistan.

Keywords: UTAUT, PE, EE, SI, FC TPB, SEM, PBC, TRA, TAM

The Impact of AI on Purchase Intention of Customers in an Online Fashion Store

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Abstract:

This research investigates the direct influence of Artificial Intelligence (AI) usage in social media marketing on potential customers' purchase intention, with a focus on the moderating role of demographics and the mediating effect of brand awareness. The study targets social media users as its population and employs a stratified simple random sampling technique based on demographics (age and income) to obtain a representative sample. The central hypothesis posits that the integration of AI in social media marketing significantly enhances customers' purchase intention.

The research adopts a moderated-mediation framework, wherein demographics act as a moderator influencing the strength of the relationship between AI usage and purchase intention, and brand awareness operates as a mediator channeling the impact. Through a rigorous analysis of survey data collected from diverse demographic groups, the study aims to discern the nuanced dynamics between these variables.

The findings of this research hold practical implications for businesses seeking to optimize their marketing strategies in the dynamic landscape of social media. Understanding how AI, demographic factors, and brand awareness collectively shape purchase intention can guide marketers in tailoring their approaches to specific audience segments, fostering more effective and targeted campaigns. Furthermore, this study contributes to the evolving literature on AI in marketing by offering insights into the intricate interplay of these factors and their combined influence on consumer behavior in the context of social media.

Keywords

- Artificial Intelligence
- Social Media Marketing
- Purchase Intention
- Demographics
- Brand Awareness
- Moderated-Mediation Framework
- Customer Behavior
- Marketing Strategies

Impact of Mobile Banking Retention on Performance of Banking Sector: Evidence from Pakistan

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Abstract:

Purpose: This paper aims to explore important antecedents which help explaining customer retention of mobile banking & impact of MBR on Bank performance in Pakistan.

Design/Methodology/Approach: An adapted Questionnaire used to assess customer's response and annual reports & web sites used to measure performance of 5 Pakistani banks. The impact of MBR measured in two time periods: pre saturation & post saturation. The SPSS used for data analysis.

Findings: Findings indicate that all predictors of MBR (IT Control rating, Transaction cost, Usage without data and Card less transactions) are significant except specialized team. All predictors of Bank performance (No. of ATM increased, Increase in Current accounts and Increase in transactions) are significant.

Limitations: More banks and increase in sample size can increase reliability of the study.

Practical implication: By providing different types of comparative facilities, banks are encouraging their customers for mobile banking adoption & their retention which contributes to customer satisfaction as well as business growth of banks.

Originality/Value: This paper is extension to mobile banking adoption intention & interestingly measures business growth through customer retention about mobile banking creating a significant impact.

Keywords: Information Technology (IT), Mobile Banking Retention (MBR), Automated Teller Machine (ATM), Customer Satisfaction, Banking Performance

Factors affecting the Digital Financial Adoption: The Moderating role of Customers Experience

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Abstract:

Digital Financial service users are facing challenges in the acceptance of digital finance. The study, therefore, intends to identify factors affecting the adoption of digital finance. The study includes factors, namely: security risk, financial risk, transaction cost and awareness. The conceptual model adopted based on the theory of reasoned action, the theory of planned behavior and technology acceptance models. This research aims to fill the gap of factors affecting the trust and digital financial adoption. There is no study conducted on the customers experience as a moderating variable. Data will be collected using questionnaire from customers who are familiar with digital financial services. Regression analyses will be used to show the results and association among variables. The findings of this study will help digital financial managers to improve their services and make decisions related to customer security. The study is useful to enhance digital financial adoption.

Keywords: financial and security risk, transaction cost, awareness, digital financial adoption.

Structural Changes Required to Facilitate Knowledge Culture in Banks

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Abstract:

Researches have been conducted focusing on the importance of knowledge sharing culture in organizations since the authors could not find any study on enablers of knowledge sharing culture in Pakistani banks. This is a theoretical research study aimed to examine knowledge sharing structures of banks from view point of facilitation of knowledge culture. Overall design of the research study is review of literature and extraction of enablers of knowledge sharing from contemporary literature. Research methodology consists of literature discourse. The research comprises of in-depth review of literature to unveil the enablers of knowledge sharing culture in banks. As a result, the study found fifteen total factors (i.e. shared language, social ties, training and education, organizational climate, collaboration, IT skills T-shaped skills trust, strategies and policies, organizational structures, rewards and incentives, leadership, human resources, resources and funding, and individual characteristics) that can help to create knowledge sharing culture in banks. The stakeholders (management, employees, board of directors, regulators, customers, depositors, society at large, analysts etc.) can benefit from findings of this study. Future researches can construct a model of this phenomenon and classify the enablers in order of their driving and dependence powers for uncovering structural relations and hierarchies. The study subject to limitations commonly applied to studies of literature discourse.

An Empirical Study to Investigate the Impact of Enterprise Social Media On Employees' Performance Using Social Exchange Theory: Mediating and Moderation Mechanism

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Abstract:

Enterprise Social Media (ESM) has been normally embraced by companies to boost employee performance. The goal of this study is to investigate the mediating effect of workplace isolation on the connection between use of ESM and Employee Performance. The researcher explores the moderating influence of Workplace Integration the relationship between use of Employee Social Media and Isolation at Workplace. In leading the analysis, a concise cross-sectional survey template was accepting. The data for this study were taken from public and private firms of Telecommunication sector that are engaged in providing products and services to their customers. The study was carried out with the quantitative method approach. A total of 375 respondents were selected and give them questionnaires which include close-ended questions, 300 questionnaires were selected for further analysis. The sampling technique used was convenient sampling. SPSS was used for demographic analysis, PLS3 was used in evaluating the relationship between the independent and dependent variables. The findings suggest that ESM has a significant effect on and Employee Performance, while the Workplace Isolation mediates the effect between ESM and Employee performance. Expanding the sample size and remembering members for other topographical territories can strengthen investigation. An empirical study will further endorse the causal and effect relationships between variables that are experimentally collected from the investigation. Experts and/or administrators should pay consideration to the impact of using ESM on employee performance of the workers. In addition, when implementing ESM to increase employee performance they should concentrate on the extent of team diversity. This research adds to corporate awareness in illustrating the impact of ESM use on employee performance based on theory of social exchange. This study presents the relationship between use of ESM, isolation in the workplace and performance of employees.

Keywords: Enterprise social media, Workplace Integration, Workplace Isolation, Employee Performance

Sustainable HR and Entrepreneurship Success with mediating role of Entrepreneurial Readiness using job demand resource theory

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Abstract:

The purpose of the paper is to demonstrate that how sustainable HRM help and encourage the female employees to take part in entrepreneurship with mediating role of entrepreneurial readiness and moderating role of open innovation. Open innovation will support the relation of entrepreneurial readiness and women entrepreneurship. This study was conducted in Pakistan (Multan, Bahawalpur and DG khan Division) in fashion industry (Botiques, clothing, embroidery, stitching, beauty parlor and jewelry). Data was collected from 300 women Entrepreneurs (microsphere) of Punjab from Fashion industries through questionnaires. To get results in statically organized, SmartPLS (Partial Least Squares) v.3 is executed for measuring the status of relations among study variables and SPSS (statistical package for the social science) v.20 is used to generate the demographic characteristics of respondents. Mediation and moderation analysis, regression analysis, reliability analysis, T-test and Anova test under with SEM were applied to get latest results. It is found that Sustainable HRM helps to flourish women Entrepreneurship through Entrepreneurial Readiness and Entrepreneurship theories. This research limited to the specific areas of Southern-Punjab while other developed areas may lead to different findings and results regarding the selected variables. Study variables are limited to the Open Innovation, Sustainable HRM, Entrepreneurial Readiness and women entrepreneurial success while other variables like education, training, unemployment, poverty and gender discrimination may be used for further research. As finding of this research, majority of women entrepreneurs belongs to the urban areas while the contribution of rural women are less while, in Pakistan, about 60% of the families live in villages. This is estimated to grow in the near future, which makes it a big market in the world. Proper encouragement and cooperation should be afforded to rural entrepreneurs for setting up marketing co-operatives. This study focuses on sustainable HRM and Women entrepreneurship success in fashion industry of Pakistan which is not conducted before. In earlier studies researcher simply focus only on entrepreneurial readiness and entrepreneurship. This study also checks the role of open innovation for promoting women Entrepreneurship.

Keywords: Entrepreneurial Readiness Open Innovation, Sustainable HRM, Women Entrepreneurship success

Comparative Study of Fashion-Apparel Buying Behavior of Generation X, Y and Z

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Abstract:

This study aims at the highly competitive market where customers differ in their demographics, interests, and priorities. They were categorized in generations X, Y, and Z and considered different. It is quite difficult for businesses to address an audience of three different generations. To overcome this problem, we conduct a study on the comparative of fashion-apparel buying behavior of generations X, Y, and Z. It aims to build a deep understanding of customer's demographics by recognizing their purchase patterns their interest while making a transaction. The comparison permits businesses to become more acquainted with their clients by identifying what is required in the market. The primary determination of this research is to introduce the logical reasoning behind different generations' purchasing behavior and attitude. The study analyses the mindset of distinct age groups in terms of the reference group, promotion consciousness, body cathexis, and fashion apparel purchasing. This study has been conducted in the context of Pakistan from the customer of the fashion apparel industry. The data has been collected through a self-administered adopted questionnaire. The multistage sampling technique has been a customer with a sample of 384 respondents visiting the malls located in Lahore. Ridit Analysis techniques have been used for data analysis. In this way, this study helps businesses to know the behavior of their customers. It further provides insights to the marketers to adopt better marketing strategies while targeting the customers. According to results, Generation X, Y, and Z have different buying behaviors regarding fashion apparel. Generation X has different from each other. Generation Y and Z also have different buying behavior regarding fashion apparel. Still, on some points, generation Y and Z have the same results on the last statement, but we can't say that they have the same buying decision-making power or change to each other regarding fashion apparel. The study identifies various segment divisions utilized to fragment clients and help them design effective marketing strategies. It creates opportunities for the different vendors to understand other age groups, the consuming behavior, and specify their products according to it. It further eases the businessmen to understand the selection criteria for generations and plan their apparel products to set the pricing, promotional, and market strategies.

What are Core Issues of Women Cotton Pluckers in Pakistan? How are They Woven?

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Abstract:

Aim of the study is to uncover the issues of women cotton pluckers. Further to explicate and structure the relationships among the issues using real time field data. The data has been collected from team leaders of cotton pluckers from district Mianwali. Overall design of research entails on thorough discourse of literature, field survey for data collection and analysis. Interpretive Structural Modeling (ISM) is used to uncover, explicate and structure the issue (Warfield, 1973). Matriced' Impacts Croise's Multiplication Appliquée a UN Classement (MICMAC) has been used for classification of the issues (Godet, 1986). Total fourteen core issues have been detected. ISM prioritizes and imposes structure on the elements i.e. important and critical factors are filtered out and descent to bottom of the model whereas, relatively least preferred factors occupy top of the model. Middle of the model is comprised on mediators. MICMAC investigates driving and dependence power of issues. It classifies the factors into Autonomous (i.e. issues having weak dependence and driving power are known as autonomous that can be eliminated from model, Dependent (i.e. the issues having strong dependence and weak driving power are known as dependent that are highly dependent on others), Linkage (i.e. the issues having strong dependence and strong driving power are known as linking that are unstable, small change in them affects others and have feedback effect on themselves as well) and Independent **i.e.** the issues having strong driving and weak dependence power are known as independent (Godet, 1986) that are critical for the system. The study will have theoretical implications since it will propose a framework for future research. It will have practical implications for cotton pluckers by way of clearer understanding of the issue in order to articulate their case to represent it to the concerned quarters. It will also have practical implications for farmers who want to understand issues on ground and for policy makers to mitigate the issues. The study will have contribution by way of ISM model, driving-dependence diagram and identification of key factor.

Role of Credit Documentation in Performance of Banks: A Theoretical Research Study

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Abstract:

Lending (credits) is the main business and recovery is the core issue of banks. The documentation of credit transaction is very important to effect credit processing of loan and its timely recovery. This is a theoretical research study based on a critical review of relevant literature to establish the role of documentation of credits in performance of banks. The research design of the study uses elementary concepts of graph theory and comprises of mapping of issue. Issue has formally been identified, described and visualized through digraph. Findings of the study revealed that the documentation of credit transactions plays pivotal role in financial performance of banks. This a valuable study that gives insights of the issue to bankers and regulators. The research could not be envisaged quantitatively hence its findings have limited scope. It is recommended that theoretical findings should be statistically tested in future studies.

Trade Policy Shifts and Financial Market Resilience: A Study of Pakistan's Economic Landscape

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Abstract:

Purpose: The purpose of this study is to investigate the impact of trade policy shift i.e., a restriction imposed on the financial institutions about the issuance of trading instruments, such as letters of credit. The adversity of this measure has been determined at the Karachi Stock Exchange (KSE-100 index) and on shipping units by using an event study methodology.

Originality/value: Every country tried its best to make a smooth flow of its trade. However, a reciprocal of this practice seems to be observed in Pakistan; in May 2022, the Ministry of Commerce and Government of Pakistan banned the trade of luxurious items, essential commodities, raw materials, industrial equipment, and items of regular use. The trading stock market of Pakistan fluctuated abnormally and soaked its influential impact. As per the researchers' best knowledge, this measure had not taken place before, therefore, the consequent effect of banning trading activities has not been studied so far.

Methodology: It is an event study that analyzes the data of shipping companies listed at the Karachi Stock Exchange (KSE-100 Index); the study formed a window of 41 days, including, s= -20 and s=+20. The length of the event window was maintained for 41 days so that an immediate impact and trend could be observed. The time-series dataset was taken from the investing.com website. As the government of Pakistan restricted the financial institutions for further issuance of LCs from May 19, shipping companies fulfilled their due tasks and prior freights. Subsequently, a stream of adverse impacts appeared after a few days of this measure being taken.

Findings: Particularly, this step was taken to stabilize the economy and maintain foreign currency reserves to strengthen the financial stability of Pakistan. The practice of this measure adversely impacts the import, export, and operational work of shipping and industrial estates. The study revealed that inefficient markets like Pakistan rapidly take the influential impact of particular events, announcements, and prevailing climate adversity. Under the effect of the announcement made by the Government of Pakistan, the trend of KSE and the performance of shipping units are examined and found the 2 insignificance in the case of the Pakistan International Container Terminal (PICT) was comparatively less than that of the Pakistan National Shipping Cooperation (PNSC). Further, the consequences of this step reduced the balance of trade by -83.31% till December 2022; thus, imposed restrictions were released in January 2023.

Implications: First, Pakistan and other inefficient markets i.e., Turkey and Sri Lanka rapidly influenced by government announcements, political changes and the occurrence of certain events; therefore, the regulatory bodies, government, and other market operators have to consider the severity and adversity of particular announcements or events while proceeding. Second, the current research suggests alternative means of reviving the economy, in contrast to the steps taken by the government of Pakistan. Third, the study reported a few abrupt consequences that could happen in the future in case of partial or full repetition of this measure.

Keywords

Trade Openness, Economic Growth, Shipping Sector, Karachi Stock Exchange, Abnormal Returns, ARIMA, Trade Agreements, ARCH/GARCH Effects, Event Study

Analyzing the Accrual Anomaly: Evidence from Pakistan Stock Exchange "KSE 30"

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Abstract:

Anomalies represent the inefficiency of the market. The accrual anomaly is a well-documented phenomenon in developed markets, where stocks with high accruals tend to outperform stocks with low accruals. However, there is limited evidence on the existence and magnitude of the accrual anomaly in emerging markets. Drawing upon the results research on the Capital Markets anomalies to check whether it is exist in Pakistan. This paper examines the accrual anomaly in the context of the Pakistan Stock Exchange (KSE 30) using data from 2015 to 2020. Data has been collected of all the firms that constitute KSE30 index. From KSE30 index we utilize data of 18 firms and skip the firm whose data was not available. My hypotheses provide prove that their no Accrual Anomaly in Pakistan.

Keywords: KSE 30**,** Anomalies

Is Packaging "Voice or Face" of Product? A Study Explaining Perspective of consumer Psychology

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Dr. Irsa Mehboob,

Abstract:

Purpose:

The current research aims to explore key factors affecting consumer buying behavior while making product choices.

Originality:

The visual aspect of a product–acquires importance, as brands commodities must be aesthetically and visually differentiated to attract the gaze of a particular consuming group, also to build link between consumer and the product design. The visual communication effect of packaging design plays an important role in influencing consumer buying behavior. In the psychological theory, the consumer aesthetic experience of product packaging will affect their psychological state and feeling. Based on the underlying theory, this course of Study is the first one to examine key antecedents of Packaging (i.e., Package color scheme, packaging design, packaging material and package labelling) in impacting consumer in store shopping behavior.

Subjects and methods:

Two different packages are designed for the same product of a company, one of which integrates positive psychology elements, and the other is traditional packaging. Two different packages were designed (one with traditional packaging, and the other with intricate packaging elements). The products of the two packages are put into hypermarket store retail shelves in different rows. Four populated areas were selected to observe the purchase of consumers. 300 residents were selected as study subjects in the four population concentration areas to observe the changes in their psychological state at the time of buying

Results:

The results show significant changes in buying decisions of the residents. per the deduced result from given research, it has been concluded that product Packaging color schemes and material has substantial effect on consumer decision making, however product labelling and design have no impact on consumer buying behavior.

Implication & Contribution

Product packaging design is a very important part of product and allows the brand manufacturers to invest more into their R&D capabilities and produce aesthetically sound Packaging that allows for more consumer buying and results in increased consumer equity and profits.

Future Directions

Future studies may investigate how consumer buying decision get influenced by other packaging elements in the context of online buying.

Keywords: Product packaging, packaging color scheme, packaging design, packaging material and package labelling, consumer buying behavior

The Role of Human Capital in Strengthening Energy Mix-Climate Change Relation: A Study of Selected Low and High Vulnerable Economies

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Abstract:

Changes in climate adversely affect the human and biological system. Human activities include the uses of land for urbanization and misuse of fossil fuel for energy, agriculture and industry etc. increases carbon emission in the atmosphere. Adaptive capacity of human is influenced by socioeconomic factors such as skills, resources, technology and governance. The aim of current research are: a) to identify the factors that can reduce vulnerability in low and high vulnerable countries, b) to find the factors that can moderate the effect of climate change in these countries, c) to compare the effect of these factors in high and low vulnerable economies. Panel Quantile Regression is used as an econometric technique to get the final results of the study. Sample is comprised of 40 low and high vulnerable countries, and data range from 1995-2020. Division of sample countries is based on the ranking of ND-GAINS. Data for present study is collected from ND-GAINS, WDI and PWT. Results revealed negative relationship between Human Capital and climate change vulnerability. Moreover, human capital along with energy-mix reduces climate change vulnerability in case of low and high vulnerable countries. Communication and education increases capacity-building skills and knowledge which help to reduce the risk associated with hazard and prepare us to deal with that hazard. Present study is conducted to highlight the importance of SocioEconomic factors in strengthening energy-mix climate change relation. Policy makers and governments are concerned about change in climate as it is causing adverse impact on the society and environment. To cope the adverse impact of climate change there is a need to develop adaptation measures which is necessary to safeguard environment and society. This issue is more critical in developing nations because these nations are unable to counter climate related risk. They lack suitable infrastructure, technology, adaptive capacity, human and physical capital while developed nations have incorporated adaptation measures in their developmental agendas using investment in technology and human power.

Key Words: Human Capital, Vulnerability, Energy Mix, renewable energy.

he Effect of Green HRM Practices on Corporate Green Performance: The Moderating Role of Green Innovation

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Abstract:

Green human resource management strategies have been established to enhance a company's green performance in previous studies. In the gap, there is very little research substantiation that reveals how green innovation culture affects the relationship between green human resource practices and a company's green performance. This study set out to fulfill this essential by creating two goals. To initiate, researchers observed the impact of green innovation culture and green human resource practices on a company's green performance. Moreover, to research how much green innovation culture affects the relationship between green human resource management and the green performance of modern firms in Pakistan. This article truly established AMO theory and initiates with the assessment of green human resource management practices. In this quantitative study, core data sources are utilized and data is gathered from virtual /offline assessment with the help of customary questionnaires from the employees, who are employed in the modern industries of Pakistan. Moreover, various analyses (descriptive, reliability, EFA, CFA, regression analysis) are directed to verify the research hypothesis by using SPSS and AMOS 24 software. The results intimate green HRM practices like green staffing, green training, and progress, green performance evaluation, green incentive system, etc. have a meaningful impact on the environmental performance of organizations of modern firms in Pakistan. While findings show that excluding rare HRM practices, green innovation moderates the relationship between green HRM and Corporate green performance. The results of the study will be manipulated by academia to educate students and hypothetical managers about the significance of green innovation culture, as well as the interrelationship between GIC and GHRM in terms of maintainable performance. Our outcomes can broaden the evaluation of managers in businesses in terms of realistic consequences.

Exploring the Nexus of Entrepreneurship: The Role of Institutional Pressure and Political Stability in Subjective Well-Being and Psychological Functioning

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Abstract:

The underpinning research objective of the current study is to evaluate the relationship between entrepreneurship and well-being. As the prior studies fail to understand as relationship self-employment and well-being. The current study proposed that framework to investigate the purposeful engagement, skills, and capabilities along with external factors like institutional pressure and political stability shape this connection. The present study collects the data through survey from entrepreneurs listed on Lahore chamber of commerce currently operating in Lahore, Pakistan. Structural equation modeling technique is being used to evaluate the proposed model. The findings of current study indicate that social and personal functioning positively mediate the relationship between entrepreneurial ventures and well-being. In addition to that the findings indicate that political instability significantly moderates the relationship between personal and social functioning, and well-being. Exploring the nexus of entrepreneurship within the context of broader socio-political influences, we hope to uncover insights that can inform both academic understanding and practical implications for individuals engaged in entrepreneurial activities.

Keywords: Nexus of entrepreneurship, institutional pressure, political stability, psychological and well-being.

Media Used: The Influence the Cyber Protection Behavior Among People

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Abstract:

Students, colleagues, and other members of society are increasingly using digital media. Students utilize digital media for a variety of reasons, including communication, gaming, making new friends, and simply being curious. However, there are some disadvantages to using digital media. Cyberbullying, cyber harassment, and cyberstalking are examples of useful digital media activities that can have a negative impact on digital media users and lead to societal issues. Surprisingly, limited studies have investigated cyberbullying in depth, utilizing a broad and varied sample of Middle Eastern institutions. As a result, the purpose of this study is to fill a research vacuum by questioning students' use of digital media for cyber involvement. This research aims to create a model for assessing the ethical consequences of behaviors that directly impact students' psychological health because of their use of digital media. The questionnaire looked at how people used digital media to engage in cyberbullying and cyber engagement, the ethical implications of bullying, and being harassed, stalked, and bullied. The study employed a quantitative questionnaire to collect data to achieve the research goal. It was given to 375 students who are digital media users. Partial least squares (PLS) and structural equation modeling (SEM) were used to examine the data. Considering the empirical data, nearly half of the participants admitted to being harassed, stalked, or bullied on different digital platforms. The evaluation of discriminant validity is a prerequisite factor for examining possible variables' relationships. The goodness-of-fit index indicates that the model is well-fit. Through the established model, decision-makers and school administration would be able to implement measures that would effectively reduce cyber harassment among students and improve the digital media usage experience.

Keywords: Social media use, cyber protection behaviour, Cyberbullying, cyber harassment, and cyber stalking

The effect of Work-Related Depression, Anxiety, and Stress to Employee Performance during COVID-19? The Mediating Role of Job Burnout and Mental Health

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Abstract:

The aim of the study examining the psychological effects of the COVID-19 pandemic on healthcare workers' performance was. A theoretical framework that takes into account several psychological problems (such as stress, depression, and anxiety) that affect the performance of employees by acting as mediators between mental health and job burnout drove the research. Questionnaires were used to collect study data from 200 employees who were employed in Pakistan's different industries. A structured equation modeling (SEM) technique was used for data analysis and hypothesis development. It was found that stress, depression, and anxiety positively affected healthcare employees' job performance during COVID- 19. Psychological factors had a positive and significant impact on job burnout and mental health. Job burnout and mental health mediated the relationship between stress, anxiety, depression, and employee performance.

Key Words: Covid-19, Depression, Stress, Anxiety, Job burnout, Mental Health

The Impact of CSR on The Financial Performance. The Moderator Role of Media Attention And Earning Management

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Abstract:

Purpose: This research aims to investigate impact of CSR on firm financial performance of media attention and earning management. We select and take the data from 80 sample of firms listed in Pakistan of stock exchange. Study provides evidence that CSR experts positive impact ROA and pricing earning ratio. We collect data from listed companies in China from 2014 2020 in order to demonstrate whether CSR is positively or negatively correlated with financial performance and studied this relationship for the first time using media attention as a moderating variable.

Methodology/Design This study or research that under joints efforts of multiple forces like such as government, capital markets we disclosures and we select Chinese listed companies from 2014 to 2020 as research sample. Corporations are now considered liable to go a step further and implement such business policies and practices which go ahead of their minimum legal requirements to take step for the betterment of the society. Finding The finding of this research is observable and measurable.

Implication This study will help government and financial firms in policies making regarding their CSR practices. The managers of financial and other firms can help from this study for understanding the important of CSR in business operations.

Exploring the Impact of Green Intellectual Capital on Green Corporate Image with Green Core Competence as Mediator and Green Innovation as Moderator in Pakistan Entrepreneurial SMEs

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Abstract:

Modern businesses have been encouraged to perform their role regarding a sustainable business environment. The importance of green potential outcomes in the work environment continuous to expand. There has been little research to conduct to determine the role of green intellectual capital influence the environmental behavior and outcomes. With the higher level of carbon emission, it has become important for enterprise to explore the way to enhance their environmental performance. For this purpose, we collect the data from 400 entrepreneurial small and medium sized enterprises of Pakistan through questionnaire and then analyze it through partial least square structural equation modeling **(PLS-**

SEM).With the help of preceding literature, the proposed relationship Between the variables argue that green intellectual capital positively influences green core competence. Moreover, Green core competence positively affects the green performance. Furthermore, Green core competence mediate the relationship between green intellectual capital and green performance and green innovation climate as a moderator .this study is based on the **social cognitive theory** and present the best solution for **SMEs** enterprises stakeholders to use the knowledge generated by green intellectual capital and core competence to improve their green performance.

Keywords: Green intellectual capital, Green core competence, Green innovation climate, Entrepreneurial small and medium-sized enterprises, Green corporate image.

The Impact of Financial Performance on The Financial Stability of Commercial Banks. The Moderator Effect of Managerial Expertise

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Abstract:

This study aims to investigate the impact of financial performance on the financial stability of the commercial banks with the help of moderator the managerial expertise.

This study is primarily based on the financial ratios such as return on assets (ROA) and return on equity (ROE) to assess the financial performance; and quantitative factors that comprise the CAMEL model consisting of five parameters, namely, capital adequacy, asset quality, management capability, earnings ability and liquidity ratio and Altman's Z-score to test the financial stability of ten national commercial banks.

This is a proposed study and there is expected finding right now.

The Impact of Political Connections on Firm Performance: The Moderating Role of Board Gender Diversity

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Gujranwala, Pakistan

Abstract:

Purpose This study investigates the relationship of political connections and firms performance in Pakistan, with the help of board Gender Deversity can moderate the impact of political connections on the performance of firms in Pakistan.

Methodology /Design This study will analyze the relationship between proposed variable using Regression panel data with General Least Square. suggesting the change of the political connection is the main reason for the narrowing of the board gender diversity gap in firm performance. The independent variable is political connections, and the dependent variable is firm performance .The Moderating variable is gender diversity .The date will be collect through the financial reports listed companies in stock exchange.

Finding we find that the a positive effect on the performance of their firms

Implication This study will be used by investors, policy maker and other related authorities

Impact of Green HRM Practices on Environment Friendly Attitude and Behavior at Work

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Abstract:

The aim of this research is to examine the effect of Green Human Resource Management practices on Pro-environmental behavior of employees of Pharmaceutical industries all over the Punjab. Furthermore, this study also focuses on the mediating effect of green commitment and green environmental performance. Another focus of this study is to check how green self-efficacy moderates the relationship between green commitment and green environmental performance, and also the moderation effect between green environmental performance and pro-environmental behavior. The data will be gathered through a structured questionnaire from the employees of pharmaceutical industries of Punjab using a convenience sampling technique and the sample size will be 600. Later on, data will be analyzed on SPSS and mediation and moderation effects will be analyzed through Hayes Process Model.

Keywords: Green HRM Practices, Pro-Environmental Behavior, Green Commitment, Green Environmental Performance, Green Self-Efficacy.

The Influence of Ebullient Supervision on Employees' Proactive Service Performance: Mediating Role of Work Engagement and Moderating Role of Psychological Capital

Mahnoor Feroz

Rizwan Qaiser Danish

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Abstract:

Purpose- This study is conducted to find the influence of ebullient supervision on proactive service performance of employees. Moreover, this research also aims to study work engagement as mediating variable between ebullient supervision and proactive service performance of employees, and the moderating role of psychological capital between ebullient supervision and work engagement.

Methodology–The study for the proposed model is conducted through survey questionnaires to find out the relation of these variables. Data is collected through online platform and printed questionnaires. A total of 218 responses are gathered from people working in different service sectors of Pakistan.

Findings-The results find out that ebullient supervision positively impacts work engagement and proactive service performance. Work engagement partially mediates the relation between ebullient supervision and proactive service performance. The role of psychological capital as a moderator is found insignificant in the study.

Originality of the paper- The conducted study is quite novel as ebullient supervision is a relatively new construct and not much work has been done on this construct before. Studies on predictors of proactive service performance are also needed to be explored further. Previous studies on the proposed relationships of the study are quite limited.

Keywords-Ebullient supervision, Proactive service performance, Work engagement, Psychological capital, Affective events theory**.**

An Empirical Investigation of the Entrepreneurial Intention and Start-ups Through Moderating Role of Covid-19 and Family Support: Findings from Business Graduates.

Rehab Khan
Waqas Shakir
Superior University, Lahore

Dr. Rab Nawaz Lodhi

Dr. Rizwan Qaisar Danish
IBA, University of the Punjab, Lahore.

Abstract:

Purpose: The research is based on the Empirical Investigation of the Entrepreneurial Intention and Start-ups through Moderating Role of Covid-19 and Family Support.

Design: The researcher used questionnaire to collect the data for the study from the business graduates on Pakistan. The researcher divided the questionnaire into two main segments. Fist segment includes the demographical items (gender, age, university name, education, degree title) of the respondents, and second segment included the items of the variables.

Findings: Net Desire of Self-Employment has significant relationship with Entrepreneurial Intentions. Whereas Net Desire of Self-Employment has significant relationship with Start-up as Entrepreneurial Activity.

Research Limitations: This research is based on the entrepreneurial intention and startups. In which the researcher used covid-19 and family support as the moderators. In future researches, the researchers can add other variables as the moderator. The researcher conducted this study in Pakistani context. In future researches the same research can be conducted in other counties to check out whether the results are same or different.

Originality: New graduated who have business knowledge but they don’t know about their current position and situation of surroundings for an entrepreneurial environment. They are suffering from the covid-19 situations. So, this research is purely for the entrepreneurs.

Keywords: Entrepreneurial Intention, Start-ups, Covid-19, Family Support.

Consumer Participation with brands and Loyalty:

A Social Commerce Perspective

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Dr. Rizwan Qaiser Danish
IBA, University of the Punjab, Lahore.

Abstract:

In the past researchers emphasized and drew attention towards the ways which can be adopted by the brands for making their customers loyal and participative. Social media is one of the most effective mediums for brands to communicate with customers to know their desires and needs. The brand communities with the level of Tradition aren't completely applied the easy way and it is not clear why consumer wishes play the role of contribution & loyalty for the brand establishing for the social media and microblogs. By innovative techniques, the organizations should implement innovative mediums of interaction that capture the intention of the users. The current research highlights that the customer's participation on social media and their loyalty to the brand considered as the most important elements to comprehend the reasons which influence the brand's online communication and social media communities. This research provides empirical proof for understanding predictors for participants and loyalty to the brand in social media and microblogs. Data were collected from the individual user of Facebook (social media site) from Lahore, Pakistan. Results indicated that the research study concluded finally that to get the maximum participation of user on social media and getting their loyalty for specific brand organizations needs to design their strategies in the way that attracts the user and leads their behavior in favor of the brand.

Keywords: customer loyalty, social media, e commerce, brands

Factors Affecting Compulsive Buying Behavior Through Panic Behavior Disorder in the Pakistani Market

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Meryum Rehman

Eman Fatima

Fatima

University of Education, Lahore.

Abstract:

A tremendous growth is being experienced in the contemporary times by beauty products and has become one of the leading industries in the world. The objective of this research thesis is to study Consumer Panic Behavior Disorder regarding cosmetic products. This research would be conducted in Lahore city and a survey method would be used to collect data from female student respondents. Cosmetic products are an integral part of the nation's economy with its huge potential. The present day's cosmetic industry covers a wide range of products and services. The theoretical aspects of consumer behavior and cosmetic products comprises of two segments, the first segment includes related to evolution of consumer behavior factors affecting the consumer behavior, types of consumer behavior and consumer decision making process. Cosmetic companies, marketing agencies and influencer marketing aims to determine significant factors affecting the Buying Behavior and recommendation of consumers in the beauty and cosmetics industry. The study would also examine the effect of influencer marketing and peer pressure on compulsive buying behavior through panic behavior disorder. This research would be helpful to contribute an extra idea and knowledge to cosmetic companies so that they get to know more about the buying behavior of consumers.

Keywords: Influencer Marketing, Peer Pressure, Panic Behavior Disorder, Compulsive Buying Behavior

Perceived Insider Status and Thriving at Work: The Moderated Mediation Role of Employee Engagement

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IBA, University of the Punjab, Lahore.

Abstract:

Individual works for the betterment of an organization only when considering him to be an insider and valuable part of the organization. The self-determination and affective event theories will be used to draw a model based on Perceived insider status (PIS), employee engagement (EE), and Perceived organizational support (POS). This study will investigate the direct impact by perceived insider status (PIS) upon thriving at work (TAW) & through the mediation of employee engagement (EE). Also, will study the moderating role by perceived organizational support (POS) on the relationship of Perceived insider status (PIS) and employee engagement (EE). Data will be collected from service and manufacturing sector employees by self-administrative questionnaire using a cross-sectional technique. Statistical software IBM SPSS, AMOS, and Hayes PROCESS will be used for the data analysis. This research is supposed to contribute to a more in-depth understanding of the constructs, Perceived insider status, and thriving at work.

Keywords: Insider Status, Thriving at Work, Moderated Mediation, Employee Engagement

Green Banking Development in Pakistan: A way forward

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Abstract:

In 21st century, the climate change has become an important issue for businesses as well as stakeholders. Consequently, to reduce carbon emission financial institutions offer green financing to businesses to mitigate this issue. However, the availability of green loan remains the important case. Therefore, this research aims to know how this financing gap can be minimized. A panel design dataset was collected which consists of green financing data for the period 2009 to 2015 from 24 banks operating in Pakistan. We applied Two-stage Least Square Regression Analysis for data analysis. The results revealed that green loans are a less risky investment. Further, the findings also provide useful information to managers who look for grow their business loan and minimize default risk. This study contributes to the existing literature in green financing by filling the gap, particularly for developing countries through empirical evidence. The finding suggests that banks must invest more in green projects.

Keywords: green banking, green financing, green loans, investments, Pakistan

Trickle down Effects of Abusive Supervision & Supervisors Knowledge Hiding on employees' Wellbeing: Role of Political Skill

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Abstract:

Emotions are an important aspect of organizational life. However emotional issues, particularly negative emotions, have usually been largely neglected in organizational life. Drawing on negative reciprocity and conservation of resource theory, purpose of this paper is to capture the impact of destructive leadership behaviors such as abusive supervision and supervisor knowledge hiding on employee wellbeing with the mediating effects of workplace ostracism and employee knowledge hiding. Data will be collected from the front line employees of hospitality industry through self-administered questionnaires. The present study will compare and assess the predictive value of two negative supervisor behaviors towards employee wellbeing and examine the role of employee political skill in alleviating their effects. Data will be collected from the front line employees of hospitality industry through self-administered questionnaires. The present study will compare and assess the predictive value of two negative supervisor behaviors towards workplace incivility and examine the role of employee political skill in alleviating their effects.

Key Words: Abusive Leadership, Leader Knowledge Hiding (LKH), Workplace Ostracism, Employee Knowledge Hiding (EKH), Evasive Hiding, Playing Dumb, Rationalized Hiding, Political Skill, Employee Wellbeing.

Investigating The Impact of Social Media Marketing on Customer Purchase Intention Through Trust

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Abstract:

In the upcoming years, advertisers are anticipated to redirect millions of dollars from traditional advertising channels such as TV and print ads towards social media marketing. With the rapid advancement of technology, the internet has evolved into a crucial hub for consumers seeking various products and services. Social media, as a result, is progressively serving as a primary platform for marketing and advertising endeavors. Organizations have invested considerable time, money, and resources in social media ads. However, the challenge lies in effectively designing social media marketing strategies that not only capture the attention of consumers but also motivate them to make purchases. Consequently, this study aims to examine the key factors associated with social media marketing that can predict purchase intention. The study delves into the effectiveness of social media marketing on consumer purchasing decisions, focusing on its impact on reach, awareness creation, and the relationship between social media marketing and purchase decisions. The target population for this research was the general public who do online purchase. The research used a Convenience sampling technique. The conceptual model proposed centers around three factors within social media marketing performance expectancy, hedonic motivation, and habit. Trust acts as a mediator, promotions as a moderator variable, and intention to purchase as the dependent variable. The findings of the study indicate a positive correlation between social media marketing and consumer purchase decisions, as well as a positive association with trust. The study recommends that companies conduct market research across different countries to ensure that their social media marketing initiatives align with the preferences of targeted markets, thereby enhancing product purchases.

Key Words: Social Media Marketing, Trust, Intention to Purchase, Promotions

An Empirical investigation of Transformational Leadership (TL) and Innovative Work Behavior (IWB)

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Dr. Rizwan Qaisar Danish
IBA, Institute of Business Administration, University of the Punjab

Abstract:

Purpose: The current research study mainly aimed to examine the impact of Transformational Leadership and Innovative Work Behavior in which the Moderating role is of the Work Uncertainty and Mediating role is of the Employee Ambidexterity and Organizational Support.

Design: The questionnaire for this study was mainly alienated into two categories (e.g., questions related to variables, and questions about demographic characteristics e.g. gender, age, location and designation. Items that have been validated and reliable in the literature were adjusted to fit this study's purposes, and utilized to measure additional factors. All items were evaluated on a 5-point Likert scale. The survey of this study was pretested in (50) SMEs.

Findings: All the hypothesis of the study are positively and significantly supported except the mediating effect 3 with employee ambidexterity.

Research Limitations: The researcher used the Organizational Support as the Mediator. The other researches may choose other variables as Mediator instead of the Organizational Support and Employee Ambidexterity. On the other hand this research is going to be conducted on the SMEs, other enterprises may provide different results.

Originality: Many studies have been done related to TL and IWB in advanced countries. Pakistan is the developing country, but no one conducted this theme in the Pakistan’s context especially in the area of Punjab.

Keywords: Transformational Leadership (TL), Work Uncertainty (WU), Innovative Work Behavior (IWB), Employee Ambidexterity (EA), Organizational Support (OS), SMEs, Pakistan.

Investment Performance of Mutual Fund in Pakistan

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UOL, Lahore

Abstract:

Gradually, Mutual Funds got significant value in global as well as domestic areas.in 21st century when our world is a global village by connecting internet. This thesis compares the performance of Islamic and conventional optimal portfolios, from the view point of Pakistani investors.

The dataset consists of closing price from Mutual Fund Association of Pakistan (MUFAP) with 239 of all mutual funds out of which 122 are Islamic and 117 are conventional funds in emerging country Pakistan from January 2005 to March 2018.Methodology is based on Generalize method of movements and risk adjusted ratios, Sharp Ratio, Treynor index, Modigliani-Modigliani measures, Jensen Alpha, Adjusted Sharp Ratios are calculated for standard measures. The results vary in Islamic and Conventional Mutual Funds but statistically significant with market index. Hence, investors will not be worse off by choosing Islamic indices rather than conventional ones.

The study has policy recommendation for investors as well as fund manager. Investor should focus on risk and return of the portfolio when invest in Mutual Funds. Fund manager should advice the management to keep the management fee at an optimal level to attract the investors.

Keywords: Islamic mutual funds, conventional mutual funds, risk, return, fee, net asset Value. Gross Domestic Savings, Portfolio Equity Investment, Commercial Bank and Other lending, Economic Growth

Effect of Ethical Climate on Employee Green Behavior: Through Moderated Mediation Mechanism

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Abstract:

Purpose– This study aims to investigate the impact of organizational climate on the green behavior of employees working in the hospitality sector of Pakistan. This study further examines the moderated mediation of ethical leadership and green employee empowerment.

Methodology/ approach/ design- Quantitative technique through a self-administered questionnaire was used for data collection. There were 422 front-line employees from the hospitality sector of Pakistan. For testing the hypothesis, Structural Equation Modelling (SEM) was used.

Findings – The findings of this study show that organizational climate has a significant impact on employees' green behavior. Additionally, the results also show that employees' green empowerment partially mediates the relationship between organizational climate and their green behavior. Furthermore, findings also show that ethical leadership moderates the relationship between organizational climate and green employee empowerment.

Research Limitations/ future implications- This study has implications for managers working in the hospitality sector of Pakistan for establishing the importance of organizational climate in improving their green behavior.

Value/ originality- This study contributes to the existing body of knowledge by examining the mediating role of green employee empowerment and the moderating effect of ethical leadership in determining the relationship between organizational climate and employees' green behavior in the hospitality sector.

Keywords: Ethical Leadership; Green Employee Empowerment; Organizational Climate; Employee Green Behavior

Effect of Halal Certificate, Brand Reputation and Brand Loyalty on Customer Satisfaction: A Moderated Mediation Approach in the Restaurants of Abbottabad

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Nosheen Pervaiz Awan
Maria Pervaiz Awan
IBA, Institute of Business Administration, Lahore.

Abstract:

Objective- The basic aim or objective of the study determines the effect of brand reputation, and brand loyalty on customer satisfaction. A mediating Approach of Halal Certified Products in the food industry of Pakistan

Research Design- This study uses brand reputation, brand loyalty, and price sensitivity to investigate its role in customer satisfaction and also compare the responses of Muslim and non-Muslim customers towards Islamic Products in Pakistan who have Halal certificates. The researcher also used Keller's most famous model CBBE model to analyze the effect of brand reputation, brand loyalty, and price sensitivity and how they help in customer satisfaction. This study uses the stratified method and the sample size is calculated by using the Item Response Theory for collecting the data from the customers of Halal Certified products. After performing the missing value analysis only 235 respondents gave their responses out of 300.

Conclusion- The analysis of the research suggests that brand reputation, brand loyalty, and price sensitivity of Islamic products positively increase satisfaction level of customers or their relationship is also important for increasing the sustainable performance of the Brand.

Implication/Limitation/ future direction findings of this study also have some implications and limitations for further research, as the findings of this study show positive responses of consumers towards Islamic products in Pakistan it helps managers to use this strategy for organizational success. When the brand has certified products it also improves the reliability & loyalty and satisfaction of the brand which ultimately increases the organization's success. Nevertheless, this study is limited to one city in Pakistan country further studies can be conducted in other non-Muslim countries to analyze their responses towards Islamic products and Halal products.

Significance/Value of the study- In this latest era of research, the effect of brand reputation, brand loyalty, and price sensitivity point toward customer satisfaction for the success of an organization, and they are also required to be considered in the Islamic context. The study fills this gap and has two main contributions: one is how the Halal Certifications of Islamic products play a role in Islamic branding perspectives and the second is how brand reputation, brand loyalty, and price sensitivity point towards customer satisfaction for the success of the organization.

Key Words- Brand Reputation, brand loyalty, brand equity, Halal Certificate, and Islamic products.

Factors Affecting The Taxpayer's Interest In Using Electronic Tax Application

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Abstract:

The purpose of this study is to ascertain whether Pakistani individual taxpayers find the e-filing tax system acceptable. The study concentrated on individual Lahori taxpayers who submit their taxes electronically using the e-filing system. A questionnaire was used to gather information from 250 respondents. The Unified Theory of Acceptance and Use of Technology was used as the study model, while Smart PLS was used as an analytical tool. Individuals' behaviour is greatly influenced by performance expectations, but the social influence has no impact on a taxpayer's decision to utilize electronic tax filing in Lahore. Remarkably, the Facilitating Condition has a positive and large impact on performance and effort expectations in addition to having a favorable and substantial influence on the desire to use tax E-filing for personal tax returns. When used independently e-government works best for small problems. Information habits that integrate egovernment and interpersonal sources are necessary for complex challenges while using eservices. This research can assist tax authorities in improving their electronic system by establishing a staff capable of increasing citizens' faith in the electronic system.

Keywords -Personal Income Tax Report, Tax E-filing, UTAUT

Unleashing the Power of Shared Leadership: Examining the Effects of Climate for Initiative and Climate for Psychological Safety on Taking Charge

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University of the Punjab, Lahore, Pakistan

Abstract:

The research examined the relationship between shared leadership and taking charge behavior of employees. This research study has also incorporated climate for initiative as a mediator and climate for psychological safety as a moderator. The research study is based on the positivist paradigm. The research design for this study is cross-sectional. Employees working at senior management, middle management, and lower management levels in the pharmaceutical business (registered with chambers of commerce) in major cities like Lahore, Faisalabad, Gujranwala, Sialkot, Rawalpindi, Islamabad, and Karachi is the target population of the study. Multistage random sampling method is used for sample selection. Primary data from 430 employees is collected. Results showed that shared leadership is positively related to the taking charge behavior of employees, climate for taking the initiative. The climate for taking the initiative is positively related with taking charge behavior of employees. Further, climate for initiative mediates the relationship of shared leadership and taking charge behavior. The moderation hypothesis is not supported (H_5) in this research work. The present study has numerous important academic and real-world implications discussed in this study.

Keywords: Shared leadership, taking charge, psychological safety, climate for initiative, pharmaceutical industry.

Unraveling the Dual Factor Theory: Investigating the Mediating Role of Customer Social Responsibility and Green Confusion in the Relationship Between Green Brand Image and Green Purchase Intention in the Context of Pakistan.

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PhD Acholar

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Abstract:

Customers are become more aware of the environmental effects of their purchasing decisions as environmental issues continue to gain attraction on a worldwide basis. This study investigates, within the context of Pakistan, the complex links between green brand image, consumer social responsibility, green confusion, and green purchase intention. Based on the Dual Factor Theory, which holds that individuals' intentions and behaviors are influenced by both inhibitors (that resist them in adopting new behavior or changing the existing one) and facilitators (that motivate them towards adoption) thus, green purchase intention can also be influenced by both antecedents. This study's main goal is to investigate how consumer social responsibility and green confusion function as mediators in the link between green brand image and green purchase intention. The study will use SMART-PLS for SEM modelling to evaluate the hypothesis. Data will be gathered from customers in Pakistan through structured questionnaires. This study will adds to the body of information about intention towards green products and green brand image by illuminating the mediating roles of consumer social responsibility and green confusion. Additionally, the findings may provide insightful information to companies looking to improve the perception and impact of their green brands.

The Influence of Corporate Social Responsibility and Business Ethics on Brand Fidelity: The Importance of Brand Love and Brand Attitude

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Abstract:

Although little studies have been conducted in this area, consumers can tell the difference between (CSR) and business ethics. Hence, purpose of this study to explore the GAP between CSR and ethical behavior and brand loyalty among consumers. CSR, ethical behavior, brand attitudes, brand attachment, and brand loyalty were all theoretically analyzed. A hypothetical model was built using these components, and a survey was designed to collect data from 100 respondents. Brand love acts as a mediator in the GAP between business ethics, CSR, of brand image, which has an indirect beneficial effect, according to data study using SPSS & AMOS. Second, brand attitudes indirectly influence brand loyalty by fostering brand love. Based on this conclusion, the study distinguishes CSR and ethical behavior as different components, boosting brand loyalty and indeed the relationship between them. This report will help CEOs understand how crucial CSR and business ethics are to building strong brands. While CSR too much of importance, consumers also a high value of corporate ethics when evaluating a company, which leads them to believe that it strengthens customer loyalty.

Key words: Corporate social responsibility, Brand Awareness, Brand Fidelity, Business Ethics.

Discovering the Relationship between Managing Remote Teams and Software Project Success: An evidence from Software houses of Pakistan

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Abstract:

This paper is about discovering the anticipated Relationship between Managing Remote Teams and Software Project Success. The evidence was taken from Software houses in Punjab. The research model includes two moderating variables i.e. Technical support for remote work and Perceived Organizational Support. The data will be collected through an online form survey. Structured Equation Modelling will be used to analyze collected data. In today's technologically advanced world, businesses are focusing on shifting towards more flexible work setting i.e. remote or work from home WFH for high rate of project success. Moreover, two moderators that greatly influence this corroborated relationship i.e. Technical support and Perceived organizational support were also added in research model to widen the horizon of this research. The delineated relationship mentioned above will be analyzed while collecting real time data from the software houses.

Keywords: Managing Remote Teams, Software Project Success, Technical Support for remote work and Perceived Organizational Support

A qualitative enquiry on the challenges for Central Bank Digital Currency (CDBC) issuance

Prof. Dr. Muhammad Ashfaq

IU International University of Applied Sciences, Germany

Dr. Rashedul Hasan

Coventry University, United Kingdom

Aabstract:

The recent growth of fintech firms has attracted central banks’ attention around the world as they began introducing central bank-regulated digital currencies. While we witness several successful launches of central bank digital currencies (CDBCs), for example, Sand Dollar in the Bahamas and JAM-DEX in Jamaica, there are examples of CDBCs cancelled before their launch by central banks. Therefore, we explore the challenges for CDBC adoption using a qualitative research framework. We apply semi-structured interviews with fintech experts and content analysis based on data collected from secondary sources. Our qualitative research approach allows us to identify several key challenges for CDBC adoption from a global perspective, which include (1) privacy issues, (2) stability concerns, (3) impact on financial inclusion and (4) resilience from cyberattacks. We provide early evidence on the challenges for CDBC adoption based on past resources which could allow central banks' currently developing digital currencies to make necessary adjustments. Keywords: CDBC, Central Bank, Digital Currency, Fintech.

Green Purchase behavior in the Beverages industry in Pakistan: A TPB perspective with moderating role of Government and media exposure

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University of the Punjab, Lahore

Abstract:

Environmental conditions are worse these days due to the consumption pattern of human society. The main reasons which our environment suffer a lot of problems are starting from the manufacturing of product with such material that is harmful to the environment. This study aims to develop the understanding about the green purchase behavior of consumers for the drinks and beverage industry in Pakistan. Focusing on the antecedents of attitude while purchasing, our study further explores the effect of subjective norms and perceived behavioral control (PBC) on purchase intention with the moderating effect of the role of governments and media exposure. Using the Structural Equation Modeling technique of Warp-PLS, the survey-based data, collected from 248 respondents from different cities of Punjab province, was analyzed for the hypotheses testing. All the variables showed a strong positive relationship with purchase intention while the attitude is the strongest predictor for purchase intentions with a B-value= 0.382; followed by PBC and SN. Result also demonstrate that health value and green place also contribute significantly towards attitude development of the consumers but brand equity is not found reliable towards green purchase intention. The moderating effect is significant for media exposure and government role for the relationship between attitude and green purchase intention. This research concludes that consumer thinks about different factor while making decision of green packaged drinks and beverages i.e., social pressure availability but the government should have to play its role in a sustainable environment and media exposure also have to launch such camping's that effect on social values and easiness of purchasing green products in Pakistan.

Key words: green consumerism, drinks and beverages, plastic waste, TPB, purchase intention, government role, media exposure.

Reshaping Habitual and Complex Buying Behaviour Through Social Media Strategies of Apparel Brands: Taking Brand Image Layers in Account

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Abstract:

For online businesses to be successful in a competitive market it is essential to keep a track of consumer buying behaviour and what factors can influence that behaviour. With the increased awareness of the power social media holds, consumers in Pakistan are no longer confined to the receiving end of the product information but are also participating in creating electronic word of mouth for other potential customers regarding their experience with several online apparel brands. Brands that sell online are conveying information to potential customers through different social media platforms as well. In order to control the buying behaviour of potential customers, online apparel brands need to monitor the brand image that is being conveyed through its on content as well as the word of mouth generated by other customers on several social media sites. This research aims to investigate the effect of brand related information communicated through either social media generated EWOM or the brand's social media itself, on the buying behaviour of millennials in Pakistan by influencing three layers of brand image (Functional, Hedonic, Social) in consumer's mind. This research uses survey questionnaire to collect the data from a sample of 318 online shoppers of apparel brands across Pakistan. The collected data is analysed with the help of SPSS and AMOS for structural models and measurements. Social media generated EWOM and credibility content of brand's social media have a significant positive relationship with both complex and habitual buying behaviour of online shoppers in Pakistan. Furthermore, Functional and hedonic brand image proves to significantly mediate the social media generated EWOM and credibility content of brand's social media relationship with both habitual and complex buying behaviour. However, the mediating impact of symbolic brand image in this relationship proves to be insignificant. This study provides a useful insight to brand managers on how to use social media as a tool of marketing communication in order to prompt positive brand image in consumers for influencing their buying behaviour in favour of the business. This research adds to the discussion in the existing content of social media and consumer buying behaviour by examining the complex and habitual buying behaviour as individual variables. Furthermore, this research adds to the literature by exploring the mediating effect of three layers of brand image (Functional, Hedonic and symbolic) in context to brand communication through social media and consumer buying behaviour.

Keywords Social media generated EWOM, Credibility content, Functional brand image, Hedonic brand image, Symbolic brand image, Complex buying behaviour, Habitual buying behaviour

Effects of Talent Management on Workplace Adaptability: Moderating role of Perceived Organizational Support and mediating role of Organizational Learning

Sumbal Shahid

Dr. Majid Ali

Dr. Rizwan Qaiser Danish

Hailey College of Commerce, University of the Punjab, Lahore.

Abstract:

The purpose of this study is to see the relationship between talent management and workplace adaptability, although organizational learning and perceived organizational support will mediate and moderate the relationship respectively of an independent and dependent variable. Talent management aims to enhance performance. Talent management is important for employee performance. Talent management is the best way of attaching employee’s possible and enhancing performance. A research was conducted to understand the process of “building organizational learning”. It concludes that in the era of development in information and computer technology, firms and managers can't manage people in traditional ways. Employees in any organization are valuable resources through which the organization can gain a competitive advantage. The company's key aim concerning human capital is its preservation in the company. For retention and commitment of employees; perceived organizational support is most important. Workplace adaptability is that the potential of an employee to be flexible and hospitable dynamic work conditions. An adaptable employee can work well independently or within a team. In my study, I decided to target the banking sector. The reason behind selecting the banking sector is I wanted to target those people who are dealing with challenges related to our variables. My sampling criteria are based on the education level of respondents. I targeted people who are graduates at a minimal level Questionnaire technique will be used to collect employee data. Data will be analyzed through SPSS software.

Keywords: Talent management; Workplace adaptability; Organizational learning; Perceived organization support.

Relief Paper as a Catalyst for Sustainable Business Practices

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Abstract:

The narrative of this paper revolves around paper being made from trees and plants. However, this business plan introduces a unique reversal of this concept: growing a plant from a piece of paper. This business model presents Releaf Paper, an innovative solution addressing deforestation concerns in paper production by embracing sustainability. Unlike existing initiatives primarily focused on packaging, our vision extends to revolutionize the publishing industry, making Releaf Paper the cornerstone of our commitment.

Crafted from recycled paper pulp and dried seeds, Releaf Paper embodies eco-consciousness and circular economy practices. Its unique feature lies in its transformation from a mere business card to a catalyst for growth, sprouting into a thriving plant when discarded—a powerful symbol of nature's regeneration from what seems insignificant.

The Mission of Releaf Paper is to recycle paper with a pulp of seeds to prevent harming the environment. We can change the approach for marketing our product's packaging supply and satisfy growing demand without harming the planet. Our goal is to replace using wood cellulose with Releaf pulp to the greatest extent of paper mills across the world.

Our approach offers two fundamental advantages. Firstly, it fosters lasting connections with customers, deepening engagement through our dedication to Releaf Paper. Secondly, it provides high-value organizations with a means to champion CSR initiatives, utilizing Releaf Paper's environmental impact as a conduit for meaningful change.

By pioneering Releaf Paper in publishing, our mission transcends typical boundaries. Imagine every brochure and business card embodying sustainability, where discarding a card transforms into the birth of a seedling—an emblem of our sought-after paradigm shift. This transformation redefines disposability, infusing each piece with the promise of renewal and environmental stewardship.

Our model disrupts the norm of print materials' environmental impact, igniting a movement to transform routine interactions into impactful environmental statements. By championing Releaf Paper, we aim not

only to offer products but also to reshape business practices and consciousness, placing sustainability at the forefront of corporate engagement.

Moreover, this model ensures cost-effectiveness, bridging the gap between environmental responsibility and economic viability. Aligning with conscientious consumers and environmentally responsible corporations, Releaf Paper becomes a powerful tool for enhancing CSR efforts, resonating strongly with stakeholders and reinforcing brand loyalty.

In the nutshell, the Releaf Paper business model signifies a pivotal shift in sustainable business practices. Through this innovative solution, we aspire to redefine everyday business essentials as agents of positive environmental change and societal impact.Invest in Releaf Paper today, and let's co-create a future where profitability and purpose converge seamlessly, redefining success in business and nurturing a greener, more sustainable world for generations to come.

Adoption of Electric Vehicles in Pakistan

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Ibrar Khan
Hailey College of Banking & Finance
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Abstract:

This literature review examines the current state of research on the adoption of electric vehicles in Pakistan. The review focuses on the factors that influence consumer purchase intention and the policies and frameworks that can facilitate the adoption of electric vehicles in the country. According to the review, consumer perceptions and concerns, including perceived utility, perceived ease of use, perceived value, perceived benefits, perceived risks, and environmental concerns, have a significant impact on consumers' intentions to adopt electric vehicles in Pakistan. Clear and targeted policy measures are also found to be essential for the successful adoption of EVs in Pakistan. The review proposes a model for the adoption of electric vehicles in Pakistan that includes these factors and highlights the importance of governmental support. The review concludes that while the adoption of electric vehicles in Pakistan is a complex issue, it has the potential to drive multi-faceted growth in the country, including lower fuel imports, a reduction in unutilized generation capacity, and contributions towards reducing carbon emissions. The review deploys immense significance using terrain electric vehicles considering market complexities and challenges.

Targeting Virtue Snack Foods in Shape Of Customer Impulsive Buying Behavior Using Cue Utilization Theory And Classical Attitude Behavioral Model

Iqra
Government Collage University,
Faisalabad, Pakistan

Abstract:

Purpose- The purpose of the study is particularly focus on virtue food snacks packaging and their apparent cues (informational vs visual). Further, Consumer impulse buying behavior may depend on food healthfulness perception. The theoretical model will test through using cue utilization theory and classical attitude behavioral model.

Design/ Methodology/ Approach. With response of 300 consumer assessment on healthy eatables this study will use the SAMRRT-PLS to statically analyze the model. Structure eruptional modeling (SEM) will be run to test the hypothesis.

Originality/ value- The present research tries to fulfill the literature gap through develop a study for diet conscious individuals towards virtue snack foods packaging cue and their perception of healthfulness using cue utilization theory. This study addressing some research questions/objective 1) Does consumer interested in healthy eating pay more attention to packaging visual/ informational cues? 2) How perception of healthy eating leads to impulsive buying behavior?

Keywords: Healthful perception, packaging cues, virtue foods, intention to impulsive buying.

Adoption of electric vehicle

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Abstract:

Scholarly research on the topic of electric vehicles has witnessed a dramatic increase in the current decade; however, reviews that synthesize and integrate these findings comprehensively have been lacking. This study is an attempt at filling in that void through an integrative review methodology. It encompasses the identification of variables in five different categories: antecedents, mediators, moderators, consequences, and socio-demographics. The analysis procedure revealed many interesting insights related to research methods and region-specific developments. The review draws attention to relatively neglected topics such as dealership experience, charging infra-structure resilience, and marketing strategies as well as identifies much-studied topics such as charging infrastructure development, total cost of ownership, and purchase-based incentive policies. It also clarifies the mechanisms of electric vehicle adoption by highlighting important mediators and moder-ators. The findings would be beneficial to both researchers and policymakers alike, as there has been a dearth of earlier reviews that have analyzed all sustainable consequence variables simultaneously and collectively. The development of a comprehensive nomological network of electric vehicle adoption added a new dimension in this study. The segment-wise key policy recommendations provide many insights for stakeholders to envisage electric mobility.

Key words: Actual adoption for EV, Behaviour for EV, Environmental concern, hyperbolic discounting.

Consumer Acceptance Toward Takaful and Conventional Insurance in Lahore City of Pakistan: An Application of Diffusion Of Innovation Theory

Mehran Ahmad

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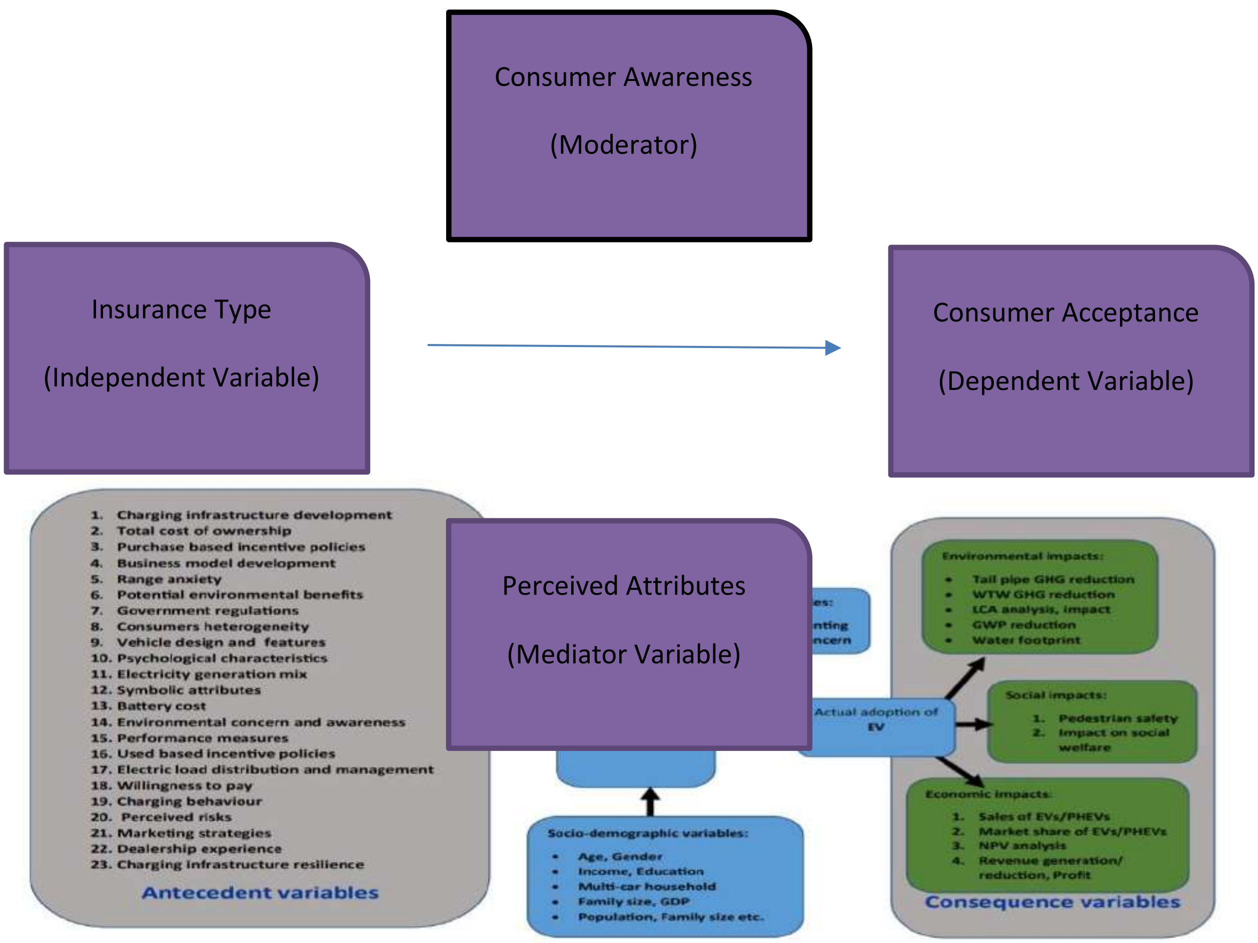
Abstract:

This research explores the dynamics of consumer acceptance between Takaful (Islamic insurance) and conventional insurance within Lahore, Pakistan, employing the lens of Diffusion of Innovation theory. The study aims to investigate the factors influencing consumer adoption, examining the perceived attributes of both insurance types, socio-cultural influences, and the role of innovation diffusion in shaping consumer preferences. Employing a mixed-methods approach, including surveys and interviews, this research seeks to provide insights into the drivers and barriers affecting consumer choices between Takaful and conventional insurance within the specific cultural context of Lahore, contributing to the broader understanding of consumer behavior in the insurance industry.

`**Model**



Does Communication of Critical Audit Matters in the Audit Report Inhibit Corporate

Li Zinrui

East China Jiaotong University

Abstract:

To enhance the information quality of audit reports in the Chinese capital marketand improve their relevance to potentialusers' decisions, china's Finance ministry has added this tool approved new auditingstandardsforcertifiedpublicAccountants(NewAuditreports), the main content is: communicate critical audit matters in audit reports.Thispaperexaminesthelinkbetweenthedisclosureofcritical audit matters and the aggressiveness of corporate tax avoidance. We test and conclude that the issuance of new audit reports has effectively discouraged corporate tax avoidance by constructing a double difference model. Further, we study the relationship between thesizeofaccountingfirmsand corporatetaxavoidance. Wefindthat the negative correlation is more apparent when the accounting firm issuing the audit report is one of the "top ten." This paper provides new evidence to examine the economic consequences of disclosures ofcriticalauditmattersandgivesaupbeatassessmentoftheeffectof the implementation of the new standard from the perspective of corporatetaxavoidance.

Audit Report Mode Reconstruction and Stock Price Crash Risk The Reform of Audit Report as a Quasi-Natural Experiment

Qin Yuting

East China Jiaotong University

Abstract:

Based on the policy background of the new audit report standards issued by the Ministry of Finance in December 2016, this paper takes China's A+H listed companies as the sample and examines the implementation effect of audit report mode reconstruction from the perspective of stock price crash risk. We test and find audit report mode reconstruction reduces the stock price crash risk. Furthermore, the number of disclosure of key audit matters is negatively correlated with the stock price crash. Additionally, the effect of audit report mode reconstruction on reducing the risk of stock price crash is more obvious in the samples with high information asymmetry, low level of internal control, poor media environment and high agency conflict. This study can not only provide early evidence on the economic consequences of the audit report mode reconstruction but also have some inspiration for the prevention of financial risks and promotion of real economy in practice.

Key Words: Audit Report Mode Reconstruction; Stock Price Crash Risk; Key Audit Matters

Chinese Library Classification Number: F239.4 Document identification code: A

"Work-Life Balance and its Influence on Career Development among Women Bankers: The Mediating Role of Creativity and Moderating Effect of Family Support" A Conceptual Study

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Zainab Bibi

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Abstract:

Pakistan's banking sector has experienced substantial growth, witnessing a notable rise in the participation of women professionals. However, despite this increased presence, women remain underrepresented in managerial positions. This research employs an integrative framework that merges relational and institutional perspectives to comprehensively understand this persistent underrepresentation. The study aims to unravel the intricate relationship between work-life balance (WLB) and the career progression of women in the Pakistani banking sector. Specifically, it delves into the influence of creativity as a mediator and family support as a moderator within this context. The convenience sampling method was utilized to gather data from individual female bankers across various hierarchical levels. The findings of this study shed light on a positive association between WLB and the career development of women in banking. Notably, the research elucidates the mediating role of creativity in this relationship, highlighting its impact on shaping career development trajectories. Moreover, the study emphasizes the pivotal significance of family support, elucidating its role as a key influencer that shapes the connection between WLB and the progression of women's careers within the banking sector. The implications drawn from this research are substantial. They underscore the critical need for nurturing initiatives that promote work-life balance within the industry. Additionally, the findings stress the importance of reinforcing family support structures to empower and enhance the career paths of women in banking. These insights are invaluable in driving policy initiatives and organizational strategies geared towards fostering an inclusive and supportive environment, thereby enabling the advancement of women professionals within the banking industry.

Key Words: Work-life balance, Career development, Creativity, Family support

Impact of Behavioural Biases on Perceived Market Efficiency: Empirical Evidence from Pakistan Stock market

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Abstract:

The aim of this study is to investigate the impact of behavioural biases on perceived market efficiency. The goal of the research is to pinpoint the behavioral elements that account for how individual investors make decisions about their investments in developing economies. The behavioral portfolio theory (Shefrin & Statman, 2000) serves as the foundation for this study. The overconfidence, self-attribution and optimism are behavioural biases that included in the current research paper. The study is significant for all investors, policy makers and investment advisors. Primary data has been collected through use of a well-designed questionnaire. Reliability test, Correlation and linear regression techniques are used in this study by SPSS 20.0. The study concluded that all three biases overconfidence, self-attribution and optimism have positive and significant effect on perceived market efficiency.

Keywords: Behavioural biases, Perceived market efficiency, Regression model, Correlation

Examining the Influence of Mudarabah Financing on Credit Risk in Islamic Banking: Insights from the Middle East

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Abstract:

Islamic banks have a significant influence on the financial performance of the Islamic banks. The vital aim of the study is to explore the relationship between credit risk and Mudarabah financing in the context of the Islamic framework of banking. In total, 13 Islamic banks from the Middle East were included in our analysis, including those from the UAE, Qatar, Saudi Arabia, Egypt, and Oman. Our study reveals that Mudarabah financing considerably affects banks' credit risks. Non-performing loans have increased as a result of increased Mudarabah funding generally. Firm size has a big impact on non-performing loans. Exchange rates also have a considerable impact on the credit risk of Islamic banks in the Middle East countries, whereas GDP growth AND LLR both reduce the total number of non-performing loans. As a result, Islamic banks engaging in Mudarabah financing may experience increased credit risk due to the inherent risk-sharing nature of these contracts. The study suggests that the quality of assets financed through Mudarabah contracts has a direct influence on credit risk. Islamic banks must carefully assess the creditworthiness and viability of projects or ventures funded through Mudarabah to mitigate the potential credit risk. The effectiveness of risk management practices plays a crucial role in mitigating credit risk arising from Mudarabah financing. Islamic banks need to implement robust risk management frameworks, including credit risk assessment, monitoring, and mitigation strategies specific to Mudarabah contracts. Regulators and policymakers should take into account the impact of Mudarabah financing on credit risk when formulating regulations and guidelines for Islamic banks.

"Exploring the Impact of Social Media on Student Well-being and Academic Success"

Hasan Ahmad

Syed Tayyab Raza

Dr. Muhammad Bilal Ahmad

Assistant Professor

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University of Punjab, Lahore.

Abstract:

This research delves into the complex relationships between social media usage, academic performance, depression, and personality traits among individuals. The primary objective is to unravel the impact of social media usage on academic performance, exploring the mediating role of depression and the moderating influence of personality traits.The independent variable, Social Media Usage, serves as the focal point of the study. Its influence on the dependent variable, Academic Performance, is investigated. Simultaneously, the study incorporates two crucial variables to deepen the understanding of this relationship. Depression is introduced as a mediator, acting as an intermediary variable that may explain the mechanism through which social media usage affects academic performance. It is hypothesized that increased social media engagement may contribute to higher levels of depression, subsequently influencing academic outcomes. Personality Traits emerge as a moderator in this study, introducing variability in the relationship between social media usage and academic performance. The hypothesis posits that individual differences in personality traits may enhance or mitigate the impact of social media on academic performance. The research methodology involves a comprehensive survey. Participants will be assessed for their social media usage patterns, academic performance metrics, levels of depression, and various personality traits.

Key Words: Social Media, Academic Performance, Depression

Financial Ratio Analysis: A Comparative Study of Islamic and Conventional Banks' Performance in Pakistan

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Abstract:

Purpose Over the past few years, the sustainability and growth of Islamic Banks (IBs) have raised a debate among policymakers, regulators, economists, and investors due to these financial institutions' rapid growth and development. The objective of this paper is to analyse the relative financial performance of

IBs with Commercial banks (CBs) in Pakistan from 2019 to 2022. To measure the progress of IBs in comparison with CBs. Approach To compare and evaluate the financial performance of IBs in comparison with CBs working in Pakistan, this study has considered the financial ratio analysis (FAR). Top-five IBs and topfive CBs, offering Islamic products, are taken as the sample dataset. Results The findings show no statistical difference between the profitability level and capital structure of conventional and Islamic Banks. Counter to this Islamic Banks are less risky, have lower liquidity, and are more solvent as compared to CBs. Research Scops This study only provides an overview of the financial performance of full-fledged IBs in comparison with CBs (providing both conventional and Islamic services) operating in Pakistan. Moreover, this study only considered sample data instead of considering the whole population of banks operating in Pakistan. Meanwhile, a cross-country analysis can derive more significant information, to compare the financial performance of Islamic and Conventional Banks. Practical Implications This study supports that Islamic banking should be augmented in Pakistan. And for this purpose, Islamic literacy should be promoted in Pakistan and IBs should open new branches to expand their business. Originality/Value This research would assist debtors, managers, creditors, investors, and other stakeholders in decision-making purposes. Furthermore, this latest information would also be useful to policymakers and regulators (i.e., SBP) for making policies and developing regulations for Pakistan’s financial and banking sector.

Optimizing the Beneficiations of Credit Information for Banks

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Hira Tanweer Butt
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Abstract:

This paper evaluates the operations of credit information in the context of banking system of Pakistan. The asymmetries of information, regarding potential borrowers, are enormous problem for banks. There are formal and informal information systems adopted by banks in different countries. Apart from informal credit information systems, e-CIB (a formal system) is prevalent in Pakistan since 1991. We have analyzed the operating systems of e-CIB & developed data nets to optimize the benefications of credit information for Pakistani banks. The study indicates problems of e-CIB operations at the stage of initiation and benefications. Primary solution suggested is linking e-CIB with financial reporting of banks (i.e. linking with books of accounts) and alternate solution is to introduce sustainable reforms that should increase costs and reduce the benefits that banks and employees derive from ignoring e-CIB.

How Brand Image and Social Media Marketing Activities Affect Customer Loyalty Through Customer Satisfaction

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Ehtesham Tariq Khan

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Abstract:

This study will describe the importance of brand image and social media marketing activities and their impact on customer loyalty through customer satisfaction. This study will conduct in super markets in Pakistan. In addition, this paper aims to investigate whether brand image and social media marketing activities influence customer satisfaction and to what extent customer loyalty. Brand image is the modern perception of products by customers, and social media marketing is one of the most important influencing factors in creating customer satisfaction. We will conduct exploratory research. The data collect will be primary and information will collect from our population through a questionnaire. The results will conclude that consumers can achieve satisfaction in supermarkets with reasonable product prices, availability of quality products, timely service delivery, accurate information acquisition shortening of the checkout process.

Key Words: Brand Image, Customer Loyalty, Super Market, Customer Satisfaction

The Influence of Workplace Bullying and Harassment on Turnover Intentions: The Moderating Role of Leader-Member Exchange

Dr. Ahmed Muneeb Mehta

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Abstract:

This study intended to investigate the Impact of workplace bulling and harassment on turnover intention with moderation of leader-member exchange. The primary objective of this research is to examine moderating effect of leader member exchange in relationship of work place bulling, harassment, and turnover intentions. It also investigated the moderating role of leader member exchange in this relationship, to examine whether leader member exchange affects turnover intention or not. Questionnaires are adopted and with few modified distributed among individuals. Through these questionnaires valuable data will be extracted and performed analysis using PLS-SEM. Result revealed that workplace bulling and harassment have a significant effect on turnover intention and this relationship partly moderated by leader member exchange. This research contributes in exiting body of knowledge through investigation of workplace bulling and harassment critical role in turnover intention. Furthermore, moderating role of leader member exchange shed light on significance of turnover intention. This study contributes to literature and provides comprehensive understanding of all variables in the study. This research findings have implications for stakeholders, including academicians, practitioners, and policymakers that will provide insights on workplace bulling and harassment, regulatory adjustments, and strategic decisions that leads to economic growth.

Keywords: workplace bulling, workplace harassment, turnover intention, organizational identification, leader member exchange.

Examining The Impact of Workplace Ostracism On Turnover Intentions

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Rimsha Ali
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Abstract:

The purpose of this study is to examine the relationship of workplace ostracism and turnover intention in public and private banking sectors, National Bank and Allied Bank limited, of Pakistan. The study finds out the mediation of organizational cynicism between workplace ostracism and turnover intention. This study finds out the moderation of social capital bonding between workplace ostracism and organizational cynicism. Maximum 382 questionnaires were distributed to public and private banking sectors and out of which 350 sample sizes were effective and run for analysis. To determine the sampling size of 382 questionnaires, item response theory of (Krejcie & Morgan, 1970) was used. Cross sectional study is used to assess this study. Also this study uses conservation of resource theory to find out the relationship between workplace ostracism and turnover intention. Positive and significant relationship was found between workplace ostracism and turnover intention. Partial Mediation of organizational cynicism was also found to be significant and positive between workplace ostracism and turnover intention. Social capital bonding also moderates the relationship of workplace ostracism and organizational cynicism such that if social capital bonding is low, the relationship between workplace ostracism and organizational cynicism would be strengthened and if social capital bonding is high. The relationship between workplace ostracism and organizational cynicism would be weakened.

Impact of Mobile Banking Retention on Performance of Banking Sector: Evidence from Pakistan

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Abstract:

Purpose: This paper aims to explore important antecedents which help explaining customer retention of mobile banking & impact of MBR on Bank performance in Pakistan.

Design/Methodology/Approach: An adapted Questionnaire used to assess customer's response and annual reports & web sites used to measure performance of 5 Pakistani banks. The impact of MBR measured in two time periods: pre saturation & post saturation. The SPSS used for data analysis.

Findings: Findings indicate that all predictors of MBR (IT Control rating, Transaction cost, Usage without data and Card less transactions) are significant except specialized team. All predictors of Bank performance (No. of ATM increased, Increase in Current accounts and Increase in transactions) are significant.

Limitations: More banks and increase in sample size can increase reliability of the study.

Practical implication: By providing different types of comparative facilities, banks are encouraging their customers for mobile banking adoption & their retention which contributes to customer satisfaction as well as business growth of banks.

Originality/Value: This paper is extension to mobile banking adoption intention & interestingly measures business growth through customer retention about mobile banking creating a significant impact.

Keywords: Information Technology (IT), Mobile Banking Retention (MBR), Automated Teller Machine (ATM), Customer Satisfaction, Banking Performance.

Bullying of Hotel Employees: moderating Role of Self-Compassion and Mediating role of Psychological Distress

Research Student at University of Punjab Gujranwala Campus

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Gujranwala Campus, Gujranwala.

Abstract:

The normalization of bullying creates distress and strain among employees and leads to employees' mental disorders. Employees who are bullied also become less engaged at work and are more likely to quit their jobs. However, people with low self-compassion do not trust their ability to tackle difficult situations they lose their psychological resources in that case and become distressed. Consequently, the mains questions of the current study are: what are the major repercussions of bullying at work in the hotel industry? Could self-compassion lessen the psychological distress that bullying causes at work? Therefore, this research is to (a) test the effect of workplace bullying on employees' psychological distress and engagement in hotels, (b) examine the influence of psychological distress on the engagement of hotels' employees, and (c) evaluate the moderating impact of self-compassion on the link between workplace bullying and psychological distress

The Impact of Covid 19 Pandemic on The Stock Returns. The Moderator Role of Financial Stability

Faiza Saleh

University of the Punjab,

Gujranwala Campus, Gujranwala.

Abstract:

Purpose/ Methodology

In this paper, the researchers aim to examine the impact of Covid-19 on stock returns, the moderator role of financial stability. We used an event study methodology to observe the company wise stock returns reaction the Covid-19 pandemic. Moreover, financial stability is employed to test its moderating role on sustainable banking regulations.

Finding

There is proposed study and there are expected findings right now.

Implication

This study will be used by State Bank of Pakistan, sustained health of banking sector through its well-regulated monitoring mechanism.

The Impact of CSR Performance on the Firm Performance. The Moderating Role of Dividend Policy and CEO Education

Tehmina Anwar

University of the Punjab,

Gujranwala Campus, Gujranwala

Abstract:

Purpose

This research aims to investigate the Corporate, Social, and Responsibility impact on the firm performance, with the help of moderating role of dividend policy and CEO education.

Methodology/ Design

This study will analyze the relationship between proposed variables using multiple regression techniques.. The independent variable is CSR performance, and the dependent variable is two indicators of firm performance. The moderating variable will be dividend and CEO education. The data will be collected through the financial reports of the companies listed on the Pakistan Stock Exchange.

Finding

This is a proposed study and there is expected finding right now.

Implication

This study will be used by stakeholders, policy-makers, and regulatory bodies policymakers, and other related authorities.

The Impact of the Public Sector on Green Finance and Green Firms

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Abstract:

Green finance involves investing in evolutions that reduce greenhouse gas emissions and environmental pollution. It is a new area of financing, that has application in the process of incorporation of environmental protection and economic profit. This concept has reshaped investment decisions in the

1990s, highlighting environmental concerns such as air and water pollution, waste disposal, deforestation, and biodiversity conservation. Population growth and industrial activity has increased that has reduced the natural resources. It is crucial to promote green finance in various sectors such as agriculture, construction of eco-friendly buildings, environmental conservation, and other sustainable projects to reinforce the economic growth of the nation. This paper outlines that how green projects would be financed for economic development and green energy development by greening bonds and greening banking systems by public firms. There should be the rise of renewable energy and CO2 emissions should be reduced by the public sectors and firms. Companies should adopt strategies that improve resource efficiency, reduces greenhouse emissions and reduce the loss if biodiversity. They are the keys to access of green environment. An efficient environmental regulation is need to victorious markets that look with particular attention to issues relating to human health and environmental sustainability. Green bonds have increasingly been consuming around the world as a source of financing for renewable energy development, designed with conformity requirements and measurable economic returns to investors, while alleviating climate change. If we want to achieve sustainable development goals, we need to have access to new green projects and boost the financing of investments that provide environmental benefits, through new financial measures.

ESG Impact on Firm Leverage: Exploring the Moderating Roles of Firm Flexibility and Financial Constraints

Muhammad Usama Nabeel

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Abstract:

This research explores the relationship between a company's Environmental, Social, and Governance (ESG) performance and its capital structure on firm leverage within the US corporate sector. Furthermore, we examined whether financial constrain and firm flexibility plays a moderating role in influencing the

relationship between ESG and firm leverage. The concept of capital structure has now adopted a new term, which is known as zero-leverage (ZL) policy. By applying panel regression, we collect data from financial and non- financial US rating agencies giving different companies year observations from 2010 to 2020. This study support legitimacy theory, suggesting that a company's ESG disclosure and overall progress play a pivotal role in determining their financing decisions. In particular, firms with superior ESG performance have less debt financing. The results indicate that companies with strong ESG performance have easy access to equity funding through stock markets.

Keywords: Environment, Social, Governance, ESG, Capital structure, Firm Leverage, financial constrain, firm flexibility

Unlocking Success: Investigating The Influence of Zero Debt and CEO Traits on Firm Performance

Mudassar Iqbal

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Abstract:

This study aims to investigate the relationship between chief executive officer's characteristics and the firm's output, with a particular emphasis on the part that debt plays in forming this relationship. The study investigates the notion that the existence or absence of debt can influence the association between CEO traits and business performance. Specifically, the study examines this hypothesis using both qualitative and quantitative methods. This study provides insights into the complex interactions between CEO traits,

debt and firm performance. To do so, it will conduct an exhaustive assessment of the current literature and empirical analysis of financial data.

The investigating findings suggest that the CEO's attributes considerably influence the company's performance. The results imply that the CEO's experience and understanding of the industry favorably impact the firm's performance. The study's finding indicate that CEO's higher education, particularly in business and management, is connected with increased organizational success and improved financial performance.

Effects of Digitalization of Marketing on Sales Performance with Moderation of Artificial Intelligence:

A Case Study of Gul Ahmad Textiles. LTD

Warda Ahmed

Aimin Ameen

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Assistant Professor

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University of Punjab, Lahore

Abstract:

Digital marketing has been an essential marketing tactic in recent years. Marketers use electronic media to advertise products or services on the market with the primary purpose of acquiring customers. This study will examine how the digitization of marketing affects the sales of Gul Ahmed Textile, a garment firm.

Gul Ahmed uses Computer Vision System to improve it sales i.e. by analyzing customer behavior in physical stores, tracking customer movement and interactions with products, for security purposes, such as monitoring and preventing theft, for quality control in the manufacturing process. Computer Vision System is a field of Artificial Intelligence that helps computer to drive meaningful information from digital images, videos and other visual inputs. Depending on the placement of cameras within and outside stores, machine vision layered on top of a closed-circuit TV system can also help retailers with security and prevent theft or fraud, removing the need for human security to be sitting behind a screen, while initiating physical intervention when alerted to a threat. This study will focus on the effect of use of digital marketing and computer vision system on the perceived sales performance of Gul Ahmed. Does use of technology is helping Gul Ahmed in gaining market competition? Social media zones have a beneficial influence on brand visibility of business, so it's important to know how use of technology help in gaining customers and market competition. A questioner has been designed for this research.

Keywords: Artificial Intelligence; Computer Vision System, Digital Marketing, Sales Performance, Market Competition

Impact of Green Training On Perceived Organization Performance Through Environmental Sustainability

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Faiza Rashid

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Abstract:

This research is motivated by the organization performance through green training. The decline of organization performance is suspected by the reducing level of green training for employees. The purpose of the study is to examine the impact of green training on perceived organization performance through the mediating role of environmental sustainability. The research method used is causal study usually associated with hypothetic-deductive approach in research. This approach studies the causal relationship between variables. The statistics used are green training and organization performance. The analysis was conducted using the statistical package for the social sciences (SPSS) and to test a path model (PLS-SEM) with the aim of testing the predefined hypothesis. The convenience sampling technique was employed to collect data through an online survey. Questionnaires are generally designed to collect data. Questionnaire was based on ranking scale termed as Likert Scale (Five Point Scale) It describes that green training play a significant role to ensure adequate resource utilization, reduce waste, energy conservation,

and environmental degradation cause reduction. The study implies that green training should be considered a tool of strategic organization performance management for the purpose of gaining environmental sustainability. Environmental sustainability significantly impact on organization performance to achieve the green objectives. This can help raise awareness and enhance employee's knowledge and skills related to environmental sustainability. The findings suggest that green training improves the overall perceived organization performance. This research empirically testing an integrated path model of green training on organization performance. Due to recent COVID-19 pandemic, many sectors were closed worldwide and leading to a major worldwide economic downturn. In this study, we try to provide training as an economically sustainability and environmental friendly approach, in their attempt to be green among green human resource management. The literature in the field revealed a positive influence of green training on organization performance.

Keywords: Green Training, Perceived Organization Performance, Environmental Sustainability, Green Motivation

Role of Green Human Resource Management in Determining the Employees` Innovative Behavior in The Service Sector of Pakistan

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University of the Punjab, Lahore

Abstract:

Purpose - This study aims to determine the relationship between GHRM techniques and employees' innovative behavior. The study also proposed perceived organizational support as a mediator and green transformational leadership as conditional boundary to enhance employees` innovative behavior innovations. The research describes perceived organizational support and green transformational leadership as a new mechanism through which GHRM techniques influence employees' innovative behavior.

Research design/Methods - Using a survey questionnaire, this study will collect data from various employees of services sectors. The study also aims to apply structural equation modeling to test the hypotheses.

Proposed findings - Based on ability-motivation-opportunity (AMO) theory and resource-based view theory (RBV), the study assumes that employee may feel perceived organizational support while comprehending their organizations involved in GHRM practices and this ultimately encourage them to be more innovative. In addition, the study also assumes that green transformational leadership can strengthen the association between GHRM and perceived organizational support.

Research Implication: Companies must adopt GHRM strategies to attain environmental effectiveness. Employees may discover themselves with institutions which use green techniques, and as a result, institutions could acquire advantages by executing GHRM strategies.

Originality/value – The study discovers that employees` innovative behavior is new mechanism by which affect GHRM strategies in a firm.

Conclusion – Employees innovative behavior could generates more novel GHRM strategies which attain environmental performance. Moreover, organizations can survives in markets and compete their competitors.

Keywords *GHRM, perceived organizational support, green transformational leadership, Innovative behavior.*

Moderating Effect of Loan Concentration on Liquidity Creation and Credit Risk: A Cross-Country Perspective

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Abstract:

The significance of Islamic Banking in global banking industry is further enhanced based on its robust international growth. This study comparatively analyzes the association among liquidity creation and Credit Risk for Islamic and Conventional Banks in Pakistan and Malaysia over a period of 2004–2021. Moderating role of bank loan concentration on aforementioned relationship is also studied. Regression estimation methods (fixed effect, random effect and GLS) and PSM are deployed. Results provide us insight regarding positive or significant relation of liquidity creation with credit risk in dual banking systems. This study also tests the moderation of credit concentration which reflects the importance of risk management and loan portfolio concentration in banking sector.

JEL Classification: G21, G32

Key Words: Liquidity creation, Islamic Banks, Credit Risk, conventional banks, Malaysia, Pakistan, Loan Concentration

Maximizing Business Project Success Using AI Strategies

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Abstract:

The Analytic Hierarchy Process (AHP) for criteria weighting and Machine Learning models for performance scoring are combined in this study to create a robust framework for feasible project selection to maintain organizational financial concerns and other resource allocation. To maximize benefits, project selection, a critical decision-making process, necessitates the prudent allocation of resources. This study demonstrates the use of AHP to determine the importance of criteria and employs Machine Learning models such as Concurrent Neural Network, Decision Tree, Random Forest, Support Vector Machine (SVM), Naïve Bayes, and Logistic Regression for dynamic project performance assessment. The hybrid approach improves objectivity by combining expert judgment with data-driven insights, resulting in informed decision-making that is aligned with organizational goals. Criteria weighting, linear normalization, performance scoring, and evaluation of various machine learning models are all part of the experiment. The findings demonstrate the innovative strategy's potential to optimize resource allocation and elevate decision-making processes in organizations.

Keywords: Analytic Hierarchy Process, Machine Learning, Project Selection, Criteria Weighting, Performance Scoring, Decision-Making, Resource Allocation, Business Optimization, Data-Driven Insights, Organizational Objectives.

Assessing the Multifaceted Impact of Artificial Intelligence on Financial Intelligence

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Abstract:

This paper investigates the transformative impact of AI on financial intelligence, focusing on risk assessment, performance metrics, cybersecurity, and global collaboration. It delves into the development and application of artificial intelligence (AI) strategies, such as machine learning and data science, and NLP to address global financial challenges. Starting with a historical context of financial crises, the study evaluates current financial intelligence methods as well as regulatory considerations for AI in finance. The evolving partnership in financial decision-making is highlighted by ethical implications, human-AI collaboration, and case studies. The study goes on to discuss AI-driven risk assessment, describing how AI improves real-time risk identification. The study emphasizes on a comprehensive examination of AI's role in reshaping financial management by performance metrics, cybersecurity measures, and continuous monitoring. Finally, the study offers valuable insights for academics, industry professionals, and policymakers, demonstrating AI's potential for creating a more adaptive, efficient, and secure financial ecosystem.

Keywords: Financial Intelligence, Global Financial Crises, Machine Learning, Data Science, Ethical Implications, Human Collaboration, Big Data, Cybersecurity, Regulatory Compliance, Global Collaboration

Impact of E-Satisfaction on customer repurchase intention in B2C E-Commerce Segment

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Abstract:

This study examine the factors that influence e-customer satisfaction along with customers re-purchase intention in B2C e-commerce segment.

It scrutinize the mediating role of perceived value on repurchase intention and inspect the moderation of customer involvement. This article examine and study three factor that capture e-satisfaction of customer: system quality, information quality and service quality. A research model with three hypothesis is proposed. On the basis of adapted questionnaire the measures are verified. The data is collected from the customers having online shopping experience. The structural equation modeling (SEM) and path analysis is used to analyze data.

Key-Words: E-customer satisfaction, B2C business segment, Perceived value, Customer involvement, Re-purchase intention,

Paper Type: Research paper

Investigating the role of influencers towards Millennial and generation Z E-entrepreneurial intention

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Abstract:

Today, e-entrepreneurship has a significant role in the development of an economy because it motivates individuals to start their own virtual and innovative ventures. Furthermore, in the sphere of technological advancements, it is an important aspect to understand what motivates to millennial and Gen z to start involving in e-entrepreneurial activities. Thus, this study proposed an idea of examining the impact of influencers' opinion leadership, attitude homophily and parasocial relationships with influencers on social media users' intentions to initiate their own e-business. Moreover, this study will also reflect on the mediating role of Theory of Planned Behavior (TPB) factors including social media users' attitude, perceived subjective norms and behavioral control towards e-entrepreneurship. Population for this study includes millennial and gen z's social media users and sample size is 146 determined by employing g power analysis. Data for this study will be obtained through close-ended questionnaire by opting convenience sampling technique. To test the proposed model, Structural Equation Modeling (SEM) method will be used for inferential analysis. Numerous researches have been confirmed that TPB factors such as perceived subjective norms and behavioral control has significant relationship with e-entrepreneurial intentions. But none of them has emphasized on influencers as antecedents of social media users' attitude towards e-entrepreneurship (ATEE). Therefore, this study will investigate the role of influencers' as antecedent of EEI. This study has important practical and academic contribution to the body of knowledge and findings will be addressed in relation to prevailing online business trends in Pakistan by shedding lights on innovative aspirations and emerging entrepreneurs among social media users.

Keywords: e-entrepreneurship; theory of planned behavior; parasocial relationships with influencers; influencers' opinion leadership; attitude homophily with influencers; attitude toward e-entrepreneurship; perceived subjective norms; perceived behavioral control; social media users; millennial and gen z; e-business; online businesses; Pakistan

Paper Type: Conference full length paper

1. Introduction

This study purposed to investigate the influence of influencers on the social media users' e-entrepreneurial intentions (EEI). How Gen z and Millennial build e-entrepreneurial intentions, why their attitude change toward e-entrepreneurship and why they are not influenced toward e-entrepreneurship. There are many types of individuals' characteristics impact on EEI have been examined by the researchers, resulting in either direct or indirect relationship with e-entrepreneurial intentions of those individuals. But this study is first in kind which investigates the impact created by influencers on the social media users' EEI. Therefore, this study examine the impact of Influencers' attribute which is attitude homophily (AH), Influencers' characteristic which is parasocial relationships with influencers (PRI), and influencers' opinion leadership (IOL) on social media users' (includes Gen z and millennial) EEI. While factors such as perceived subjective norms (PSN), attitude toward e-entrepreneurship (ATEE), and perceived behavioral control (PBC) constructs of Theory of Planned Behavior (TPB) is playing a mediating role between the purposed relationships. Additionally, the key intention of this study is to investigate the influencers' impact in developing e-entrepreneurial intentions among social media users by integrating theory of planned behavior as mediator. The core purposes of this research include:

1) To investigate the role of attitude homophily with influencers (AHI) on social media users' e-entrepreneurial intentions (EEI).
2) To measure the effect of parasocial relationships (IPR) with influencers on social media users' e-entrepreneurial intentions (EEI).
3) To examine influencers' opinion leadership (IOL) affect on social media users' e-entrepreneurial intentions (EEI).
4) To examine the moderating effect of "theory of planned behavior" between "attitude homophily (AH), influencers' parasocial relationships (IPR), influencers opinion leadership (IOL)" and "Social media users' e-entrepreneurial intentions (EEI).

2. Literature Review

A theoretical background of each variable in any study is crucial as it support the overall research concept/idea. While theories help to transform conceptual framework into theoretical framework. It also ensures that the study is well-grounded in established principles, contributes to the coherence and enhancing the research effectiveness. In the light of emerging trend of e-entrepreneurship, it is essential to evaluate the e-entrepreneurial intentions of millennial and gen z. As they frequently invest majority of their time on social media platforms, whereas influencers are the building blocks of those social media platforms. Influencers' attributes/characteristics have significant impact on the social media users' attitudes and intentions. Therefore, there is a need to conduct such types of research which measures the relationship between influencers' attributes and social media users' EEI. Furthermore, to the best of researcher knowledge this study is first in nature that investigates the relationship between attributes of influencers on the social media users' e-entrepreneurial intentions. This study will also focus on the mediating role of theory of planned behavior (TPB) factors (attitude, perceived subjective norms and behavioral control). With regards to this research settings the e-entrepreneurship concept, millennial and gen z, social media usage and supporting theories, influencers' significance and e-entrepreneurial intentions has been discussed first following the influencers' attributes and theory of planned behavior (TPB) along with hypothesis of this study.

2.1 E-Entrepreneurship

In 21st century, the concept of entrepreneurship has attracted significant interest and several researchers have described entrepreneurship as producing innovative products or services, creating value, and evaluating business prospects(Hang & Chen, 2021; Newman et al., 2019; Tonday & Tigga, 2019). Today, the most evolving branch of entrepreneurship is electronic-entrepreneurship (which includes online businesses and virtual ventures), as an internet based business highly relies on digital platforms such as email, social media channels and e-commerce websites (Abdelfattah et al., 2022). However, in the literature e-entrepreneurship is described as designing, launching, directing, and advancing a virtual venture with the creative, novel, and inventive, ideas or knowledge/human skills by utilizing electronic devices, information technology (IT), and digital networking sites such as social media platforms to earn profit by taking such risks (Tonday & Tigga, 2019). Simultaneously, e-entrepreneurship start-ups plays a vital role in economic development by providing job opportunities through social and technological advancement (Hassan et al., 2020), e-commerce business development, and itrapreneurship opportunities in a progressive organization (Antoncic & Hisrich, 2001; Ip et al., 2018). Despites the significance of e-entrepreneurship, today millennial and gen z are facing difficulties in finding a job. Whereas e-entrepreneurship offers effective communication channels to fasten operations, provides efficient and cost effective ways to manage business activities to start a technology-driven business virtually from home (Abdelfattah et al., 2022). Furthermore, there is a need to fill this gap in the literature by investigating the effect of different social factors that triggers e-entrepreneurial intentions among millennial and gen z (Batool et al., 2015; Farooq et al., 2018); however, this study is proposed to examines the influence of social media influencers' attributes such as PRI, IOL, and AHI on e-entrepreneurial intentions among social media users (Millennial and gen z) in an emerging context such as Pakistan.

2.2 Millennial and Gen Z

Literature provides us with many classifications of generations but proposed study is focused on millennial/Gen Y and Generation Z also known as Gen z. Similarly, Lyons et al. (2015) defined these two generations accordingly:

- Generation Y (also known as millennial) generally includes people who born in between 1981–1994,
- Generation Z includes people who born in 1995 to onwards.

Whereas, millennial have witnessed the evolution of technology including personal computers, internet, mobile devices, and social media platforms/apps. Moreover, millennial actively engages with these technologies, using them for communication, opinion expression, and consumer interaction, making social media marketing crucial for reaching this demographic (Balakrishnan et al., 2014; Bolton et al., 2013; Lazarevic, 2012; Zhang et al., 2017), while considerations of others' recommendations (such as influencers) as a substantial factor of their decision making process (Muskat et al., 2013).

According to Bloomberg analysis from 1990, Generation Z includes all people who were born in 1995 or in mid 1990s (Bassiouni & Hackley, 2014; Turner, 2015). As of today, gen z is 32% of total world's population and also considered as the first ever generation grown-up in the era of internet revolution. Moreover, Gen z's acceptability and involvement towards social media platforms is considerably more than millennial as they are more interested in shaping themselves up to be inspirational for younger generations, activists towards environmental sustainability, and are more interested in gaining substantial amount of followers by creating pages on social media platforms (Wilson, 2019). Whereas, Gen z workforce is more attractive and has significant intentions towards the earning opportunities they found through social media platforms (Zhong et al., 2023). In contrast to Generation Y, Generation Z is characterized by a unique connection with technological devices and internet which makes them socially conscious and seamlessly incorporates social media platforms into their daily lives (Turner, 2015). While Generation Y experienced behavioral and psychological effects from early technology exposure (Bolton et al., 2013). Both generations share a common trait of considering social media as an essential element in their daily routines which helps them to embrace new technologies to experiment innovative ways of communication. Therefore, this study has adopted these two generations as its population to determine the impact of social media influencers on millennial and Gen Zs' EEI.

2.3 Social Media Usage

In 21st century, social media is the most remarkable technological mean for communication, collaboration, sharing information and expertise due to its incredible speed (Arli, 2017; Lau, 2017; Singh et al., 2010). Today, billion of people worldwide are using social media due to significant increase in its popularity (Laudon & Traver, 2020). Furthermore, socializing platforms such as Facebook, Twitter, YouTube, Instagram, Printerest, and LinkedIn has changed the way millennial or gen z carry out with their day to day routines and conversations. Furthermore, internet availability around the world and its' smooth accessibility, help to people engage in different social networking sites. Social media platforms are significant source of information, education, entertainment, socialization, and most importantly shopping (Mude & Undale, 2023). Therefore, social media platforms changed the way people and companies used to interact with one and others or with their customers; thus, it alter the means to start a business (Al Halbusi et al., 2021; Alnoor et al., 2022; Muninger et al., 2019; Newman et al., 2019).

Additionally, online platforms serve as indispensable part of e-entrepreneurship; thus millennial and gen z should consider it as golden opportunity to start an e-business as it requires low financial budget, staff and legal works to start a business virtually. E-entrepreneurship also provides solution for young entrepreneurs to achieve financial and individual benefits by minimizing their risk and cost of development, finance, and labor (Olanrewaju et al., 2020; Schmutzler et al., 2019). Previously, it only offers entrepreneurs a platform for business growth and brand development but now individuals can learn and develop entrepreneurial skills and attitudes from these platforms. As today, millennial learn everything from the social media or influencers' content. Moreover, there is an instant growth in social media influencers and users around the globe, have created a need to determine the influencers' impact on the users' EEI. Thus, the value that social media create is different for influencers, entrepreneurs and users, depends upon their perception to use those platforms either for entertainment or learning (Rokka et al., 2014).

Conversely, influencers share their stories and routine activities on social media platforms in order to build strong relationship with their audience by providing them related information. Social media platforms are basically a tool for different types of influencers to significantly change the attitude of social media users towards different products and services. As of today, 4.9 billion people are assessing social media platforms worldwide, thus, our millennial and gen z is too much involved in different online networking sites and is finding the shortcuts to achieve their financial or social goals through different online platforms.

However, social media usage has remarkable affect on the gen z and millennial behaviors or intentions. For instance, theories like Theory of Planned Behavior (TPB), Social Learning Theory (SLT) and Norms Activation Theory (NAT) support the idea that individuals develop new attitude such as EEI, learn new skills by observing people in their surroundings and by watching influencers' content on social media platforms respectively (Sethuraman, 2023).

2.4 Influencers

In 1987, Feick and Price introduced the notion of market mavens and define them as individuals with extensive knowledge and influence. Additionally, at that time the technological landscape was immensely different like the inventions of Microsoft Windows 2.0 and first portable laptop. Over 30 years later, the emergence of social networking sites has totally transformed the role of those mavens by providing them access to unlimited information and enabling them to reach almost 50% of the global population (Appel et al., 2020).

Influencers are characterized by a substantial social media following; possess above-average persuasive impact on users' behaviors and attitudes through their electronic word of mouth (De Veirman et al., 2017; Freberg et al., 2011; Haenlein & Libai, 2017; Liu et al., 2015). They are known for their opinionated and trustworthy nature, influencers are sought after for advice, viewed as trendsetters in specific niches, and particularly influential among individuals who share similar interests (Choi & Kim, 2019; Trammell & Keshelashvili, 2005; Uzunoğlu & Kip, 2014). Researchers also emphasized on the importance of influencers' authenticity, sincerity, validity, transparent recommendations, expertise, and originality along with the distinctive effects on their followers evaluation, consent and intentions to follow their recommendations (Delbaere et al., 2021; Lee & Eastin, 2021), while recognizing the evolution of influencers' professional capability to generate sophisticated content (McQuarrie et al., 2013).

Whereas, researchers has categorized different social media influencers on the base of their popularity among users with distinctions such as mega-influencers (recognized experts with widespread popularity), micro-influencers (ordinary individuals with niche influence), and macro-influencers (an intermediate category) (Borges-Tiago et al., 2023; Haenlein & Libai, 2017; Kay et al., 2020). Researchers like Campbell and Farrell (2020) has distinguished the influencers on the base of two categories such as; global/national influencers (who have recognition beyond social media), and nano-influencers (who are recognized among locals or niche audiences). Additionally, the emergence of virtual influencers, non-human entities created by artificial intelligence, is noted (Vrontis et al., 2021). Influencer marketing has seen significant growth, with over 50 million individuals worldwide identifying as influencers, promoting products or brands across platforms like Instagram, YouTube, Facebook, Twitter, and Printset, earning payment based on their following and outreach.

However, as every individual have role models in their life such as in their family, peers, teachers/mentors, and social circle (Abbasianchavari & Moritz, 2021). Those role models effect on individuals' behaviors towards their career choice, self-representation and self-expression in society (Ajzen, 1991; Akerlof & Kranton, 2000; Douglas & Shepherd, 2002) and this effect increase as the level of individual's self proficiency increase for observational learning (Lent et al., 1994). People observe "others" and learn how to chose the best option for their career accordingly (Hackett & Betz, 1981), especially about their entrepreneurial start-ups' plans (Carroll & Mosakowski, 1987). These "others" serve the society as mentors by shaping the behavior of their observer. Therefore, these mentors/role models create an environment which triggers entrepreneurial behavior by providing support and guidance toward entrepreneurial intentions (BarNir et al., 2011). Hence, it is very evident today that those role models among millennial and gen z are social media influencers.

Therefore, all type of influencers has similar impact on their audience life, thus; influencers also share information with their followers related to freelancing, investment opportunities, and some even develop their audience's knowledge and interest in social media earning, also view this activity as a social responsibility to empower their audience.

2.5 E-Entrepreneurial Intentions

According to cognitive model, behavioral intentions are the function of attitude (Oliver, 1980). Attitude is impacted by various factors. Influencers' attributes and characteristics are one of those factors that impact on social media users intentions toward different perspectives. E-entrepreneurial intentions are one of those perspectives. Previous researches have investigated the individuals' entrepreneurial trigger factors such as intentions, behaviors, attitudes, passion, ambition, career selection, achievement, and ownership relationship with entrepreneurial start-up ratio. But the most significant predictor of entrepreneurial behavior is entrepreneurial intention (Abbasianchavari & Moritz, 2021). Thus, Abbasianchavari and Moritz (2021); Abdelfattah et al. (2022) stated that it is important to investigate all aspect of e-entrepreneurial occurrences which includes analyzing entrepreneurial attitudes, as it is the most significant determinant of entrepreneurial intentions.

Moreover, influencers and entrepreneurship literature indicates that no research has been conducted yet in this regard, which directly measures the effect of influencers on EEI of Millennial and Gen Z. Therefore, the need to explore the relationship between individual capacities in acquiring entrepreneurial skills from various influencers through social media platforms still exist in literature. To overcome this need, this study will measure the direct effect of influencers' attributes on EEI. In this study, influencers' attributes are described as effect created by influencers on social media users' intentions to start an e-business. Moreover, this study also measures the mediating role of TPB factors on the relationship between influencers' influence and EEI. Therefore, this research aims to provide empirical insights by collecting data from millennial and gen z.

2.6 Independent Variable: Influencers Attributes and Characteristics

Various studies have defined the influence of individuals' entrepreneurial behavioral factors on their attitudes including opportunity creation, self-perceived creativity, financial situation, and risk-taking. Simultaneously, other researches has focused on influencers marketing, studying how influencers' attributes affect consumers' intentions to purchase and follow recommendations. However, this study investigate the combine influence of these two domains by exploring the relationship between influencers' attributes and social media users' e-entrepreneurial intentions based on Theory of Planned Behavior (TPB) to fill this gap.

2.6.1 Parasocial Relationships with Influencers (PRI)

Initially, Horton and Richard Wohl (1956) introduced the idea of para-social interactions as one-way social interaction with distinctive personalities through mediums like social media, TV, and Radio. Parasocial relationship, viewed as a multi-dimensional construct which offers significant insights about audience and media relationships. Theorists, including Auter and Palmgreen (2000) suggest that various factors, such as identification with a persona and interest, play roles in determining these relationships. PSR, while potentially developing during viewing, extends beyond a specific media exposure, resembling real-life relationships conceptually (Dibble et al., 2016). This self-established relationship, often unknown to others (Kelman, 1958), is positively related to social networking site usage, especially in the context of developing PSRs with celebrities (Kim et al., 2015). Sokolova and Kefi (2020) has stated that online social networking users can establish PSRs with bloggers through subscriptions and social media engagement. Additionally, PSR influences attitudes toward social networking service usage (Yuan et al., 2016) and significantly impacts social media followers' purchase intentions, evident in studies focusing on influencers on platforms like YouTube and Instagram (Augustine, 2019; Djafarova & Rushworth, 2017; Erkan & Evans, 2016; Ki & Kim, 2019; Lim et al., 2017; Lou & Kim, 2019; McCormick, 2016; Woodroof et al., 2020). Hwang and Zhang (2018) have stated that celebrities who have direct PSR with their audiences are more likely to develop purchase intentions among their audiences. From a brand perspective, studies has indicated that influencers having PSR with their followers are more likely to impact on their audiences intention to purchase (Chung & Cho, 2017; Lee & Watkins, 2016). Building on the above literature, hypotheses are formulated to measure the positive impact of Parasocial Relationship with Influencers (PRI) on PSN, ATEE, PBC, and EEI are as follow:

***H1**. Parasocial relationships with influencers (PRI) have positive impact on social media users' e-entrepreneurial intentions (EEI).*

***H2**. Parasocial relationships with influencers (PRI) have positive impact on SN.*

***H3**. Parasocial relationships with influencers (PRI) have positive impact on ATEE.*

***H4**. Parasocial relationships with influencers (PRI) have positive impact on PBC.*

2.6.2 Influencers' Opinion Leadership (IOL)

Opinion leadership is defined as the individual's attribute to be perceived as a mentor to provide trustworthy information due to their persuasiveness. In contemporary times, opinion leaders play a crucial role both online and offline, amplifying their impact (Turcotte et al., 2015). According to Goldenberg et al. (2006) opinion leaders are specialized in a particular domain or individuals who have extensive social connections with social media users. Peers acknowledge individuals as opinion leaders if they genuinely influence them (Iyengar et al., 2011), suggesting that celebrities can serve as high-arousal stimuli, enhancing the effectiveness of skippable and avoidable video ads (Belanche et al., 2017). In essence, opinion seekers, those seeking information or advice, actively seek out opinion leaders (Engel et al., 1990). Therefore, Opinion leaders are individuals exerting significant influence over others' decision-making and behaviors (Rogers & Bhowmik, 1970), and also develop their attitudes (Godey et al., 2016).

In this study, this concept of IOL aids in evaluating as influencers' credibility (Casaló et al., 2020). If the content shared by an opinion leader aligns with a consumer's personality on social media, they are more likely to develop the intentions to follow their opinion leader's ideas and recommendations (Casaló et al., 2020). In the realm of social media platforms, influencers express their opinions about different brands; their products and services, they are also functioning as opinion leaders with substantial follower on social networking platforms like Instagram, TikTok, Facebook, and Twitter (De Veirman et al., 2017). Thus, aligning with above literature, hypotheses are formulated to investigate the positive impact of influencers' opinion leadership are as follow:

***H5**. Influencers' opinion leadership (IOL) has positive impact on social media users' e-entrepreneurial intentions (EEI).*

***H6**. Influencers' opinion leadership (IOL) has positive impact on SN.*

***H7**. Influencers' opinion leadership (IOL) has positive impact on ATEE.*

***H8**. Influencers' opinion leadership (IOL) has positive impact on PBC.*

2.6.3 Attitude Homophily with Influencers (AHI)

Attitude homophily, based on the principle that similar individuals interact more frequently than dissimilar ones (McPherson et al., 2001). Essentially, attitude homophily represents the similarity between two individuals' opinions, perspectives, attributes and attitudes. Individuals sharing similar attitudes tend to engage in communication (Rogers & Bhowmik, 1970). While, McCormick (2016) stated that influencers with more familiarity with their audience enhances their effectiveness as celebrities. Today, social media users perceived influencers as similar to them, thus they have significant impact on their audiences/followers (Sokolova & Kefi, 2020). Similarity between influencers and their followers on social networking sites is also proved by many researches, which enhances their social demand (Byrne, 1961; Gonzales et al., 1983). Researchers like Shan et al. (2020) stated that brands can achieve effective endorsement outcomes when they empower those influencers who have ideal image among their audiences.

Additionally, Li and Du (2011) highlighted that attitude homophily is a significant predecessor to trustworthiness that promotes influencers' electronic word of mouth acceptability. Similarly, a research on celebrities suggests that there is a close connection between attitude homophily and trustworthiness (Al-Emadi & Yahia, 2020). Another research by Sokolova and Kefi (2020) stated that attitude homophily with social media influencers has positive impact on inter-personal or one-way interactions, and on their perceived usefulness and authenticity. Therefore, influencers who exhibit attitude homophily with their followers have extensive impact on their followers' attitude; to test this positive impact of AHI on EEI following hypotheses are proposed:

H9. *Attitude homophily with influencers (AHI) have positive impact on social media users' e-entrepreneurial intentions (EEI).*

H10. *Attitude homophily with influencers (AHI) have positive impact on SN.*

H11. *Attitude homophily with influencers (AHI) have positive impact on ATEE.*

H12. *Attitude homophily with influencers (AHI) have positive impact on PBC.*

2.7 Theory of Planned Behavior (TPB) factors as Mediators

Fishbein and Ajzen (1977) introduced a cognitive model of theory of reasoned action, which defines the impact of individuals' behavioral factors and external factors such as social norms on their intentions development. However, behavioral factors refer to a person's intentions or attitude to do a certain act or behavior and social norms refer to external environmental and societal factors that insist him to adopt a certain behavior. Almost after two decades, Ajzen (1991) introduced a new factor in this theory as perceived behavioral control refer to personal perspective of an individual that motivates him to perform a certain behaviors and named this theory with extension as Theory of Planned Behavior (TPB).

Today, it is the most popular socio-psychological behavioral theory to determine individuals' intentions to do a certain behavior. In literature, it helps researchers to determine entrepreneurial intentions of students in different fields under different demographic settings; at national and international level such as in Turkey, Germany, China, Ukraine, and United States (Gao, 2016; Ozaralli & Rivenburgh, 2016; Solesvik, 2013; To et al., 2014; Walter & Dohse, 2012). Furthermore, TPB factors have positive impact on the intentions of different consumers to use technologically advanced electronic-devices and internet networking sites for communication and online shopping such as social media websites (Cheung & To, 2016, 2017; Liang et al., 2013; Yen & Chang, 2015).

Souitaris et al. (2007) also stated that TPB factors including ATE, PBC, and PSN have significant impact on entrepreneurial intentions among students. Despite the effectiveness of TPB in determining entrepreneurial intentions, its role as a mediator between influencers attributes, and millennial and gen z's EEI has yet to be thoroughly studied.

2.7.1 Perceived Subjective Norms (PSN)

Perceived subjective norms are the unwritten rule of conduct within a group and it is also characterized by the shared approval and sustained endorsement of norms among members. Asimakopoulos et al. (2019) argue that PSN significantly impacts people's ideologies, especially when embarking on entrepreneurial endeavors. Authors like Autio et al. (2001); Su et al. (2021) stated that PSN involves individuals in perceiving the social idea within their environmental context and influence on whether they take specific actions; such as initiating a personal venture. In Nigeria, a study by Abbas et al. (2020) suggests that fostering appropriate PSN enhances emotional intelligence among students. Their study emphasizes the role of university administrators, including student welfare directorates, in creating conditions that nurture the development of relevant social standards. The influence of PSN on choosing a specific vocations is acknowledged, thus; literature indicates that PSN is a pivotal factor that is shaping students' entrepreneurial intentions (Gultom, 2020; Moran et al., 2020; Oftedal et al., 2018; Siu & Lo, 2013). To test this positive influence, hypotheses are proposed to examine relationship between PSN and EEI:

H13. *Perceived Subjective norm (PSN) positively influences social media users' attitude toward e-entrepreneurship (ATEE).*

H14. *Perceived Subjective norms (PSN) have positive impact on EEI.*

H15. *Relationship between PRI and EEI is mediated by PSN.*

H16. *Relationship between IOL and EEI is mediated by PSN.*

H17. *Relationship between AHI and EEI is mediated by PSN.*

2.7.2 Attitude toward E-entrepreneurship (ATEE)

Individuals with a positive mindset towards entrepreneurship are tending to express their potential for entrepreneurship in the future (Tiwari et al., 2017). Authors like Kuratko and Morris (2018) stated that students with practical and theoretical knowledge overcome the difficulties in starting a business and also help to develop entrepreneurial mindset. Consequently, a more favorable ATEE is significantly influences a heightened eagerness to establish a new online venture. Various empirical studies has approved the connection between ATE and the intentions to start a business (Amofah et al., 2020; Esfandiar et al., 2019; Gultom, 2020; Vamvaka et al., 2020). Building upon the insights gleaned from the preceding literature review, this study formulates the hypotheses as follow:

H18. *ATEE have positive impact on EEI.*

H19. *Relationship between PRI and EEI is mediated by ATEE.*

H20. *Relationship between IOL and EEI is mediated by ATEE.*

H21. Relationship between AHI and EEI is mediated by ATEE.

2.7.3 Perceived Behavioral Control (PBC)

Esfandiar et al. (2019) stated that PBC refers to an individual's internal desire to start his own business; due to its favorable financial and social outcomes which significantly influence on his entrepreneurial intentions. Many, researches have established that an individual's emotional intelligence is closely tied to their inclination to embark on entrepreneurial endeavors (Abou Chakra & Al Jardali, 2023; Otache et al., 2021). Additionally, encouragement toward starting a business from external environment significantly influence on individual PBC's likelihood; to initiate and develop positive attitudes towards such ventures which is a reliable determinant of entrepreneurial intentions (Bazan et al., 2019). Moreover, TPB suggests that financial benefits from a venture positively impact on individual's perceived behavior toward entrepreneurship (Krueger Jr et al., 2000). Authors like Bazzy et al. (2018); Ali and Yousuf (2019) have stated that PBC is pivotal for developing EEI and have significant influence on EEI in Pakistan. Furthermore, Otache et al. (2021) have stated that PBC positively influence on entrepreneurial intentions among students. Therefore, we proposed following hypotheses on the stance of above literature:

***H22**. Perceived behavioral control (PBC) has a positive impact on social media users' attitude toward e-entrepreneurship (ATEE).*

***H23**. EEI is positively impacted by PBC.*

***H24**. Relationship between PRI and EEI is mediated by PBC.*

***H25**. Relationship between IOL and EEI is mediated by PBC.*

***H26**. Relationship between AHI and EEI is mediated by PBC.*

2.8 Research Framework

Today, various types of Influencers due to their popularity, technological advancements, parasocial relationships, and attitude homophily; play an effective role as mentors, leaders and ideals in the development of human capital and economic activities (Auter & Palmgreen, 2000; Casaló et al., 2020; Sokolova & Kefi, 2020). All of these key constructs are already developed by the researchers and significantly approved as reliable measures to evaluate the influence of influencers attributes on social media users' e-entrepreneurial intentions. Social media is also a reliable source which facilitates this relationship (Leftheriotis & Giannakos, 2014). Additionally, Social Learning Theory (SLT) and Norms Activation Theory also support this idea theoretically. Moreover, TPB's factors mediating role in the model is also justified by the literature for this study (Amofah et al., 2020; Boubker et al., 2021) In line with the above arguments, the research frame work is developed as illustrated in model 1:

2.9 Research Model

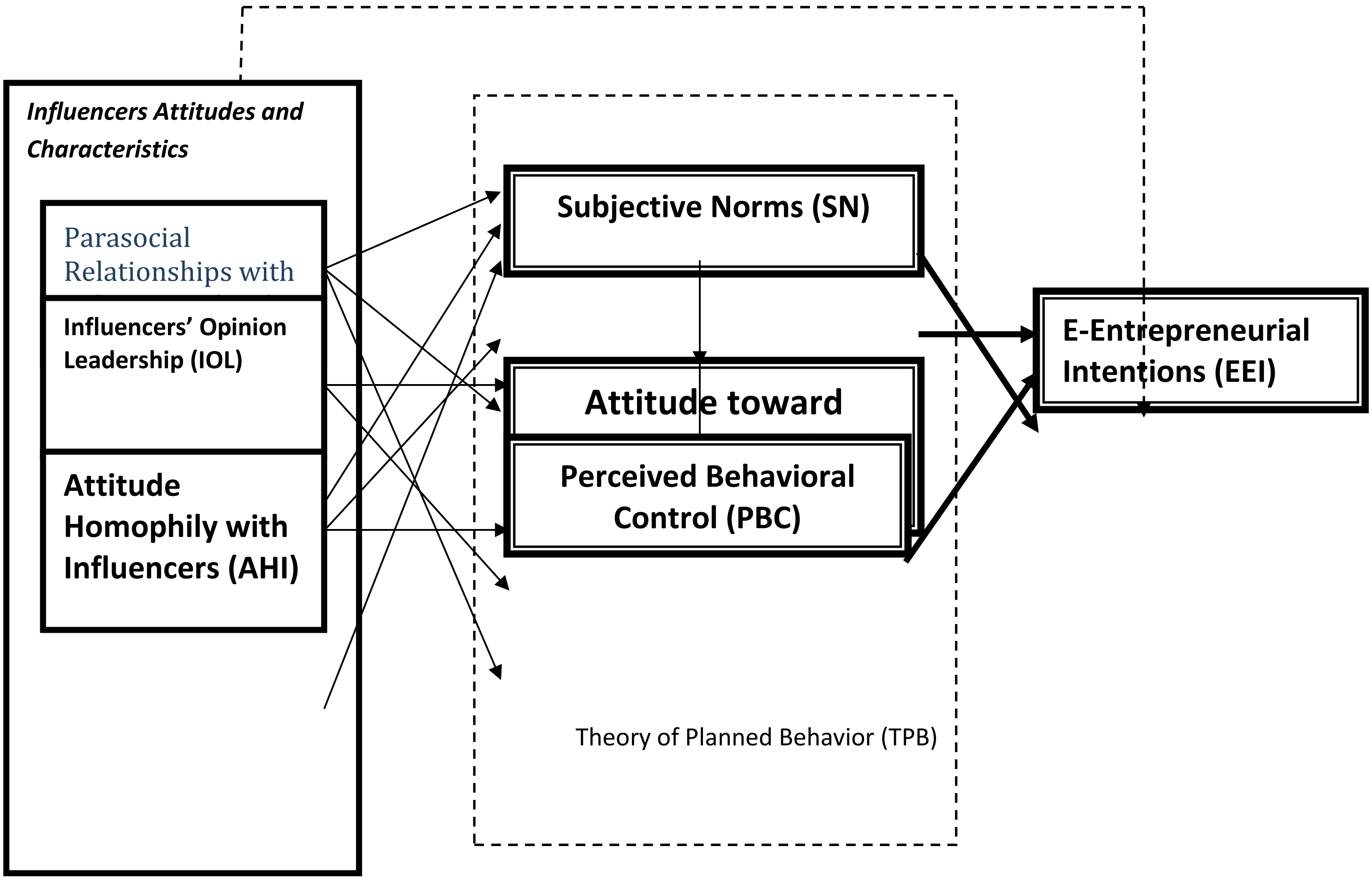

Fig 1: Research Framework

3. Methodology

3.1 Research Philosophy

Research philosophy also known as research paradigm defined as the researchers beliefs about how to do a research are called research paradigms (Rahi & Ghani, 2016; Rahi et al., 2020). Research paradigm are like a basic set of principles and assumptions on how to solve a problems by conducting a research (Rahi, 2017; Rahi et al., 2023). Moreover, research apardigms are classified into four categories such as positivist, interpretive, advocacy/participatory and pragmatism paradigms (Rahi, 2017, 2023a). For this study, positivist paradigm is the best approach because positivists believe that true knowledge can only achieve through observations and experiments (Rahi, 2023b)).

Additionally, followers of positivist paradigm also call it the Scientific method, empirical method, and quantitative research and also suggest it as a best approach for social and behavioral sciences (F. Alnaser, M. Ghani, S. Rahi, M. Mansour, & H. Abed, 2017; Hirschheim, 1985; Rahi, 2015). Therefore, Positivism paradigm is the best approach for this study as it is a way of thinking where researchers can use numeric information and facts for their analysis. People who follow Positivism believe that there's a constant truth that could be find from an objective point of view. According to Levin (1988), Positivists think that truth can be seen and observed without any bias. As, this study is explanatory in nature thus; it will measures the relationship by employing scientific methods under positivist paradigm.

3.2 Research Approach

In this study, deductive level of theory approach will be used for empirical testing of hypotheses developed on the base of TPB, to see how different constructs are connected (Woiceshyn & Daellenbach, 2018). Whereas, when researchers already have a theory that is proven by the researchers, they use the deductive approach to test that theory under different assumptions (Collis & Hussey, 2009). As, this study is proposed to test the mediating role of TPB and direct relationship between constructs thus; deductive approach is the best suitable approach for this study.

3.3 Research Methods

Under positivist paradigm the purpose is to test the assumptions by collecting data objectively through close-ended questionnaire. In this study, we're using quantitative method to collect primary data because this approach is beneficial for descriptive and inferential statistical analysis of data acquire through close-ended questionnaire. Moreover, this research aims to explore cause and effect relationships and address specific questions, focusing on a thorough analysis of benefits (Given, 2008). Authors like Creswell et al. (2007) emphasize the importance of collecting fresh data aligned with the research problem from a large population, while Tashakkori and Creswell (2007) highlight that the quantitative approach, focusing on objectives and measuring data through actions and opinions, is ideal for describing rather than just interpreting data. Hence, for this study, the quantitative method is considered as the best approach for data collection and measurement.

3.4 Target Population and Sampling Technique

The target population refers to all the individuals and items one aims to comprehend, and the sampling process involves dividing them into segments (Creswell et al., 2007; Hair et al., 2007). For this research, the target population is all social media users including millennial and gen z in Pakistan. Sampling in this context, entails selecting a subset of units from the dataset to gauge their beliefs, attitudes, and characteristics (J.F. Hair, 2003). Non-probability sampling approach will be employed to collect data in which likelihood of being selected is not confirmed for each unit (Hair et al., 2007). As, Rahi (2017) stated that convenience sampling involves collecting data from a readily available and easily accessible population. Given the constraints of this research, we will opt for the convenience sampling approach, as it is cost-effective and more feasible than probability sampling, which isn't possible due to a lack of control over the respondent list of all social media users.

3.5 Instrument Development

A close-ended survey questionnaire will be used to collect data on millennial and gen z beliefs and attitudes about influencers' attributes and EEI. Therefore, this study will employs close-questionnaire and five-point Likert Scale will be used to measure the beliefs and attitudes, with instruments adopted and adapted from an existing scale developed by researchers, eliminating the necessity for creating a new scale (Rahi, 2017). The items for influencer attributes (PRI, AHI, and IOL), Theory of Planned Behavior factors (ATEE, PSN, and PBC) and e-entrepreneurial intensions (EEI) are adopted from the following studies define in the table below. We will modify certain scales by adding or removing items to align them more closely with our research goals, and for collecting data the key constructs, we will employ scales that have been validated in academic literature are as follow:

Items to measure Independent Variables:

Independent Variable Constructs	Scale Rating	Author(s)
Influencers' Opinion Leadership (IOL)	Likert scale (5 points, 7 items)	(Casaló et al., 2020)
Parasocial Relationship with Influencers (PRI)	Likert scale (5 points, 10 items)	(Rubin & Perse, 1987)
Attitude Homophily with Influencers (AHI)	Likert scale (5 points, 4 items)	(Lou & Kim, 2019)

Source: *Created by author on the base of previous studies.*

Items to measure Dependent and Mediating Variables:

Dependent Variable Constructs	Scale Rating	Author(s)
E-Entrepreneurial Intentions	Likert scale (5 points, 4 items)	(Lai & To, 2020)
Mediating Variable Constructs	**Scale Rating**	**Author(s)**
Subjective Norms	Likert scale (5 points, 4 items)	(Autio et al., 2001)

Perceived Behavioral Control	Likert scale (5 points, 4 items)	(Autio et al., 2001)
Attitude Towards Entrepreneurship	Likert scale (5 points, 6 items)	(Amofah et al., 2020; Boubker et al., 2021; Kolvereid & Moen, 1997)

Source: *Created by author on the base of previous researches.*

3.6 Pre Test

To review the complete questionnaire help will be taken from one academic professor and one famous but approachable influencer (either micro, macro or entrepreneurial). The purpose to take review from them is to reduce ambiguity in the instrument and to bring easiness for the social media users to understand what they are being asked (Kashif et al., 2016).

3.7 Pilot Test

At this stage a pilot test will be run by selecting 50 respondents randomly who are using social media. In order to identify any ambiguity in items, length of the questionnaire and time to fill it by establishing validity and reliability in this dataset. Because this is an important test before actual analysis and it will help in appropriate data collection (Sekaran, 2000).

4. Expected Outcomes

The findings of this study will indicate how individuals develop e-entrepreneurial skills using social media through influencers, offering valuable insights for practitioners to engage individuals with entrepreneurial abilities by leveraging influencers in their strategies. In light of the importance of imparting entrepreneurial skills to millennials and Gen Z for economic growth, various researchers, including Westhead and Storey (1996), have emphasized the need to explore innovative methods. Moreover, negative empirical impact of entrepreneurial training is also determined on entrepreneurial performance and activities. Additionally, from the past two decades, researchers are exploring novel approaches to foster the acquisition of entrepreneurial skills. Therefore, this study aims to examine the influence of social media influencers in promoting entrepreneurial skills among users, predominantly comprising millennials and Gen Z.

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Examining The Impact of Corporate Social Responsibility Towards Corporate Image and Sustainable Purchase Intention

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Abstract:

The purpose of this study is to investigate influence of corporate social responsibility on corporate image and consumer sustainable purchase intention. In this study dimensions of corporate social responsibility are taken as predictor factors to measure corporate image and sustainable purchase intention. In addition to that moderating effect of culture is conceptualized between corporate image and sustainable purchase intention. The research model is developed in such a way that the dimensions of CSR have shown direct impact on corporate image and sustainable purchase intention. This study targets consumer of fashion industry in Pakistan and therefore convenience sampling approach will be used. Data will be collected through survey questionnaire. Moreover, sample size will be selected by using prior power analysis. To test the relationship between latent variable the partial least square based structural equation model (PLS-SEM) approach will be used. A large number of studies are directed towards the corporate social responsibility and corporate image but the literature on sustainable purchase intention is limited. Therefore, this study is unique and contributes to body of knowledge and examines factors which boost corporate image and enhance sustainable purchase intention.

Keywords: Dimensions of corporate social responsibility; corporate image; sustainable purchase intention; culture

Paper Type: Conceptual Full length paper

1. Introduction

The purpose of this study is to investigate the influence of corporate social responsibility on corporate image and sustainable purchase intention. How consumers identify the CSR activities and how these activities effect on corporate image. How corporate economic, legal, ethical and discretionary responsibilities directly influence on corporate image. Corporate image has a direct relation with sustainable purchase intention while culture plays a role of moderator between the both. It is important to understand what factors play their crucial role to influence the sustainable purchase intention? These factors can be evaluation of product price, satisfaction of customers and motivating factors which includes culture, beliefs and values of consumer society. These factors can directly or indirectly impact the consumer behavior to make sustainable purchase decision. For understanding consumer behavior current study shed light on the importance of culture and its influence on sustainable purchase intention. To bridge this gap, current study examines the role of CSR activities to create a good corporate image and its influence on sustainable purchase intention with moderator. The primary objectives of this research are:

1. To measure the impact of economic responsibilities of corporation on “corporate image”
2. To measure the impact of legal responsibilities of corporation on “corporate image”
3. To measure the impact of ethical responsibilities of corporation on “corporate image”
4. To measure the impact of discretionary responsibilities of corporation on “corporate image”
5. To measure the impact of corporate image on “sustainable purchase intention”
6. To examining the moderating effect of “culture” between “corporate image” and “sustainable purchase intention”

2. Literature Review

For any type of research, theoretical background contains high weightage. Corporate social responsibility (CSR) is disputed enthusiastically through academics and executives across business functions. Multinational firms spend a lot of money to manage their CSR programs that helps them to accomplish the corporate social performance. It is crucial to manage the CSR program as it affects intangible assets of corporate such as their reputation, identity as well as their image. On the other hand, consumers have become more conscious about sustainability as they are increasingly aware of environmental problem we are facing such as global warming, fresh water scarcity and ozone depletion. This paper has worked on to know the relationship between the corporate image and sustainable purchase intention. Why and when consumers shows their willingness to make their purchases sustainable. With reference to the setting of theoretical framework, dimensions of corporate social responsibility has been discussed first.

2.1 Economic Responsibility

Economic responsibilities embrace the duty to please customers with items that are of excellent value and the need to provide enough returns for investors. Economic activities prioritize boosting a company's revenue and support the growth of the economy as a whole (Kim, Song, Lee, & Lee, 2017). Windsor (2001) suspected that to achieve the other responsibilities, economic responsibility should not be neglected. Corporation that provide goods and services at reasonable prices, remunerate their employees, enhance investors value and care for collaborators can satisfy the economic responsibilities to society (Carroll, 1979). Firms exercise economic responsibilities to maximize earning per share, enhance productivity and to maintain competitive position / rivalry in market (Carroll, 1991) and such firms have significant impact on corporate image. Crane, Matten, Glozer, and Spence (2019) stated that interaction of corporate with its stakeholders has an impact on the economy. With high involvement of corporate in economic responsibility, corporate image also increases.

H1: *Corporate economic responsibility has direct impact on corporate image.*

2.2 Corporate Legal Responsibility

Legal responsibilities of corporation while accomplishing their economic duties are to sustain law and follow rules. Legal activities are concern with laws as well as rules and regulation of society. Schwartz and Carroll (2003) stated that is a type of social agreement between society and corporation. Laws are important but firm faces a lot of issues and laws cannot address all those issues due to inadequacy. Firm should follow the laws set by government which includes environmental protection and tax payments. However, a firm accomplishes its economic activities by enduring the legislation. A firm should at least meet the minimum requirement by offering goods and services that conform to laws and regulations of country (Carroll, 1991) as this create more trust and image. However, on the basis of above concept we proposed the hypothesis

H2: *Corporate legal responsibility has direct impact on corporate image.*

2.3 Corporate Ethical Responsibility

Ethical responsibilities are expected to follow by firm even if they have not been mentioned into law. The norms and values of a society are linked to ethical behavior. Morality, fairness and security are concerned by all participants of a company including their customers, employees or shareholders (Sen & Bhattacharya, 2001). Creyer (1997) revealed that customers are willing to pay high price for those goods and services offered by such firms whose they expect that their business functions are based on ethics. Ethical norms embraced by society must be administered by firm who strive for achieving the ethical responsibility to enhance their customer satisfaction and to build their image. With reference to above study following hypothesis is suggested.

H3: *Corporate ethical responsibility has direct impact on corporate image.*

2.4 Corporate Discretionary Responsibility

Financial or non-financial contribution by a firm for betterment of society represents the discretionary responsibility. In response to social and community expectations that firms are good corporate citizens, discretionary duties are activities or policies that support humanity and charitable causes. A business that voluntarily donates to charity contributes its profits to the community through funding initiatives for youth and community development (Pinkston & Carroll, 1996). Society wants business personnel should contribute funds to charity cause. To make the community a better place to live, corporate discretionary responsibility supports (Visser, 2008).

H4: *Corporate discretionary responsibility has direct impact on corporate image.*

2.5 Corporate Image

In 1950s, notion of corporate image (CI) was presented. The common opinion that public has about a company is known as corporate image (Barich & Kotler, 1991) (Dichter, 1985). Mazzarol (1998) indicated that corporate image is a measuring instrument to encourage the customer to contact with a corporation. The positive causal relationship between CSR and CI has been accompanied by abundant studies.

It is suggested by (Vanhamme, Lindgreen, Reast, & Van Popering, 2012) that CSR assist a satisfactory corporate image. Brown and Dacin (1997), Macchion et al. (2018) and Da Giau et al. (2016) determined the positive impact of CSR on consumer’s evaluation regarding company as well as its product. However, to manifest a positive and influential corporate image CSR is a significant tool (Andreassen & Lindestad, 1998) , (Hart & Rosenberger III, 2004).

2.6 Sustainable Purchase Intention

Awareness of sustainability among consumers has increased. In context of sustainability we deal with ethical issues which focus on question how individual ought to live and perform, social issues elaborated by (Antonetti & Maklan, 2014) (Bray, Johns, & Kilburn, 2011) as well as environmental issues discussed by (Jung, Kim, & Oh, 2016) (Singh, Iglesias, & Batista-Foguet, 2012) (Wesley, Lee, & Kim, 2012). Wee et al. (2014) recommended that purchase of environmentally sustainable product is a result of perception of consumer regarding sustainable product that impact their behavioral intention. Corporate image mitigate the ambiguity in making purchase decision because it helps consumer to acquire a better awareness of products presented by corporations. Few researcher focused on sustainable purchase intention for example (Barber, Kuo, Bishop, & Goodman Jr, 2012) (Kumar, 2012) (Paul, Modi, & Patel, 2016) (Mei, Ling, & Piew, 2012) (Maichum, Parichatnon, & Peng, 2016) stated that purchase intention of sustainable product lead by environmental knowledge. Literature review on relationship between corporate image and sustainable purchase intention (SPI) is limited. However, to bridge this gap we focused on influence of CI on SPI.

H5: *Corporate image has direct impact on sustainable purchase intention*

2.7 Moderating effect of Culture

Globalization has gradually created more standardized market where large number of consumers exists with different geographical location and diverse cultural background that share same preferences stated by (Levitt, 1983). Suh and Kwon (2002) revels that consumers attitudes, value and preference varies from culture to culture and diversity of culture affect behavior of consumers (Aaker, 2000). Some researchers have found that culture has impact on consumer's purchase intention. However, the behavior of consumer varies from culture to culture. For example, based on different cultural background consumer preferences and their behavior change like some consumer are more conscious about their personal preferences for brand and they are more concern about intrinsic attributes such as quality of product (Reykowski, 1994) while few consumers focused on extrinsic attributes of products like price, brand etc (Belk, 1988).

H6: *Culture has a moderating effect on corporate image and sustainable purchase intention.*

3. Research Methodology

3.1 Research Paradigm

The concept of paradigm is projected by (Kuhn, 2012) that is aligned with theory and research where followers of a field of research and investigators are guided by shared ideas and notions. Research paradigms help to address the research problems and to direct research (Samar Rahi, 2016; S Rahi, 2016). Paradigm are of four types that are positivist paradigm, interpretive paradigm, advocacy or participatory and the last one is pragmatism paradigm (Alnaser, Ghani, Rahi, Mansour, & Abed, 2017). Positivist paradigm have different name such as scientific method, quantitative research and empirical method. In our study we will use this paradigm. In this paradigm the knowledge is reveled from observations and experiments are believed by followers (Abd Ghani, Rahi, Yasin, & Alnaser, 2017). This paradigm can be used in social sciences in a better way (Hirschheim, 1985).

3.2 Study Level

There are two level of study/ theory i.e inductive and deductive. This study is based on deductive level as we are not generating new theory (Samar Rahi, Abd.Ghani, & Hafaz Ngah, 2019). The theory is already generated previously by different researchers we are just testing a theory by collecting new data from respondent (Samar Rahi, Alnaser, & Abd Ghani, 2019; Samar Rahi, Othman Mansour Majeed, Alghizzawi, & Alnaser Feras, 2019). For this we are using questionnaire to collect and apply statistical test to observe findings.

3.3 Research Methods

3.3.1 Qualitative Research Method

Qualitative research method is used to observe or interpret the environment to gather in-depth knowledge to build a new theory. In this method, researchers analyses the non-numerical data as they focus on person's feeling and emotions. In our study we will not use this approach as we are not developing new theory our focus in on testing the existing theory.

3.3.2 Quantitative Research Method

In our study, quantitative research method will be used rather qualitative method because qualitative technique is used to develop a theory (Samar Rahi, Alghizzawi, & Ngah, 2022). In our study, instead of developing new theory our focus is on testing existing theory. Quantitative method used by positivists. In this approach we collect fresh data from large population and analyses the data by using statistical tools (Samar Rahi, 2017; Samar Rahi & Abd. Ghani, 2019a; S Rahi, Ghani, & Ngah, 2018).

3.4 Research Design

In research design, empirical data is used to answer the research question by collecting and interpreting the data in systematic order. So, for this research we used the following steps. First of all, area of research was selected and chose the topic accordingly that filtered by supervisor's instructions (Samar Rahi & Abd.Ghani, 2019). After extensive review of literature we came to know that number of studies was conducted to check the impact of these variables but sustainable purchase intention and moderating role of culture was not discussed in this context (Samar Rahi & Abd. Ghani, 2019b). Moreover, data was collected and statistical tests were applied to analyses data. Furthermore, results and findings were presented and suggestions were made for corporation to make their strategies and activities better to enhance their image and achieve sustainability (Samar Rahi & Abd. Ghani, 2019c). Finally, conclusion was drawn and references were also generated.

3.5 Population and Sampling

Population is an entire group and its representative part is known as sample. Sample size was selected by using the prior power analysis (G-Power Analysis)(Samar Rahi, 2022, 2023b; Samar Rahi, Othman Mansour, Alharafsheh, & Alghizzawi, 2021). We cannot examine the whole population due to some constraints however we select the representative part of population (Samar Rahi, 2023a; Samar Rahi, Ghani, & Ngah, 2019). Population of study is consumer of fashion industry of Pakistan. Sampling technique was selected based on type of research. There are two types of researches one is probability sampling technique and other is non-probability sampling technique. Sub type of non- probability sampling is used which is convenient sampling as they are easily accessible to collect data and supported by prior studies (Mi Alnaser, Rahi, Alghizzawi, & Ngah, 2023; Samar Rahi, 2023b)

4. Expected Outcome

Corporate social responsibilities positively affect the corporate image. When corporate are involve in high economic, legal, ethical and discretionary activities they show positive inclined toward corporate image. On the other hand, corporate image also positively associated with sustainable purchase intention. When image of corporation is good in customer eye they prefer to buy more products again and again from that corporate. Here, culture plays a role of moderator between corporate image and sustainable purchase intention. As consumer of strong cultural background are more intended towards sustainable purchase.

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Investigating Factors Impact Consumer Behavioral Intention to Continue Use of Banking Services

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Abstract:

The aim of this research is to investigate how Perceived Quality (PEQ), Brand Awareness (BAW), Brand Emotional Attachment (BEA), Risk aversion (RAV), Brand Association (BAA), and Social Responsibility Impact Brand Love (BRL) in the context of banking. Second, this study investigates the influence of Brand Loyalty towards the Intention to Continue use of Banking Services (INB) with the moderating impact of Brand Trust (BTR). Data will be collected from existing customers of Islamic banks in Pakistan using a structured questionnaire. Around 200 to 250 questionnaires will be distributed among customer to take their opinions. Then responses will be further analyzed and hypotheses will go through testing by structural equation modeling techniques using SPSS and Smart pls. Previously, few studies have been conducted on this topic. Therefore, this research will make an addition to the existing knowledge and will explore how perceived quality, brand awareness, brand association, brand emotional attachment, risk aversion, and social responsibility enhance Brand Love.

Keywords: Brand Emotional Attachment; Brand Association; Perceived Quality; Brand Awareness; Risk aversion; Social Responsibility; Brand Love; Brand Trust; Intention to Continue use of Banking Services

1. Introduction

The target of this research is to study first, how the independent variable Perceived Quality (PEQ) positively influences Brand Love (BRL). How Brand Awareness (BAW) positively influences Brand Love (BRL). Brand Association (BAA) has how much impact on Brand Love (BRL). It also tests the positive impact of Brand Emotional Attachment (BEA) on Brand Love (BRL). Risk aversion (RAV) effects on Brand Love (BRL) will also be investigated. It also tests whether Social Responsibility (SRE) positively changes Brand Love (BRL) or not. Second, this study also investigates the influence of brand loyalty on the intention to continue the use of banking services considering the moderating influence of Brand Trust (BTR). There has been little research almost rare on this topic in which the behavioral intention of consumers to continue using banking services has been tested. This study does not regard the initial adoption of banking services by the customers but it will investigate the continued use of banking services. This study seeks to explore the multifaceted factors influencing consumers' behavioral intention in banking services, emphasizing the moderating effect of Brand Trust (BTR). By testing the interplay between Perceived Quality (PEQ), Brand Awareness (BAW), Brand Association (BAA), Brand Emotional Attachment (BEA), Risk aversion (RAV), Social Responsibility (SRE), and Brand Love (BRL) and further Brand Love (BRL) to continue the use of banking service with the moderating influence of Brand Trust (BTR), we got a clear understanding of those dynamics which lead customer's decisions to be consistent in use bank services can be achieved. The purchasing intention has a main position in marketing studies, taking the attention of scholars. It's not just academics; practitioners in the banking sector also dig into understanding the purchasing intentions of customers to use it further as a means to shape both existing and upcoming products or services. This purchasing intention of customers serves as a guiding compass for marketers, helping them in making their decisions related to current and new products. They can do market segmentation. They can make promotional strategies and policies accordingly (Dam, 2020). Such an investigation not only enriches our theoretical grasp of consumer behavior in the banking sector but also helps in practical implementation for banking institutions in making strategies to enrich Brand Trust (BTR) but also helpful in consistent consumer engagement. The main purpose of this research is to investigate:

1. How the Perceived Quality (PEQ) of bank customers has positively impacted Brand Love (BRL).
2. How Brand Awareness (BAW) of bank customers has a positive influence on Brand Love (BRL).
3. How Brand Association (BAA) of bank customers has a positive influence on Brand Love (BRL).

4. How Brand Emotional Attachment (BEA) with a bank has a positive influence on Brand Love (BRL).
5. Why Risk aversion (RAV) of bank customers has a positive influence on Brand Love (BRL)
6. Whether Social Responsibility (SRE) positively influences Brand Love (BRL) and Intention to Continue use of Banking Services (INB).
7. How Brand Love (BRL) of bank customers has a positive impact on and Intention to Continue use of Banking Services (INB).
8. How much is the moderating impact of Brand Trust (BTR) on the relation between Brand Love (BRL) and Intention to Continue use of Banking Services (INB).

2. Literature Review and Hypotheses

The theoretical foundation holds significant importance in all kinds of research. A study lacks depth and richness without a strong theoretical framework. Developing and maintaining customer loyalty and continuous purchasing behavior has increasingly become a strategic requirement in the banking sector in recent decades. Within the literature, consumer loyalty and continuous purchasing behavior hold a central position and is closely linked to a company's continuity and profitability. We can use it as a predictor of future purchasing behavior. Discussions in previous marketing literature have discussed the concept of customer loyalty and purchasing behavior. It can be explained as a dedication by customers to purchase again and again a specific product or service. Loyal customers also recommend their preferred service provider to others. Therefore, at its core, customer loyalty and continuous purchasing behavior involve favorable attitudes, again and again purchasing, and advocacy to others.

2.1 Perceived Quality (PEQ) and Brand Love (BRL)

The primary factor influencing consumer behavior in all industries is Perceived Quality (PEQ). We can also consider it as a behavior of consumers that arises when consumers compare their expectations regarding bank services with actual performance by the banks. We can say that it can be an assessment by consumers regarding the success of a product (Junaid & Hussain, 2016). The concept of service quality can also be explained as a comparison of expected service levels with the actual perceptions of performance. we can also consider it as an overall impression of service (Omar et al., 2009). Consumers' perceptions can be very helpful for bankers in understanding their buying behavior. Previous research shows that there is a positive association between customer perceived Quality (PEQ) and customer satisfaction. This connection, as a result, contributes to Brand Trust (BTR) and brand loyalty (Junaid & Hussain, 2016). Different characteristics associated with the brand, attributes of consumers, and the relation between them may have an influence on the formation of brand affection and love. In a nutshell, the Perceived Quality (PEQ) of banking services has the capacity to act as a means for the cultivation of Brand Love (BRL) in the banking sector (Junaid & Hussain, 2016).

Therefore, we may hypothesize that
H1: Perceived Quality (PEQ) of bank customers has a positive impact on Brand Love (BRL).

2.2 Brand Awareness (BAW) and Brand Love (BRL)

Brand Awareness (BAW) is an aspect of brand knowledge or we can say that it is a component of brand knowledge. It can refer to the consumer's competence to acknowledge and recall a brand in different situations, with the help of a brand picture in their mind.(Ambolau, 2013; Çelik, 2022) It can also be explained as the ability of the consumer to recognize and remember the primary brand in a certain product category that comes to mind and then attach that brand to the product category. Brand Awareness (BAW) also arises when a consumer assesses and makes a comparison of a specific brand with its competitors like a customer compares a specific bank with its competitors. (Çelik, 2022) If we look from the consumer's perspective, Brand Awareness (BAW) plays an important role as a direct influencer on both brand loyalty and Brand Love (BRL) and all this is applicable in the banking sector. In addition, Brand Awareness (BAW) is a key factor that indirectly influences brand loyalty through Brand Love (BRL) acting as a mediator (Çelik, 2022).

Therefore, we may hypothesize that
H2: Brand Awareness (BAW) of bank customers has a positive impact on Brand Love (BRL).

2.3 Brand Association (BAA) and Brand Love (BRL)

Brand Association (BAA) can be defined as anything associated to a specific brand in our memory. (Till et al., 2011) Brand Association (BAA) refers to both positive and negative information residing in a customer's mind about a brand or a bank, this information is complicatedly linked to the node of memory in the brain. Functioning as a tool for information gathering. After information gathering Brand Association (BAA) plays a crucial role in executing brand differentiation and extension.(Sasmita & Suki, 2015) Essentially, any message encountered via Brand Association (BAA) becomes connect with brand name in the recall of consumer and shapes the imageof the brand (Sasmita & Suki, 2015). If the intensity of Brand Association (BAA) is high within a product, it will directly correlate with its memorability and the consumer's loyalty to the brand. If the intensity of Brand Association (BAA) is high, the result will be higher memorability and brand loyalty.(Sasmita & Suki, 2015) According to previous studies, there is a conceptual linkage between Brand Association (BAA) and Brand Love (BRL). There is a relationship that exists between brand equity dimensions (such as brand loyalty, Brand Association, Perceived Quality, brand loyalty and Brand Awareness), along with Brand Trust (BTR), and Brand Love (BRL). Brand Love (BRL) and Brand Trust (BTR) are considered to be the cognitive outcomes of the brand equity dimensions, as proposed by previous researchers. After all this discussion we can draw the conclusion that Brand Love (BRL) and Brand Trust (BTR) of bank customers can be viewed as results from the various dimensions of brand equity.(Madadi et al., 2021)

Therefore, we may hypothesize that

H3: Brand Association (BAA) of bank customers has a positive impact on Brand Love (BRL).

2.4 Brand Emotional Attachment (BEA) and Brand Love (BRL)

Attachment identified as a fundamental human need, is characterized by a connection filled with emotions with a specific target between an individual and a particular entity. Emotional bonds can be formed by individuals with both other individuals and objects. In the context of marketing, research suggests that attachment is a construct that links customers with a brand, broadening the scope from interpersonal and personal-object connections toward customer-brand connections. Within this marketing context, individuals can make and sustain emotionally charged connections with brands and banks, including different sentiments such as affection with a brand, passion with any brand, and a sense of connection with a specific brand or bank.(Vahdat et al., 2020) Emotional attachment is a psychological state of feeling in which a customer is connected or bonded with a bank. Good brands maintain an emotional bond with their target audience. It is the result of long-term association between banks and customers shaped by the quality of service experiences over time. It is the result of banks' marketing efforts (Levy & Hino, 2016). All these things apply in banks too. Existing literature suggests that in the initial phases of a customer-brand or customer-bank relationship, in the case of a bank, a bank is marked as a satisfied bank by the consumer. With the passage of time satisfaction arises, and make customers emotionaly attached with the bank as a result of positive consumer experiences. These emotional states are making consumers of banks passionate. Make bank or bank irreplaceable for customers. Customers experience anxiety at the thought of separation from the bank (Ghorbanzadeh & Rahehagh, 2021). Finally, the bank becomes a love for customers (Ghorbanzadeh & Rahehagh, 2021).

Therefore, we may hypothesize that

H4: Brand Emotional Attachment (BEA) with a bank has a positive impact on Brand Love (BRL).

2.5 Risk aversion (RAV) and Brand Love (BRL)

Risk aversion (RAV) can be explained as our preference of selecting certain outcomes rather than those outcomes which are based on probabilities. It can be an attitude of taking only those risks that remains relatively stable and constant in different situations (Mandrik & Bao, 2005). People vary in their capacities to take risks within a specific situation. Termed as an individual trait, this basic stance towards risk is referred to as Risk aversion (RAV)(Mandrik & Bao, 2005; Matzler et al., 2008). Researcher in relationship marketing propose that one of the most commonly used strategy by the consumers to become loyal to a brand to minimize the perceived risk (Matzler et al., 2008). Brand loyalty is not directly linked to the Risk aversion (RAV). Researcher highlight that risk-averse consumers tend to show higher levels of brand affectionas as well as brand trust. After that brand trust along with brand affection, then causes the brand loyalty.Then both brand trust and brand affection act as mediators (Matzler et al., 2008). According to previous research Brand love significantly predicts brand loyalty and it is an antecedent for brand loyalty. We can say that initially customer falls in love with a brand and then as a result of Brand Love (BRL) there is brand loyalty (Cuong, 2020) (Çelik, 2022).It also be applied in banking sector.

Therefore, we may hypothesize that
H5: Risk aversion (RAV) of bank customer has a positive influence on Brand Love (BRL).

2.6 Social Responsibility (SRE) and Brand Love (BRL)

Social Responsibility (SRE) means companies take special care of not only their shareholders but aloso consider the welfare of other stakeholders (Hofman & Newman, 2014). A prevalent example social responsibilty is is cause-related marketing , where a company said that if anyone purchase his product or services then company promise to donate to a specific sum to a nonprofit or social cause. And company keep doing with each purchase of its products or services (Nan & Heo, 2007). Previous research has concentrated on how consumers generally react to Social Responsibility (SRE). Researchers explore various consumer responses, how they perceive and feel about the company, what are their preceptions regarding brand and product.Many nonprofit organization also engage in social responsibilty or cause-related marketing campaigns. All these examined by researchers. Surveys and interviews were the primary methods used for this kind of researches. Findings suggest that consumer attitudes toward companies engaging in social responsibilty or cause-related marketing campaigns tend to be favorable .Consumers often view these companies as socially responsible.

Moreover, A company's efforts in Social Responsibility (SRE) positively impact consumers willingness to buy its products (Nan & Heo, 2007). These activities might be serve as drivers of Brand Love (BRL). And have a positive influence on fostering Brand Love (BRL). This conceptual relation also applied on banks and their customers.

Therefore, we may hypothesize that

H6: Social Responsibility (SRE) has a positive influence on Brand Love (BRL) and intention to continue use of brand.

2.7 Brand Love (BRL) and intention to continue use of service

In previous years, notable attention provided to the concept of Brand Love (BRL) by the practitioners and academician Several studies have concentrated on on specifying the factors that lead to the outcomes or antecedents resulting from Brand Love (BRL)(Madadi et al., 2021). Brand Love (BRL) can be defiend as the level of delightful dependence that a pleased customer feels toward a particular brand. Studies indicate that if we investigate consumers' experience of Brand Love (BRL) along with interpersonal love, Brand Love (BRL) is most accurately portrayed as an outstanding concept including various thoughts, feelings, and actions that consumers arrange into a mental model(Madadi et al., 2021). These dimensions not only encompass the brand attachment but also include the other things which are more than brand attachment and and self–brand connections. Therefore, following this definition, this study regards Brand Love (BRL) as a prototype, a not clearly understood concept that comprises multiple cognitive and emotional facets(Madadi et al., 2021). The bond between consumers and a beloved brand very deep, it is more than a simple affection. The attachment is very strong that. The brand becomes irreplaceable. And individuals experience hardship when they are unable to access it for a longer period. Consequences of Brand Love (BRL) including positive impact on consumere brand loyalty, actively participation in brand community, positive worde of mouth, willingness to pay greater price and brand commiment (Albert & Merunka, 2013). Having establish that we can say Brand Love (BRL) with a bank has positive influence towards the Intention to Continue use of Banking Services (INB).

Therefore, we may hypothesize that,

H7: Brand Love (BRL) of bank customers has a positive impact on and Intention to Continue use of Banking Services (INB).

2.8 Moderating effect of Brand Trust (BTR)

Brand Trust (BTR) plays a important role in making successful marketing . In the context of brand-customer or bank-customer relationships, trust embodies consumers' perceptions regarding a brand's reliabilityof a brand, its honesty, and altruism (Albert & Merunka, 2013). This study defined Brand Trust (BTR) as the favorable experience a consumer has with a particular brand. Coupled with their confidence in the brand's performance. Accordingly, a strong reliance on a brand creates loyalty, deeper commitment and positive attitudes. This trust is a important element contributing to the development of Brand Love (BRL). Brand Trust (BTR) arise when a consumer has overall satisafaction with a specific brand. Therefore Brand Trust (BTR) encompassing both past experience as well as future experiencesand it is an antecedent to formation of Brand Love (BRL) (Madadi et al., 2021). Research suggest that as consumers develop greater trust in a specific brand, and cutomers will start repurchasing the brand, initiating a Certain scholars suggested that as consumers develop greater trust in a specific brand, it is more likely that repurchasing will occur, customer initiating to prefer a brand on other. Earlier studies have shown that Brand Trust (BTR) serves as a predictor for brand preference. Additionally, There is a connection between Brand Trust (BTR) and the intention to make a purchase. As Brand Trust (BTR) grows, the volume of purchases also increases. Previous research has consistently confirmed the positive impact of Brand Trust (BTR) on purchase intention(Dam, 2020). Having establish that we can say Brand Trust (BTR) play an important roll as a moderator between brand love and Intention to Continue use of Banking Services (INB).

Therefore, we propose the following hypotheses:

H8: Brand Trust (BTR) has moderating impact on the relation between Brand Love (BRL) and intention to continue use of brand.

3. Research Methodology

3.1 Research Paradigm

A paradigm is described as a fundamental group of beliefs held collectively by scientists. A set of understandings. Problem-solving approaches that shaping our perspective about the world, and affecting how we conduct our inquiries. This paradigm advocate that genuine knowledge is achievable only when we use observation as our and experimentation to produce knowledge. Therefore, Positivists typically favor the scientific method as a means to generate knowledge. (Rahi, 2017). This study has adopted the positivist paradigm as its framework.

3.2 Study Level

Only two levels of theory exist. One of them is empirical level employing a deductive theory approach abstract level which employing an inductive theory approach, and the subsequent abstract level which employing an inductive theory approach (Rahi, 2017). This study falls under deductive level. As we are testing the existing theories which already established. Instead we are inductively start developing new theories. This approach involves testing an existing theory. By gathering new data from respondents.then we analyzing it by using various statistical tests.

3.3 Research Methods

3.3.1 Qualitative Method

The qualitative method get in-depth insights on a specific topic. Focusing on individual perspectives. This approach values the emotions and sentiments of individuals and consider the individual as representative of a whole group (Rahi et al., 2023). This method used for envoirmental context. Often individuals overlooked in quantitative methods. It is commonly employed by those embracing interpretive methodologies.(Rahi, 2017).

3.3.2 Quantitative Method

The quantitative method, based on the positivist paradigm is a scientific approach. Quantitative method that emphasizes collecting new data from a large population related to the research problem (Rahi, 2023). This data subsequently analyzing. However, it tends to overlook individual emotions and overlook individual feelings. It also ignore the environmental context. Likewise, there's been an argument stating that the quantitative strategy relies on objectivity, emphasizing on opinions and focusing on actions. This emphasis helpout researchers in describing data rather than interpreting it (Rahi, 2017). The study employs the quantitative method, focusing on examining a theory which already exist. Using new statistical tools. Avoiding the development of new theories.

3.4 Research Design

Research strategy involves the systematic gathering of data. Then interpretation It.And all this process guided by specific objectives (Rahi, 2017). In this specific research, the author followed a research strategy outlined as follows: Initially, an area of interest was identified. This topic selected for in-depth investigation and it need to be investigate. Then topic remain go through refinement based on guidance from the research supervisor. This involved conducting an extensive review of the literature, exploring numerous studies examining how independent variables influence the dependent variable.. Following the data collection, an analysis aligned with the research questions and study objectives was conducted. Subsequently, the results derived from applying statistical tests were discussed. The study's outcomes and findings were presented, accompanied by recommendations for banks to enhance their customer Intention to Continue use of Banking Services (INB) and how banks encouraged their customer to be loyal. A conclusion was drawn based on the study's findings. Finally, a comprehensive list of references was compiled at the end to cite the materials anlyzed and argued in the study.

3.5 Population and sampling

The population include all individuals or items that researchers aim to understand, while sampling involves choosing a portion of this population for study. Sampling is the method of selecting a units from a dataset to anlyze their characteristics, their beliefs, and attitudes of the individuals.Various rationales support sampling, such as speedly data collection, enhanced result accuracy, and cost-effectiveness (Rahi, 2022a, 2022b). A smaller population population can draw conclusions or inferences about a larger population. The choice of sampling method is contingent upon the nature of the research study (Rahi, 2017). For this study population will be the customer of all islamic banks. While two primary sampling categories are probability and non-probability techniques, this study employed convenience sampling. Convenience sampling refers to the collection of data from a easily accessible population for the researcher. It is cost-effective, but it may face criticism due to potential selection bias.

4. Expected Outcome

Possible outcomes may be as follows:

1. Perceived Quality (PEQ) of bank customers has positively impacted Brand Love (BRL).

2. Brand Awareness (BAW) of bank customers has a positive influence on Brand Love (BRL).

3. Brand Association (BAA) of bank customers has a positive influence on Brand Love (BRL).

4. Brand Emotional Attachment (BEA) with a bank has a positive influence on Brand Love (BRL).

5. Risk aversion (RAV) of bank customers has) positively influences Brand Love (BRL)

6. Social Responsibility (SRE) has a positive impact on Brand Love (BRL) and intention to continue use of the brand.

7. Brand Love (BRL) of bank customers has a positive impact on and Intention to Continue use of Banking Services (INB).

8. Brand Trust (BTR) has a moderating impact on the relation between Brand Love (BRL) and intention to continue use of brand.

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Understanding Factors Influence Consumer Attitude to Use Drone Enabled Food Serving Restaurants

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Abstract:

Due to technology innovation, the restaurant business has significantly improved during the past ten years. The competition in hospitality industry restaurants are now relying innovation and novelty in food delivery services. Therefore, current study investigates factors which impact consumer intention to adopt drone enabled food serving restaurants. It is conceptualized that attitude positively influences customer behavioral intentions backing by perceived innovativeness and consumer motivation. The study will be carried out using the positivist paradigm, and responses will be gathered regarding variables that impact consumer attitude and behavioral intention to utilize drone-based food serving restaurants. This research will use sample of 300 customers from restaurant restaurants. The survey questionnaire will be sent to respondents via email. Structural equation modeling will be used to compute components such as perceived innovativeness, functional consumer motivation, hedonic cognitive motivation, and social motivation for data analysis. This study is important since it discusses cutting-edge technology in food sector and looks at how consumers feel about using and accepting innovative food serving patterns.

Introduction

Technology breakthroughs over the last ten years have greatly enhanced how retail supply chains are organized. Using modern technologies to gain a significant competitive advantage in the hospitality industry has shown to be an effective strategy. During the course of the fourth technological revolution, drones have gained popularity. Numerous industries, including the agricultural sector, communication, mapping, and transportation, are using drones. Hardworking entrepreneurs are making this happen (Hwang, Cho, et al., 2019). Among many other modern technologies, drone-based food delivery services are growing in popularity. Prior to the introduction of drones, it was difficult to serve food on time to customers who had placed their orders. Drones have several benefits that people are starting to realize, like their affordability, versatility, and longevity. An important factor in influencing attitude and behavioral intention is a consumer's opinion of how innovative a product or service is. Perceived innovation has been found to be a critical component of efficient operations in the restaurant sector. The functional, hedonic, cognitive, and social aspects of motivation are thought to be the main determinants of customer attitude and behavior with relation to the desire to purchase new technology services. In this context, functional motivation has been identified as a critical determinant of attitude that influences consumers' behavioral intentions with respect to a particular technology. Consumers use new services for fun and excitement due to hedonic motivation, which encourages people to use technology to stimulate their senses. After weighing the benefits and drawbacks of a new technological product or service, individuals who possess a high degree of cognitive motivation are more likely to use it. Customers who wish to stand out in the social crowd tend to favor using cutting-edge technical goods and services. Building the study framework to support theory is a highly popular approach in research. In the context of modern technology, attitudes and behavioral intentions have been explained by the widely recognized social psychology theory known as the theory of planned behavior.

Advancements in technology have had an impact on both customer attitudes and food delivery systems. In order to deal with customer perceptions and behavioral intentions about drone base services, the concepts of perceived innovation and consumer motivation are applied. Investigations on drone restaurants reveal that while there lack many related to work drone base eateries in developing nations, there are lots in rich nations (Hwang, Kim, et al., 2021). The current research aims to explore the elements that impact consumers' attitudes towards using drone-enabled food service businesses.

Literature Review

Perceived innovativeness

In the context of contemporary innovation, research on perceived innovation has been ongoing (Chauhan et al., 2019). Recent studies have shown that perceived innovativeness is a crucial element of successful services in the restaurant industry. Experts in the restaurant and travel industries have recognized perceived innovativeness as a variable of significant importance (Jin et al., 2016; Wang et al., 2018). There is currently ongoing research on how innovative people perceive themselves in the context of technological breakthroughs (Chauhan et al., 2019; Rahi et al., 2023). The level of creativity and innovation believed to go beyond current capacity was described as perceived innovativeness (Lowe & Alpert, 2015). Another way to define consumer perceived innovativeness is the tendency to buy new products rather than adhering to traditional consumption patterns (Rašković et al., 2016). When new high-tech products exhibit high levels of innovation, consumers believe they are superior compared to older models, perceived innovation is therefore regarded as an essential part of contemporary marketing strategies (Hwang, Lee, et al., 2019). Consequently, it can be said that an individual's perception of their level of inventiveness has a big impact on their attitude. The existing research supports these relationships in the acceptability of technology by consumers (Mamun & Kim, 2018; Shams et al., 2015).

Hypothesis1. Perceive innovativeness is positively related to customer attitude.

Functional Motivation

Technological developments may promote more profitable company practices that lower labor costs by streamlining business procedures for industry specialists (Snead et al., 2018). People search for products that address consumption-related difficulties due to functional demands, numerous studies highlight useful aspects of using a product (Ozturk et al., 2016). Put differently, functional motivation encompasses attributes that are specific to tasks and useful (Hwang, Lee, et al., 2019). The functional capabilities of innovations serve as the driving force behind functional motivation, which prioritizes increased productivity and timely completion of tasks (Choe et al., 2021; Hwang, Kim, et al., 2021). In order to influence consumers' attitudes on new products and services, professionals should first focus on their functional motivations. Consumer behavior toward new technical products and services is influenced by functional motivation. A noticeable shift in mindset was observed along with functional engagement (Hwang, Choe, et al., 2021). Thus, if consumers believe the services are effective, they are a greater probability to regard the use of drone-delivered meals favorably. The significance of the functional aspect has been emphasized by technological study.

Hypothesis2. Functional motivation is positively related to customer attitude.

Hedonic Motivation

The concept of sensory behavior is linked to hedonic motivation (Han et al., 2018). Hedonic motivation is considered the most significant theoretical innovation. One of the main factors influencing someone's decision to adopt and use technology is hedonic motivation, or the happiness or enjoyment that one derives from utilizing it (Alalwan, 2018; Baabdullah et al., 2019). When selecting a new technology product or service, a consumer with a high degree of hedonic motivation is more inclined to prioritize enjoyment and excitement (Reinhardt & Gurtner, 2015). The results showed that hedonic motivation and attitude were significantly correlated. Applying the acceptance and exploitation of technology concept (Baabdullah, 2018). The adoption of particular technologies by users for their own enjoyment has been explained by hedonic incentives (Hamari & Keronen, 2016). People who are highly motivated by hedonic factors develop a trusting relationship with technological advances, which in turn boosts their trust in utilizing a specific type of technologies (Alalwan et al., 2015).

Hypothesis3. Hedonic motivation is positively related to customer attitude.

Cognitive Motivation

Cognitive motivation refers to the aspect of user innovation that stems from the want to learn and comprehend things (Caricati & Raimondi, 2015). Customers who are driven by the need for intellectual stimulation are referred to as cognitive (Hwang, Cho, et al., 2019). The truth is that those with a strong drive for cognitive motivation are more likely to embrace new technology (Hwang, Cho, et al., 2019). After assessing the benefits and drawbacks of a modern technical product or service, people with high cognitive motivation are far more willing to give it a try (Hwang, Cho, et al., 2019). Customers' cognitive motivation shapes their attitudes. They will carefully consider the advantages and disadvantages of using the service after studying its various features (Kapser & Abdelrahman, 2020).

Hypothesis 4.Cognitive motivation is positively related to customer attitude.

Social Motivation

Social motivation can be defined as the result of the interaction between social influence and social recognition (Wu & Chen, 2017). Social motivation is an aspect of consumer motivation that is motivated by the need to stand out. It is typically employed to predict an individual's social distinctiveness to have leadership, symbolism, or prominence (Caricati & Raimondi, 2015). Consumer perceptions of drone food delivery services will be shaped by the technology's social purpose. For example, people who use drone technology stand out from the crowd, become noticed by others, and/or become industry public intellectuals (Kapser & Abdelrahman, 2020). Companies that offer food services emphasize that they can set themselves apart from competitors by using drone delivery services, which results in a favorable attitude toward drone base restaurants (Hwang, Cho, et al., 2019).

Hypothesis5. Social motivation is positively related to customer attitude.

Theory of Planned Behavior

Popular theory from social psychology The Theory of Planned Behavior (TPB) has been applied to explain behavioral intentions in the setting of modern technologies (Yu et al., 2018). The theory of planned behavior builds on the concept of reasoned action by arguing that perceived behavioral control, or PBC, and subjective norms (SBN) influence conduct. Expectancy-value theory, or theory of planned behavior (TPB), is a widely used model of attitude-behavior relationships. It has had some success in predicting a variety of behaviors (Ajzen, 1991). Researchers frequently use the TPB to describe and analyze consumers' behavior intentions as well as to investigate how consumers use technology such as drones, e-services, and social robots for food delivery (Giger & Piçarra, 2017).

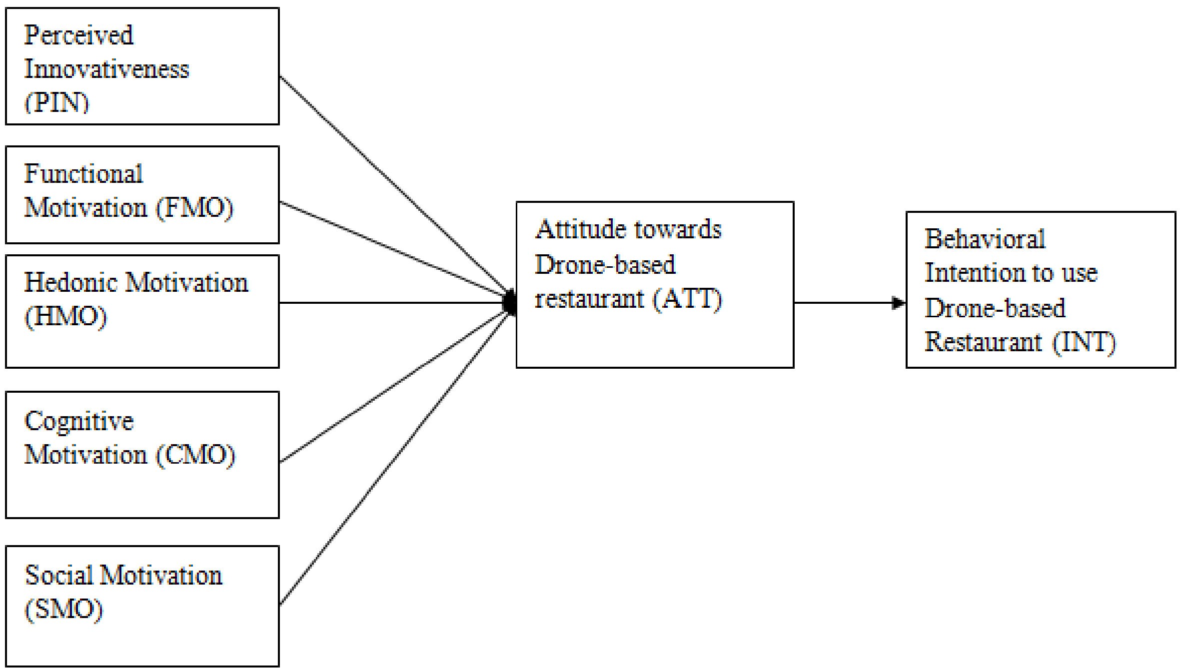
Hypothesis6. Subjective norms is positively related to customer attitude.

Hypothesis7. Perceive behavioural control is positively related to customer attitude.

Consumer attitude to use drone enabled food serving restaurants

Customer attitudes indicate whether they plan to use a specific invention in a positive or negative way (Cha, 2020). According to studies on the role that individual ingenuity played in adopting new technology, customer attitudes about this type of digital platform were greatly influenced by it. In the hotel and tourism industries, similar conclusions about the impact of consumer perceptions of innovativeness on views regarding new goods or services were reached (Frimpong et al., 2017). The functional component had a big impact on whether or not innovation was accepted. They found that users' inclination for innovation is driven by four factors: functional, hedonic, cognitive, and social motives (Hwang et al., 2020)

Research Model



Research Methodology

While there are numerous additional types of research methodology, the two most common types are quantitative and qualitative methods (Rahi, 2017; Rahi, Khan, et al., 2021b). A qualitative method is used to collect detailed information on a specific subject. The quantitative research technique ignores society's thoughts and emotions, which are just as important to understand, and instead implies that one individual speaks for the community's feelings and views (Rahi, 2017; Rahi, Othman Mansour, et al., 2021). This is a tactic that the explanatory culture commonly uses. This studywill be use a quantitative approach because it deals with an existing theory (Rahi, 2017; Rahi, Khan, et al., 2021a). Likert scale questions are frequently used in survey questionnaires to assess findings and attitudes (Buttle, 1996; Rahi, 2023b)(Rahi, 2017, 2023a; Rahi, Alnaser, et al., 2019). Likert scale questions will be used in questionnaires for surveys to assess findings and opinions (Rahi, Abd.Ghani, et al., 2019). A 7 point Likert scale will be used in this study for more accurate results. Sampling is the process of choosing a portion of the population for research purposes from among all the individuals or objects that one would like to understand in general (Rahi, 2017, 2022a; Rahi et al., 2022). The participants in the research will be hotel industry customers target the hospitality sector, in particular the hotel sector. Convenience sampling is employed since it is impractical to gather data from the entire population due to time and budgetary restrictions. 300 respondents will be approached through emails comprising survey questionnaire and this is consistent with prior studies (Rahi & Abd Ghani, 2021; Rahi, Alghizzawi, et al., 2021). The data will be evaluated systematically using the structural model. It is helpful to understand whether the structural model's theory is backed up by data (Rahi, 2022b; Urbach & Ahlemann, 2010).

Conclusion and recommendations

This study aims to ascertain the ways in which customers' perceptions regarding drone-based restaurants were influenced by perceived innovativeness and consumer motivation. The analysis findings will be shown that perceptions of innovation will a significant factor in determining consumer behaviour as like earlier research (Hwang, Cho, et al., 2019). It will be discovered that functional motivation significantly affects attitude. Consumers increasingly want thrills, pleasure, and entertainment when they will buy a service. The study's findings will demonstrate the importance of hedonic incentive in the use of drone delivery services for food. Studies will reveal a strong relationship between attitude and cognitive motivation in the context of drone food delivery services. Research will show that those with strong social motivations are more likely to have positive feelings regarding food delivered by drone (Hwang, Choe, et al., 2021). The intention of participants to use drone base food services will be positively correlated with their attitudes regarding these services (Kim & Hwang, 2020).

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Understanding Factors Motivate Users to Continue Use of M-Commerce: An Extended Expectation Conformation Model

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Abstract:

Research has less focused on the elements that influence mobile commerce's perceived value in developing nations, despite its impressive development and bright future. This study adds to the body of knowledge in marketing literature by examining technology in developing nations and focuses on expectation confirmation, perceived utility, accessibility, convenience, and e-trust. The moderating role of consumer innovativeness was also investigated. The sample of the current study was comprised of 200 participants (100 male and 100 female). The results revealed that expectation confirmation, perceived usefulness, accessibility, convenience and e-Trust influence on the customer satisfaction and customer satisfaction also impact on the m-commerce. Further it was also explored that consumer innovativeness moderate the relationship between customer satisfaction and m-commerce. The outcomes additionally demonstrated that value influences real usage favorably and is reinforced by consumer ingenuity.

Keywords: User Satisfaction, M- Commerce, Expectation Confirmation Model, Perceived Usefulness, Accessibility, Convenience, E-Trust, Consumer Innovativeness

1. Introduction

A new avenue for the promotion of services and applications has been made possible by the increase in mobile phone usage. Due to its lower setup costs and ability to provide consumers more freedom and convenience than landline phones, mobile has emerged as the primary method of communication. The newest thing going on in the globe is mobile. We can use these devices anytime, anyplace, and from a distance thanks to robust mobile apps and fast services made possible by m-commerce (Padmavathy et al., 2021).

Bill payment, telecommunication, and account review can all be done using the same portable device. M-commerce is e-commerce's sophisticated technology. In a nutshell, a platform where sales and purchases of products and services are made via mobile devices is known as mobile (M)-commerce. (Chong, 2013) Buyers and sellers, or customers or m-commerce users in this case, can easily execute purchasing and selling operations using their mobile devices anywhere at any time as long as there is an internet connection (Rana et al., 2019). There are more features available in m-commerce when compared to e-commerce in terms of accessibility and flexibility (Vărzaru & Bocean, 2021).

M-commerce has become more significant as a new consumer sales channel during COVID-19 (Vărzaru & Bocean, 2021). Suppost, the entire amount of money sold online in 2021 for consumer goods (food, electronics, clothing, and other commodities) was USD $3.85 trillion, a rise of more than half a trillion dollars (Datareportal.com, 2021). Remarkably, m-commerce accounted for 72.9% of total e-commerce revenues in 2021, up from 58.9% in 2017, suggesting that m-commerce is displacinIndonesians are "among the world's most ardent users of digital technologies," according to McKinsey & Company (2018). The ordinary Indonesian spends twice as much time on mobile devices as the average American, averaging two hours each day. With US$43 billion in revenue in 2021 in the global e-commerce market, Indonesia came in at number 10, above both Canada and India. Indonesia is seeing the fastest rate of growth in the global mobile commerce sector (e-Commerce sector Analysis: The e-Commerce market in Indonesia, 2021). Indonesia's e-commerce market expanded by 32% in 2021, which helped to fuel the 29% global growth rate As per Statista's 2021 Digital Market Outlook, there is a likelihood of growth in the Indonesian market in the future years. The cumulative annual growth rate (CAGR) is predicted to be 10% for the ensuing four years. (2021–2025). This drop implies a somewhat saturated market, particularly in light of the 32% increase in comparison to the previous year. Indonesia's 44% online penetration, or the percentage of Indonesians (Google Temasek Bain & Company, 2021).

While a considerable amount of research has been conducted on users' ongoing usage, only a small number of studies now consider the perspective of the user's adaptation (Bhattacherjee & Lin, 2015; Bölen & Özen, 2020; Marinković et al., 2020). (Jasperson et al.) Unexpectedly, there is no empirical evidence connecting adaptation to the user's intention to continue, despite the fact that user adaptation is significant and has a positive impact on continuing use (Beaudry & Pinsonneault, 2005; Bhattacherjee & Harris, 2009; Cooper & Zmud, 1990; Karahanna et al., 1999). (Nabavi et al., 2016; Amblov, 2018In 2015, Shaikh and Karjaluoto. Furthermore, some adaptive behaviours are unavoidable because an IT platform can never simply fit into a user context, even when user adaptation is required when utilising an IT-based service system (like mobile purchasing) (Leonard-Barton, 1988; Schmitz et al., 2016). Furthermore, there is a weak and inconsistent correlation between user trust and continuity intention (CI), the post-adoptive component, despite the fact that the relationship between user trust and the early phases of m-commerce development has been thoroughly researched (e.g., Chong et al., 2012; Liébana Cabanillas et al., 2017). (Qureshi et al., 2009; Sarkaret al., 2020; Hung et al., 2012).

This study looks into what motivates customers to keep using m-commerce and how to keep them satisfied, taking into account the significance of user retention. More specifically, "Which factors influence the user satisfaction to continue m-commerce?" is the major study question that this work aims to answer. We used an expectation confirmation model to provide an answer to this query (ECM, Bhattacherjee, 2001).

2. Theoretical Background and Hypothesis Development

2.1 Perceived Usefulness

Sense of Utility Perceived usefulness is the tendency for someone to use an application and believe that doing so will make him more productive (Davis, 1989).

For this variable, a total of six dimensions divided into two groups are:

1) Utility was composed of various elements.

a Complete tasks faster.

b. facilitates work

c. is helpful

d. raises productivity

2) An efficacy composed of dimensions

g. Increase efficacy

f. Boost my performance at work

2.2 Accessibility

The modern world is reliant on mobile devices more than ever. In the latter stages of a pandemic that has mostly resulted in lockdowns and frequent quarantines, the significance of "mobile" technology may appear paradoxical. Still, it's accurate. Since more and more business is conducted on smartphones and other mobile devices, a company's ability to conduct business on the go is essential to its success (Pro, 2023).

2.3 Convenience

Customers have traditionally chosen mobile commerce based in part on convenience, and they utilise it for various purposes (Kim et al., 2010). Time-place flexibility and this convenience are strongly associated concepts. Time convenience is best characterised by the evenings and in-season fresh fruits and vegetables. Customers have traditionally chosen mobile commerce based in part on convenience, and they utilise it for various purposes. Customers now value convenience more than ever, especially in light of the advancements in information and communication technology (ICT). To far, nonetheless, little research has been conducted to define its proper definition or examination in m-commerce.

2.4 e-Trust

Through mobile commerce, existing Internet sales channels can be extended into a more immediate and personalised mobile environment. Nonetheless, establishing confidence in mobile commerce remains one of the most difficult obstacles to ensuring its widespread adoption. The biggest long-term obstacle to both mobile and e-commerce is a lack of consumer trust (Keen, 1997). In business partnerships, trust is essential (Nah and Davis, 2002). Numerous academic fields, including social psychology and decision-making, have examined trust.

2.5 Satisfaction

M-commerce has the potential to increase consumer satisfaction, boost service quality, make buying safer and more pleasurable, and profit operators more According to San-Martin and Lopez-catalan (2013), user happiness is positively impacted by involvement, trust in m-commerce, and originality. M-commerce customers benefit greatly from greater flexibility and mobility in wireless communication technologies, but these technologies also come with security risks (Jamaluddin, N.D). Security and privacy risks are the two key difficulties with m-commerce. The degree of satisfaction, desire to use, and loyalty of Chinese users to m-commerce platforms are significantly influenced by their perceptions of the security of the site (Xu, 2013) According to San-Martin et al. (2015), customer happiness is also influenced by word-of-mouth. User loyalty is directly impacted by habits, perceived value, trust, and user happiness (Lin & Wang, 2006). According to Oliver (1999), user loyalty is the propensity of consumers to make recurrent purchases of goods and services while maintaining consistent emotional states, even in the face of shifting marketing strategies and fluctuating environmental impacts. Customised innovation influences consumers' intentions to keep using mobile commerce (Lu, 2014). Despite the rapid advancements in information technology, m-commerce has always faced the challenge of cultivating user loyalty. User mental health and self-awareness are key components of user pleasure. It is challenging to quantify customer happiness using precise indications due to its fuzziness and comprehensiveness, In addition, a variety of factors, both known and unknown, influence user satisfaction measurements. Such a study is particularly risky because, from a cognitive standpoint, m-commerce is still an unknown notion.

2.6 M-Commerce

M-Commerce is the abbreviation for mobile commerce. The word "m-commerce" refers to the buying and selling of products through wireless devices having an Internet connection, such as PDAs, mobile phones, and other portable gadgets. Thanks to M. Commerce, we can utilize this device remotely, at anytime, anywhere, and with strong mobile apps and fast services. Bill payment, telecommunication, and account review can all be done using the same portable device. A subcategory of e-commerce is m-commerce. We are no longer restricted by time or location, and we can access whenever we need to. It is the outcome of fusing omnipresent computing with electronic commerce, two rapidly developing phenomena. It offers new business options and is accessible online on any device, anywhere, at any time. "M-Commerce = Internet + Wireless + E-Commerce" In India, where mobile commerce is still in its infancy, its main applications include basic banking, ticket purchases, utility bill payments, and other transactions. Despite the vast range of transactions covered by m-commerce, they can all be divided into one of three categories:

2.6.1 Mobile shopping. This is essentially the same as online shopping, but you can do it using an Android or iPhone. These days, mobile-friendly websites, specialized shopping apps, and social networking platforms allow for mobile shopping.

2.6.2 Mobile banking. The features of mobile banking are similar to those of internet banking, except some transaction types might not be available on mobile devices. While some banks have begun testing the usage of Chabot's and messaging apps, mobile banking typically requires a specialized app**.**

2.6.3 Mobile payments. We have decided to go into deeper detail about each of the numerous and varied mobile payment alternatives in this article. Your exposure to and interest in mobile commerce as a business owner and Big Commerce user would primarily pertain to payments and shopping, which is the subject of the remainder of this article.

2.6.4 Mobile web payments. Using websites, this technology allows customers to make payments by entering their password and mobile number into a web page's mini browser. Once the password has been verified, the customer receives a text message from the partner bank. Lastly, the customer's bank account is immediately deducted for the payment after they send an SMS to confirm the bank (Padmavathy, 2021).

2.7 Consumer Innovativeness

It's becoming more crucial for marketers to comprehend how innovative their customers are (Gao et al., 2012), especially when it comes to the ever-evolving world of digital and mobile goods and services (Lu, 2014) Managers who want to strategically attract mobile phone users must have a thorough understanding of consumer innovativeness because it often determines how successful new technologies are. In 2014 Aroean as well as Michaelidou The impact of innovativeness on the adoption of new ideas and the purchasing of new products has been examined in earlier research. Research on mobile marketing (Agarwal & Prasad, 1998; Hirunyawipada & Paswan, 2006), attitudes towards mobile marketing (Gao et al., 2012), and adoption of mobile banking (Sulaiman et al., 2007 and its positive effects on the intention to continue in mobile commerce as well as the perceived utility (Lu, 2014). For example, Lewis et al. (2003) discovered that innovativeness increases perceptions of how usable and simple new technology is to use, while Rohm et al. (2012) shown that as consumers are inspired and educated by the creative ways of the marketing communication experience, their innovativeness has a beneficial impact on their attitudes towards mobile advertising.

According to Rogers' (2003) theory on the diffusion of innovations, people's unique innovativeness determines how they respond to novel concepts and items. The moderating influence of innovativeness under different conditions has been examined in earlier research Innovativeness was proven to have a favourable moderating influence between consumers in the case of mobile technology, for instance. Similarly, Li et al. (2015) examined the relationship between customers' readiness to accept new products and their uniqueness and the positive moderating influence of innovativeness. Citrin et al. (2000) observed that domain-specific consumer innovativeness increases the influence of internet usage on online buying, while Aldás-Manzano et al. (2009) discovered that customer innovativeness lessens the impact of risk perception on online banking usage.

2.8 Expectation Confirmation Model

Based on Oliver's 1980 Expectation-Confirmation Theory (ECT), Bhattacherjee (2001) created ECM and demonstrated its effectiveness in an online banking setting. In order to assess the CI, ECM looks at a user's happiness with the IT they have been adopting, as well as confirmation and perceived confirmation of expectations, as well as the perceived utility (PU) of an adopted IT (also known as post-adoptive beliefs). Oliver's ECT framework was used to study user satisfaction (SA) and how it affects consumers' decisions to repurchase goods or services. Oliver's ECT addressed all phases of the user's expectations, while Bhattacherjee's ECM only addressed post-usage expectations. This is the primary distinction between the two. In contrast to pre-adoptive acceptance models like the UTAUT

(Unified Theory of Acceptance and Use of Technology) (Venkatesh & Davis, 1989) and the Technology Acceptance Model (TAM) (Davis et al., 1989).

2.9 Hypothesis

H1. Satisfaction will increase when expectations are confirmed.

H2. Satisfaction will benefit from perceived usefulness.

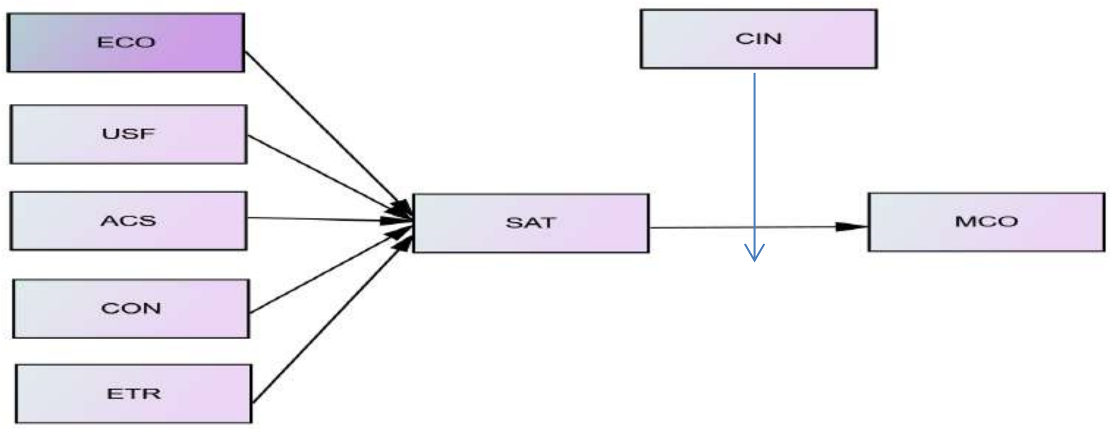
H3. A more accessible environment can boost contentment.

H4. A convenient environment will boost contentment.

H5. e-Trust will improve customer satisfaction.

H6. Commerce will benefit from customer satisfaction.

H7. The association between M. Commerce and customer happiness will be moderated by consumer innovativeness.



Research Model (Figure 1).

3. Methodology

3.1 Data Collection

200 mobile telephony consumers in Lahore, Pakistan—100 men and 100 women—provided the data for the analysis using smartphones. The participants' ages ranged from 18 to 50. To gather data, self-made questionnaires were used.

3.2 Statistical Analysis

Researchers tested our measurement and structural models using partial least squares (PLS) modelling. PLS was chosen for a number of reasons. Firstly It is believed that PLS structural equation modelling (PLS-SEM), which has few identification issues and lowers the residual variances of the endogenous structures, is a dependable technique (Hair et al., 2014). Second, previous research has demonstrated that consumer research data typically does not meet the multivariate normality criteria (Morgeson et al., 2015). More significantly, research from the past has revealed that both Pakistan and India have low levels of mobile readiness and similar adoption trends for m-commerce (Ashraf et al., 2017). Furthermore, it is believed that the two countries have cultural characteristics such as collectivism and a dislike of ambiguity (Hofstede, 2007).

3.3 Measurement Model

As advised by Hair et al. (2014), we employed a range of convergent and discriminant validity tests to assess the measurement model's quality Convergent validity was assessed using two methods: (1) individual item reliability; and (2) concept reliability. All average variance extracted (AVE) scores were higher beyond the recommended threshold, as Table 1 shows.50 (Larcker & Fornell, 1981). In a similar vein, all of the scales' composite reliability scores were significantly higher than the standard cutoff of.70, demonstrating the validity of our measurements. Two tests were performed in order to evaluate discriminant validity. We initially determined each item's loading on its own construct and cross-loading on all other constructs using the cross-loading approach (Chin, 1998). On the planned construct, each piece had a higher burden.

4. Discussion

With regard to developing economies, which has received little attention before? This study offers a model that clarifies how value is created in mobile commerce. The present corpus of information on international marketing in the context of mobile commerce is greatly expanded by this study. We contend that rather than using generic marketing strategies, marketers should base their strategies on the unique characteristics of emerging markets, in keeping with recent research in the field of strategic marketing. (Bang et al., 2016). Our findings show that every element that influences customer happiness and consumer satisfaction also influences m-commerce, including perceived utility, accessibility, ease of use, and e-trust. Furthermore, the hypothesis that consumer innovation mediates the correlation between m-commerce and customer satisfaction is also explored.

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Extending The Role of UTAUT Theory Towards Adoption of Service Robot in Banking

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Abstract:

This research is conducted for development of customer attitude towards service robots and service robot adoption in banking sector of Pakistan. The elements of Unified theory of acceptance and use of technology theory (UTAUT) with elements of Theory of planned behavior (TPB) are used as independent variables in this specific research. Customer innovativeness work as moderating variable. The model is used for research consists of four factors of UTAUT theory i.e. Performance expectancy (PE), Effort expectancy (EE), Social influence (SI) and Facilitating conditions (FC). All these have influence on Attitude towards service robot in banking sectors of Pakistan. Similarly, Theory of planned behavior (TPB) has two factors i.e. Subjective norms (SN) and Perceived behavioral control (PBC) also have a positive impact on Attitude towards service robot in Pakistan's banking sector. The main population for this specific research topic are the customer of banks and data will be gather through questionnaires. The questionnaires will be based on conveniences sampling approach. Structural Equation Modeling (SEM) approach will be applied for inferential analysis. Many researches have been completed which was based on service robot adoption in hotels, restaurants and other industries but no research is conducted on service robot adoption in banking sector using UTAUT theory and Theory planed behavior. So, the current research contributes toward service robot adoption in banking sector of Pakistan.

Keywords: UTAUT, PE, EE, SI, FC TPB, SEM, PBC, TRA, TAM

1-Introduction:

The improvement in technology help the robots to be utilized in the service industry (Jung, Quan et al. 2023). This improvement in technology is shocking in good sense. According to International Federation of Robotics 2017 automated technology growing at a rate of 20% in every year. And will take place half of the jobs in next 20 years (Belanche, Casaló et al. 2019). Robots are using in service sector like hotels and restaurants on large scale. Now, robots are using in Banks, many clients of Bank of America use a ‘Chabot’ named Erica to answer banking queries. An example of robot service in banking is ‘Nao’ a little human type teller that attend clients in the Bank of Tokyo (Belanche, Casaló et al. 2019). Past studies shows that the service linked jobs which deal customers is more than 90% will take place by service robots (McCartney and McCartney 2020). Different advisors of robots providing robotic services in the all over the world. Robot-advisors are currently having business of more than $880,000m, and are growing at the rate of 30 percent per-annum (Statista, 2019). Service robots give few benefits, for example, relentless working, being fast, consistency in work, and they can work on complexed information (Jung, Quan et al. 2023).

The key objectives of this specific research are:

1. To investigate different factors for development of attitude towards service robots in banking.
2. To inspect the robot service adoption in banking.
3. To investigate customer innovativeness towards service robot adoption.

2-Literature Review:

2.1-UTAUT Theory:

UTAUT theory comprises on different models of research named, theory of reasoned action, hybrid TAM, theory of planned behavior, motivational model, PC utilization, technology acceptance, innovation diffusion theory and social cognitive theory. Complete evaluation of previous models confirmed us about PE, EE, SI and FC has positive effect on consumers for adoption of specific technology (Rahi, Mansour et al. 2019).

2.1.1-Performance Expectancy (PE)

PE show us magnitude of a person's confidence and trust that he/she will get benefit in performance when using a new system (Gunawan, Sinaga et al. 2019). In our research, degree where an individual accepts that involving service robots in banking will assist client with getting benefits in performing banking tasks which build their attitude towards service robots adoption. Previously research scholar develop PE significantly effect on attitude towards service robot (Roh, Park et al. 2023).

The hypothesis of PE is as:

> H_1. PE will be significantly effect on attitude toward service robots in banking.

2.1.2-Effort Expectancy (EE)

EE is the easy access to technology motivate customer to use it (Jeon, Sung et al. 2020). Its origin has three constructs (1) ease of use, (2) complexity, and (3) perceived ease of use (Oh and Yoon 2014). In our research, if customer feel that service robots in banking is easy, then there will be more chances to build customer attitude toward service robots. Early research scholar show EE significantly effect on attitude towards service robot (Roh, Park et al. 2023). The hypothesis for EE is following

> H_2. EE will be positively influence on attitude toward service robots in banking.

2.1.3-Social Influence (SI)

SI show us magnitude at which anyone/ any person feel that someone else (friends or family) believes he/she should utilize the new system (Gunawan, Sinaga et al. 2019). This element is useful when use of technology is mandatory (Ayaz and Yanartaş 2020). In this study, a human is probably convinced by the person who is close to him/her and recognize by using of services of robots in banking is effective develop attitude toward service robots in banking. Previously research scholar develop SI significantly effect on attitude towards service robot (Roh, Park et al. 2023). Following is the hypothesis of SI

> H_3. SI has positive effect on attitude toward service robots in banking.

2.1.4-Facilitating Conditions (FC)

The amount for which any person thinks that organizational and technical framework is present to assist the use of the specific structure is called FC (Khalilzadeh, Ozturk et al. 2017). If technological infrastructure is not present then it will demotivate an individual to adopt new technology (Rahi, Mansour et al. 2019). In our research perspective, if customer have facilitating conditions then it will build attitude toward service robots in banking. Previously research scholar develop FC significantly effect on attitude towards service robot (Roh, Park et al. 2023). Faciltating conditions is hypothesized as

> H_4. Facilitating conditions will be significantly influence on attitude toward service robots in banking.

2.2-Theory of Planned Behavior (TPB):

According to (Ajzen 1991) TPB is enlarge form of theory of reasoned action (TRA). TPB consist of two main constructs perceived behavioral control (PBC) And subjective norms (SN) (Chan and Hon 2020).

2.2.1-Subjective Norms (SN)

SN are the social forces refers to anyone thinking for other people who are very close to him/her believe that he/she must perform specific action or must not perform a specific action (Ajzen 1991). For our perspective, social pressure of close friend, society and family members will build an individual attitude toward performing task through service robots in banking. Previously research scholar develop subjective norms significantly influence on attitude (Mohr and Kühl 2021).

Subjective Norms are hypothesized as

> H_5. Subjective Norms will be significantly influence on attitude toward service robots in banking.

2.2.2-Perceived Behavioral Control (PBC)

Perceived simplicity or difficulty in executing a specific behavior is referred to as PBC (Ajzen 1991). So, it represents that confidence of customers in their own potential to perform specific action/conduct (Chan and Hon 2020). In our perspective, simplicity of service robots will develop self-confidence in an individual to build attitude toward service robots in banking. Previously research scholar develop PBC significantly influence on attitude (Mohr and Kühl 2021).

Perceived behavioral control is hypothesized as:

> H_6. Perceived behavioral control will be significantly influence on attitude toward service robots in banking.

2.3-Attitude Towards Service Robot Adoption

Attitudes are identified as a sign, trust or believe, and worth of something, such as a person, experience, occurrence or a thing (Jung, Quan et al. 2023). According to past definitions, attitudes toward service robot is anyone behaviors and experiences for services of robots or information and data received about their services. For understanding the attitudes of customer and aim for adoption of service robot technology is a prime problem in every industry (Tussyadiah 2020). In our perspective, PE, EE, SE, FC, SN and PBC build attitude toward service robots. This attitude will help an individual to adopt service robots in banking. Previously, research scholar develop significant relationship between attitude toward service robots and adoption of service robots (Jung, Quan et al. 2023).

Attitude development of service robots and service robot adoption in banking is hypothesized as:

H7. Attitude toward service robots will be significantly influence on adoption of service robots in banking.

2.4-Customer innovativeness is use as moderator to adopt service robots in banking

Customer innovativeness is a human characteristic which is present in human behavior (Michalak and Bartkowiak 2021). Customer innovativeness is a dominant element in customer for adopting modern technological products (Jung, Quan et al. 2023). These customer innovative persons are more willing to buy modern technology products because they are not aware from risk (Fortes 2017). In our perspective, the customer who is innovative and easily use new technology is more willing to adopt service robots in banking. Previously different studies show significant relationship between customer innovativeness and attitude toward service robot (Jung, Quan et al. 2023).

Customer innovativeness is hypothesized as

H8. Customer innovativeness will be significantly influence on attitude toward service robots in banking.

3-Research Methodology:

3.1-Research Paradigm

The word 'paradigm' depict as fundamental combination of beliefs given by researchers, a bunch of arrangements about how issues are to be solved, how we see the world and consequently approach for doing research (Rahi 2017). There are predominantly 4 paradigms that have been broadly utilized in research consists Positivism, Interpretive, Advocacy and Pragmatism (Rahi, Alnaser et al. 2019). In this study we are using positivist paradigm. According to positivist paradigm true knowledge can be acquired from perception and analysis (Lincoln, Lynham et al. 2011, Rahi, Abd Ghani et al. 2017).

3.2-Study/Theory Level

Study/theory levels which include two level i.e. Inductive level and deductive level (Rahi, Alnaser et al. 2019). It is a systemized concept in which we develop the connection between two or more ideas and variables (Rahi, Alnaser et al. 2019). This study is conducted under deductive level theory/study because theory has already generated and we will test the theory after collecting new data from population and evaluate the findings by using different tests of stats (Rahi 2017).

3.3-Research Methods:

There any many methods of research but quantitative and qualitative methods are the best (Rahi, Alnaser et al. 2019). These two methods are as follow.

3.3.1-Qualtiative Method

Qualitative method is utilized to gather the complete ingredients of a specific topic (Rahi 2017). This method address a solo person reflects the group feelings which are very important to explain. This concept is disregarded by the quantitative method (Rahi, Ghani et al. 2020). This method is utilized when researcher wants to evaluate a territory and establish a new theory (Tashakkori and Creswell 2007). We are not generating a new theory. Therefore, we are not using this method/concept in our study.

3.3.2-Quantitative Method

The roots of Quantitative method grow from positivist paradigm (Grinnell Jr and Unrau 2010). Quantitative method centers around new collection of data according to the problem, analyze the data and does not pay attention towards person's sentiments and feelings (Rahi 2017). In this study we applied quantitative method because we are inspecting an existing theory through applying new different tools of stats.

3.4-Research Design:

Research Design or Strategy characterizes procedure of gathering and evaluating the data with complete objective (Rahi 2017). Research design is the arrangement of how to answer the research questions that has been developed by researchers (Rahi, Alnaser et al. 2019). For this study, we used following design or strategy: Firstly, we select field of interest and select topic according to the area of interest. The topic was refined under further guidance of my research teacher. Then detail literature review was done. Many researches have been done on service robot adoption in hotels, restaurants and other industries as well but no research is done on service robot adoption in banking sector using UTAUT theory and Theory planed behavior. After the data collection, analysis will be generated on collected data according to the research questionnaire and develop different outcomes from data by applying tests of stats. Furthermore, we will write suggestions and recommendations for the banks for adopting service robots in the banks from finding or result of this research. We will draw a conclusion from the study. At last, we will add list of complete references of articles which was used in this study.

3.5-Sampling and Population:

Population specify all of the individuals and item that anyone wishes to understand. Sampling is most common way of choosing piece from population for testing and examination (Rahi, Ghani et al. 2019). Another definition, symbolic part from population is also called the sample. We cannot inspect entire population so we chose and select a piece from population due to these restrictions (Rahi, Alnaser et al. 2019). This kind of choice is additionally valuable to lessen the work weight and cost that would have been engaged with concentrating overall population (Rahi 2017). Population of this research is every customer of the banks who use the services of the banks. In others word services industry like banking sector is the main focus. Type of research help to use sampling technique (Rahi, Alnaser et al. 2019). Sampling consists of two parts i.e. non-probability sampling and probability sampling technique. In this research we used convenience sampling technique which is a further type from non-probability sampling technique. Convenience sampling characterizes the procedure of data gathering from population which is easily available and effective for researcher scholars

(Rahi 2017). Convenience sampling permit the researcher to take responses easily (Rahi, Alnaser et al. 2019).

4-Expected Outcome:

UTAUT theory is effects the attitude towards service robots which shows the PE, EE, SI and FC positively effects the attitude towards service robots in banking sector of Pakistan. TPB is effects the attitude towards service robots which shows SN and PBC positively effects the attitude towards service robots in banking sector of Pakistan. Attitude towards service robots positively affect the service robot adoption in banking sector of Pakistan which means positive attitude helps the customer to adopt service robots in banking sector of Pakistan. Customer innovativeness is a moderator which positively effects the service robot adoption in banking sector of Pakistan. It means more innovative customer will easily adopt service robots in banking sector of Pakistan.

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Impact of Behavioural Biases on Perceived Market Efficiency: Empirical Evidence from Pakistan Stock market

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Abstract

The aim of this study is to investigate the impact of behavioural biases on perceived market efficiency. The goal of the research is to pinpoint the behavioral elements that account for how individual investors make decisions about their investments in developing economies. The behavioral portfolio theory (Shefrin & Statman, 2000) serves as the foundation for this study. The overconfidence, self-attribution and optimism are behavioural biases that included in the current research paper. The study is significant for all investors, policy makers and investment advisors. Primary data has been collected through use of a well-designed questionnaire. Reliability test, Correlation and linear regression techniques are used in this study by SPSS 20.0. The study concluded that all three biases overconfidence, self-attribution and optimism have positive and significant effect on perceived market efficiency.

Keywords: Behavioural biases, Perceived market efficiency, Regression model, Correlation

Introduction:

Entrepreneurs are perceived as logical people who approach every financial choice with caution. Their actions have an impact on when they make assets purchases and sales, choice of portfolio, and financial choices (Barberis & Thaler, 2003; Statman, 2014; Thaler & Ganser, 2015, p. 358). However, when the world economy was rocked by the Financial Crisis of 2008, which originated in the USA and led to a global recession, anomalies in investor conduct were observed. The amount of trading and value of assets in markets for stocks are influenced by the frame of mind of investors (Tan & Tas,, 2019). Since human behavior is unpredictable and behavioral factors contribute to financial instabilities and inefficiencies, it is difficult to define logic in the real world (Tuyon & Ahmad, 2016). The news of the global economic downturn has an impact on investment plans and aids in estimating the finance sector's capacity to withstand shocks. The theories of finance are based on some assumptions. Thus, an intuitive system heavily governs people's thoughts and decision-making processes. It also relies on heuristics, which in some circumstances can result in systematic and recognized errors (Norman et al., 2017). Psychology is a science in which we study the behaviour and attitude of human beings. The behaviour and attitude of human beings will evaluate in current study by analyzing the self-control, optimism and overconfidence on decisions of investors. They base their choices on current events, historical patterns, and a few benchmarks (Kengatharan & Kengatharan, 2014). The purpose of study is to measure the impact of above three biases on perceived market efficiency, strength of relationship between above three and perceived market efficiency. EMH is the place where large amount of rational investor perform work for the purpose of maximizing his returns on his investment. In which all information is available for all investor in the market and no one can get more information for the prediction of future profits therefore no one can outperform in the market and it show that price are not predictable in efficient market. Market efficiency has two meaning first investor can't systematically beat the market and the second meaning is securely price are rational but finance accept the first meaning and reject the second meaning (Pompian 2006). Overconfidence bias effects the decisions of individuals as well as corporations. One of the psychological prejudices that has been studied the most is overconfidence (D'Acunto, 2015). Overconfident investors think that their abilities are better than other that's why they use to take quick decisions and trade actively. They under estimating the risk associated with his active investment strategy. These people totally take decisions on their own thinking therefore they show quick response on investment (Kyle & Wang 1997).

In behavioural finance optimistic individual's investor are defined as those who overestimate the chance of good outcomes and underestimate the chance of negative outcomes therefore leading to more risk taking behaviour in financial markets. Kahneman and Lovallo(1993). It was Kahneman and Tversky who introduced the concept of heuristics (1972). Heuristics are psychological shortcuts that allow for fast decision-making in the face of uncertainty. Although heuristics are easy to use, they can occasionally result in systematic errors (Tekce, Yılmaz, &

Bildik, 2016). Larsen and Shepperd (2001) optimistic bias is the propensity for people to report that they are less likely than others to experience negative events and more likely than others to experience positive events.

Self-attribution bias is a long standing concept in consumer research and refers to individuals' tendency to attribute successes to personal skills and failures to factors beyond their control Feather and Simon (1971). In other worlds we can say that Self-attribution bias occurs when people attribute successful outcomes (high returns) to their own skill but blame unsuccessful outcomes (low returns) on bad luck or outside factors.

In present most of the researcher perform work on behavioural biases. Overconfidence bias is widely discussed past few decades. Ko and Huang (2007) perform a study on overconfidence and information acquisition impact on market efficiency. Sembel (2011) Examine the overconfidence impact on excessive trading in stock market (Shah and Khurshid et. al. (2012) perform a work on overconfidence and perceived market efficiency. Most of researcher used one or two biases to check perceived market efficiency but, in this study, we measure three behavioural biases such as overconfidence, self-attribution and optimism to check the perceived market efficiency. The main objective of this research is to find out the "impact of overconfidence, self-attribution and optimism on market efficiency". In this study we use three behavioural biases such as overconfidence, self-attribution and optimism to check out the perceived market efficiency. In this research market efficiency is used as dependent variable and overconfidence self-attribution and optimism use as independent variables. Sub objective of this study is too derived from the main objective. Three sub objectives are discussed in this study;

1. Find out the relation between overconfidence and market efficiency.
2. Find out the relation between self-attribution and market efficiency.
3. Find out the relation between optimism and market efficiency.

Significance:

This study provides help to the behavioural finance students for the understanding of the overconfidence, self-attribution and optimism and what's its impact on investment decision in the stock market and what kind of factors influence the market efficiency. Moreover, this research also provides information about the relationship of three behavioural biases with perceived market efficiency. Furthermore, they provide guidance to the students to choose their research topic. This is also beneficial for the financial advisers to how they can give the knowledge to their investors about their investments. In last this research provides direction to the investors who are involved in the overconfidence bias, self-attribution bias and optimism bias.

Literature Review:

Dittrich and Gauth et.al. measure the overconfidence in individual decision making in stock market by two experiments, first one is only one-risky asset and next is two-risky assets are involved. One hundred forty-nine subjects participate in two experiments, 72 are contribute in experiment one and remaining are involved in experiment number two. Results of this research show that overconfident investor does not make correct decision and make the task more complex in cause of two-risky assets. Based on various conventional financial concepts and models, investors make decisions about their investments and calculate expected returns and risk (Arora and Kumari, 2015).

Shah and Raza et. al. examine the impact of overconfidence on market efficacy for this purpose they use the three dimension of overconfidence such as overestimation over-placement and over-precision questioner are used to collect the data four hundred four subjects participate in which and results show that irrational behaviour not the reason of decreasing the market efficacy and three dimension of overconfidence investor spend more time and recourse to collect information furthermore overconfident investor involve in active trading more over positive relation is prevail between market and overconfidence.

Bashir and Javed et.al.(2015) inspect the investor behaviour in financial decision making with respect of different biases such as overconfidence illusion of control loss aversion mental accounting conformation status quo and optimism questionnaire is use for data collection and different statistical test are applied for the measurement of this data and results show that overconfidence, illusion of control optimism and conformation bias influence the

decision of investor in stock market and remaining biases have no impact on decision making in which overall biases show that significant results. A positive correlation has been observed between overconfidence and investment decisions (Ullah, Ullah, & Rehman, 2017).

Sembel (2011) examine the overconfidence impact on excessive trading in stock market this is an experimental study and participant of this study are under graduate students, results of her study show that those people who are involve in higher overconfidence his investment level is high or excessive as compare to those peoples who have low overconfidence, excessive investment also decrease the profit of higher overconfident investor in contrast low overconfident investor earn high profit, and bad news about the market or stokes does not affect the trading level of overconfident investor but in cause of low overconfidence bad news decrease the trading level of investors in stock market. Overconfidence has the detrimental effect of pushing someone to make decisions that are more drastic than they ought to (Pikulina, Renneboog, & Tobler, 2017; Zacharakis & Shepherd, 2001).

ZAIANE (2013) conducted a study on Tunisian stock market to identify the overconfidence level of investors. Data is collected by questionnaire and experiments. Results show that the decision making of investors are always not depend on rationality or market efficiency, there are some biases that also affect the decision making of investors. Someone who is overconfident tends to favor risk (McCannon, Asaad, & Wilson, 2016). Because of their extremely supportive level of confidence, people with high levels of overconfidence tend to be more courageous when making financial choices and assigning funds to extremely dangerous assets.Investor of Tunisian are involved in overconfidence bias, actually they feel that they have full control on his investment therefore they involve in excessive trading, they use more information before investing in the stock market and overestimate the information or their abilities due to this reason overconfident investor feel that they have a full control over the market it also conclude that overconfident investor difficultly beat their peers.

Moore and Healy define the overconfidence by three ways such as overestimation over-placement and finally over-precision 82 subjects are participating in this study in the way of different quizzes these quizzes are divided in different topic every topic further divide in to three categories such as easy, medium and difficult task. Result of this experiment show that people in cause of difficult task overestimate their performance and think that his performance is bad as compare to others but in cause of easy task they underestimate their performance and think that his performance is good as compare to other. In his study over precision are more constant as compare to other categories of overconfidence and negative relation prevail between the first two types of over confidence.

Yeh and Yang conduct a study that is based on the agent artificial market to examine the overconfidence of different traders in the stock markets in which agent-based modelling framework are use. Result show that overconfidence creates high instability in the marker, prices are disturbed and quantity of trading is increase and these results are reliable with hypothetical work.

Ko and Huang found that irrationality is the part of individual investors does not make the market less efficient according to their model overconfidence improve the price quality under some circumstances. They also found that overconfidence can produce information attainment whose effect on price quality can dominate the mispricing caused by this bias. They further explained that overconfidence generally over rationality provided this bias is not very high because it introduces information into the market while having a less effect in generating mispricing. In addition, a market with high overconfidence can also have high price quality when private information is available.

Hsu and Shiu (2016) perform work on overconfidence and self-attribution in Taiwan stock market. For this purpose, they take 6993 investors that are bidding 77 IPO in Taiwan market for the period of five years. Self-attributed investors believe that bad luck is to blame for their losses and assign their earnings to their own abilities (Pompian, 2011).

When someone succeeds, they are typically inclined to take credit for it and place the blame on circumstances or outside sources when they give up in any area of life (Bradley, 1978; Dorn & Huberman, 2005; Mishra & Metilda, 2015). Results show that those investors who are regularly involved in bidding they can get lower return as compare to irregular investors further more regular investors little successful in their initial bid but later on return are gradually decrease and they also found that individual investor are bad in stock selection and institutional investor select a better stock for their investment. Overconfidence is greater than before by self-attribution explain difference between regular bidder and irregular bidder in the stock market.

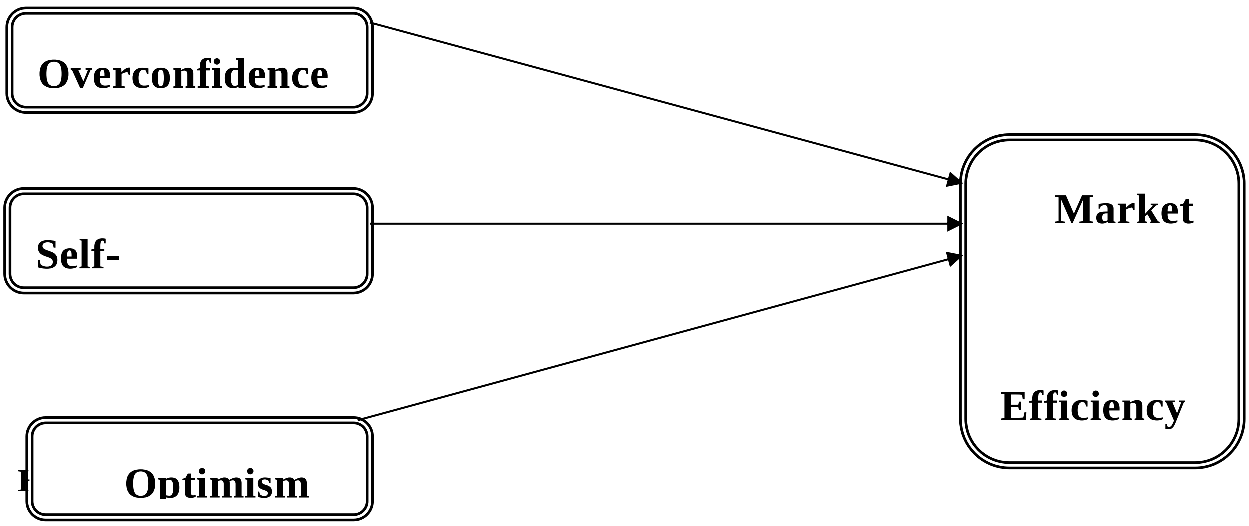
Hoffmann and Post (2013) perform work on self-attribution bias to test the investor’s financial decision making. For this motive researcher select 20000 brokerage clients randomly. Data is collected through an online survey moreover match this data with brokerage record of their clients. In this survey researcher find that investors give success acknowledgment to their personal skill and says that failure is due to outside or economic factors. They also find that there is a positive relation between self-attribution and individual investment return in addition individual investment return affect the self-attribution of investor and there is no effect on market return. Self-attribution bias also supports the investor’s overconfidence.

Balasuriya and Muradoglu et.al define three heuristic one is financial optimism, second is priori optimism and last is posterior optimism. For this purpose, 6 million observations are use from the British house hold panel, questioner is also use for data collection and this survey cover the period from 1991 to 2007. Demographic analysis of this study shows that optimistic, pessimistic and neutral participant have a significant different characteristic. Optimistic investors are younger and barrow more debts for their investment and they add high risk in their portfolio result also show that there is a significant positive relation with optimism and risk-taking behaviour and optimistic investor chose a risky portfolio for their investment in the market. Investor behavior has an impact on their financial decisions, which can cause them to make irrational choices (Akhtar, Thyagaraj, & Das, 2018; Chaffai & Medhioub, 2018).

Bennet and Selvam et.al. (2012) define individual investor optimism level investor attitude before investing in Indian stock market they also analyse those factors of investor behaviour that influence the market. In this research researcher use simple random sampling technique and 375investor are participate in which as sample. Data is collected by structure interview from investors that live in Tamil Nadu. 7 variables are use in this research out of which 6 as independent variable namely (Herd behaviour, Risk & Cost factor, Internet access, Macro economic factors, Performance & Confidence and Best game in town) and optimism is using as dependent variable. Results of this study show significant and positive relation with dependent variable and influence the optimism level of investor. Head behaviour, risk and cost factor have opposite relation with optimism.

Park and Konana et. al. Describe that investors seeks that information which they have previous beliefs and it leads to overconfidence and investment affected adversely. The high overconfidence investor is higher in their trading and there is no effect of bad news on overconfidence investor but the low overconfidence investor is low in their trading and bad news also affects their trading and earn significantly higher than high overconfidence investor.

Conceptual Framework:



H1 There is a positive and significant relation between overconfidence and perceived market efficiency.

H2 There is a positive and significant relation between self-attribution and perceived market efficiency.

H3 There is a positive and significant relation between optimism and perceived market efficiency.

Methodology:

Aim of the study is to recognize the effect of behavioural biases (overconfidence bias, optimism bias, and self-attribution bias) on perceived market efficiency. The target population of this study was Lahore Stock Exchange and 120 respondents were selected to collect data. Primary data was used in this study and a well-designed questionnaire was used to collect data. The questionnaire was consisting of two sections, 1st section consists of demographic variables and 2nd section consists of behavioural factors. Questionnaire consisted of 39 questions, 6 questions for demographic information, 12 used for overconfidence, 5 and 6 used for self-attribution and optimism respectively and rest of the 8 questions were used to collect data for market efficiency. All the questions of section 2 consist of 5-point Likert scale. The respondents express their answers from 1 to 5. 1 stand for strongly disagree and 5 means strongly agree.

SPSS 20.0 software was used to analyze the data. Descriptive analyses used to describe the respondent, Kolmogorov Smirnova Test used to measure the normality of variables, Pearson correlation and linear regression test use to measure the direction and strength of relationship between behavioural biases and perceived market efficiency.

Table: 1 Descriptive

Out of 120 respondents 108 were males and rest of 12 are females, in which 88 were married, 30 were un-married and 2 were widow. The age of 24 respondent was below 30, 84 respondents belong to age group 30-50 and other 12 were 50 +. Education level of 53 respondents was bachelor, 43 from inter, 18 from master and 6 from M.Phil. Majority of respondents in this study was self-employed that were 77, 38 were govt employed and only 5 were retired. 24 respondents monitor their stock daily, 43 monitor monthly, 39 monitor quarterly and rest of 11 and 3 monitor their stock semi-annually and annually respectively.

Table: 1

Table: 2 Reliability Test

	Behavioural biases	Cronbach Alpha	No of items
1	Overconfidence	0.736	12
2	Self-attribution	0.758	5
3	Optimism	0.687	6
4	Market efficiency	0.762	8
5	Overall reliability	0.919	31

Variables	Scale	Frequency	Percentage
Age	<30	24	20%
	30-50	84	70%
	50+	12	10%
Gender	Male	108	90%
	Female	12	10%
Marital status	Married	88	73.3%
	Un-married	30	25%
	Widow	2	1.7%
Qualification	M.phill	6	5%
	Master	18	15%
	Bachelor	53	44.2%
	Inter	43	35.8%
Occupation	Retired	5	4.2%
	Govt. employed	38	31.7%
	Self employed	77	64.2%
Monitoring stock	Daily	24	20%
	Monthly	43	35.8%
	Quarterly	39	32.5%
	Semi-annually	11	9.2%
	Annually	3	2.5%

Cronbach Alpha is used to measure the reliability of data. The results of table 2 shows that all variables Cronbach Alpha is greater than 0.5 i.e., overconfidence has o.736, self-attribution has 0.758, optimism has 0.687 and market efficiency has 0.762. The overall Cronbach Alpha is 0.919 that is also greater than 0.5 and it indicate that consistency of items from scale is higher.

Table: 3 Pearson Correlations

	Behavioural biases	Perceived Market Efficiency
1	Overconfidence	0.756**
2	Self-attribution	0.783**
3	Optimism	0.786**

** Correlation is significant at the 0.01 level.

The results of table 3 showed that Overconfidence, Self attribution and Optimism has positive correlation with perceived market efficiency at level 0.01. The values of overconfidence is o.756, self-attribution is o.783 and optimism is 0.786 indicate that the relationship is strong because all values are near to 1. It`s means that all above behavioural biases has significant and positive relationship with perceived market efficiency.

Linear regression model

The impact of behavioural biases on perceived market efficiency is calculated by a linear regression model. The following is model for this research paper.

$$Y = \alpha + \beta(overconfidence) + \beta 2(self\ attribution) + \beta 3(Optimism)$$

$$Y = 4.486 + .238(Overconfidence) + .355(Self\ attribution) + .414(Optimism)$$

Where

Y= Perceived Market Efficiency

α= constant

β= Co-efficient of overconfidence,

β2= co-efficient of self-attribution,

β3= co-efficient of optimism,

Table: 4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843a	.711	.704	2.47082

a. Predictors: (Constant), Optimism, Overconfidence, Self attribution

Table 4 show that 71.1% change in dependent variable is because of the independent variables. The 71.1% change in perceived market efficiency is due to three behavioural biases that are Overconfidence, self-attribution and optimism. Rest of 28.9% change in perceived market efficiency is predicted due to other variables that are not a part of that study. The R square is close to 1 so the model is good for prediction. The model is fit to predict market efficiency.

Table: 5 ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1745.293	3	581.764	95.294	.000[a]
Residual	708.174	116	6.105		
Total	2453.467	119			

a. Predictors: (Constant), Optimism, Overconfidence, Self attribution

b. Dependent Variable: Market efficiency

The 5th table of ANOVA shows that model is fit because the P-value is less than α.

It`s means that all independent variables have impact on dependent variable.

Table: 6 Coefficients

Mode	Un standardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error			

(Constant)	4.486	1.694		2.648	.009
Overconfidence	.238	.069	.279	3.445	.001
Self-attribution	.355	.106	.306	3.349	.001
Optimism	.414	.112	.332	3.695	.000

a. Dependent Variable: Market efficiency

Table 6 shows that all the independent variables have a significant role in change of perceived market efficiency. β= is rate of change in perceived market efficiency due to change of 0.238, 0.355, 0.414 in independent variables. The table 6 show that optimism has more influence on market efficiency rather than overconfidence and self-attribution. The P-value of overconfidence, self-attribution and optimism is less than α so we accept all three hypotheses of this study.

Findings

The findings of this research paper are that there is a positive and significant relationship between overconfidence, self-attribution and optimism with perceived market efficiency. Optimism has more effect on perceived market efficiency as compared to overconfidence and self-attribution and overconfidence have more impact on market efficiency as compare to self-attribution. The findings also showed that 1^{st}, 2^{nd} and 3^{rd} hypothesis are accepted as overconfidence, optimism and self-attribution have impact on perceived market efficiency. The overconfidence, self-attribution and optimism increase the market efficiency.

Conclusion

The main purpose of this study is to find out the impact of behavioural biases on perceived market efficiency. This study used three biases overconfidence, self-attribution and optimism. On the basis of results, this study concluded that overconfidence, self-attribution and optimism have great impact on market efficiency. Increase in all three biases increase the market efficiency.

Researcher used SPSS 20.0 to analyse the data but E. views and other software can also be applied, researcher has time constraint to collect data but there is an option for future researcher to add more proxies of behavioural biases on market efficiency.

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Alumni Relations and Equity Capital Costs

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Abstract:

Based on the sample of A-share markets in Shanghai and Shenzhen from 2007 to 2019, this paper researches whether the private information trading between auditors and company executives through alumni relations will affect the cost of equity capital. The results show that alumni relations significantly increase the cost of equity capital. Moreover, the relationship is more remarkable between auditors and core executives, audit engagement partner, and corporate executives, and alumni that graduated from the same year or major. From a dynamic perspective, the cost of equity capital is higher when the alumni relationship between auditors and executives changes from nonexistence to existence. The paper deeply digs into the way that alumni relations influence the cost of equity capital in the view of social relations, which assists investors to make reasonable decisions.
Keywords: Alumni relations; Private information; Equity capital costs; Perceived risk of investors

1. Introduction

High-quality development is the main goal of the 14th Five-year Plan in China, and we will build dynamic, innovative, and competitive emerging economies by pursuing coordinated innovation, green opening-up, and innovation (Hepburn et al., 2021). Therefore, how to achieve higher quality, more effective and more sustainable development of the economic system is the top priority of the current and future economic work (Saini et al., 2022). Improving the efficiency of macro financial resource allocation and micro enterprise capital allocation is an important basis for achieving high-quality development. The support of sufficient credit resources plays a key role in China's high-quality development (Zhang and Lucey, 2022), and the improvement of enterprise financing is conducive to the realization of transformation and upgrading (Bai et al., 2018).

However, in recent years, China has been faced with serious structural problems in credit resource allocation and the economic downturn caused by the current COVID-19 outbreak, which has made financing difficult and expensive for enterprises increasingly serious (Wong et al., 2022). This is a major obstacle to China's high-quality development. Therefore, how to effectively improve the ability of enterprises to obtain credit resources and the efficiency of credit resources allocation is a major problem that needs to be solved in China's economic structural reform in the new era.

The cost of equity capital is a factor that affects the scale of the capital market and the allocation efficiency of credit resources, and is also a measure of the investor's expected return on invested capital. Its size is closely related to various risks. When faced with large risks, investors will demand higher cost of equity capital as much as possible to hedge the impact of risks on returns. In order to improve the accuracy of risk assessment, it can not only carry out risk assessment through explicit contracts such as financial reports, but also make use of invisible contracts such as social relations to carry out comprehensive investigation and supplement. Among them, social relationships include alumni relationships, hometown relationships, work relationships, relative relationships, etc. (Fisman et al., 2018; Gu et al., 2019), where there are people, there is socialization, and where there is socialization, there is a relationship. Influenced by the traditional Confucian thought of dealing with affairs, these social relations will form people's cognition, shape corresponding behavior habits and establish similar values (Ozoliņš, 2019). As a kind of social relationship, alumni relationship has gradually attracted widespread attention from academic circles in recent years (Guan et al., 2016, Natthawat et al., 2018; He et al., 2017).

In addition, relying on the academic relationship, alumni can increase the trust and identity between the two sides through consistent campus culture, similar campus experience, and the same educational background, and alumni relationship can even produce certain economic benefits. Nowadays, almost every school has set up an alumni association, and there are long-term communication and cooperation platforms such as "Economic Forum" regularly held based on the alumni network. In 2019, to develop the alumni economy, the Qiantang New Area in Hangzhou, China, issued five economic policies and 100 Economic Policies for Alumni, making full use of alumni relations to drive local economy and realizing the goal that thousands of village cadres "double lead" entrepreneurship, thousands of private entrepreneurs "secondary entrepreneurship", ten thousand rural Party members, and ten thousand rural youth took the lead in entrepreneurship.

Alumni associations and economic forums at colleges and universities make alumni relations a major channel for the exchange of important human resources and information. The establishment of alumni associations promotes more interaction and easier communication among individuals, and auditors who have alumni relationships with company executives are more willing to share and discuss about the company's strategy, business model, internal control system, specific transactions, and accounting events (Guan et al., 2016), and engage in more pleasant communication easily.

When judging whether an investment project is feasible, investors use audited financial reports to determine the necessary rate of return for perceived risk, i.e., the cost of equity capital, while during the audit process, auditors issue reasonable assurance on whether the financial reports of listed companies as a whole are subject to the risk of material misstatement, and executives of listed companies have control and decision-making power over financial statement information (Abernathy et al., 2018).

This raises the question: whether the uncertainty caused by the special alumni relationship between auditors and company executives can be perceived by investors, and whether this uncertainty will weaken the statement user's vision of a sustainable and healthy enterprise, thus enhancing investor's return on risk and demanding a higher cost of equity capital. With independent directors as the main body, scholars have discussed the economic consequences of their different relationships with the company's management and audit committee, and based on the collusion hypothesis, it is concluded that independence will be affected by certain social relationships (He et al., 2017). Therefore, does the special social relationship of alumni also follow the collusive hypothesis? Therefore, this paper attempts to explore and analyze the effect of alumni relationships between auditors and executives on the cost of equity capital.

Using a sample of A-share listed companies in Shanghai and Shenzhen, China, from 2007 to 2019, this paper examines the impact of alumni relationships between auditors and executives of audited companies on the cost of equity capital. PEG model was used to measure the cost of equity capital in the master test, and MPEG model and OJN model were used to calculate the cost of equity capital in the robustness test. Alumni relationships have been found to significantly increase the cost of equity capital. Further observation shows that the relationship between auditors and core executives, between audit engagement partner and company executives, and between alumni of the same year and major graduates is more obvious. From a dynamic perspective, we further study the impact of alumni relationships on the cost of equity capital: when auditors and executives change from nonalumni to alumni, the cost of equity capital increases significantly.

The possible contributions of this paper are as follows: first, it enriches the literature on social relations. Previous literature paid more attention to political connections (Ito, 2021), relationships between brokers and analysts (Al-Aamri, 2022), and family relationships (Wu et al., 2022), but there was no research on alumni relationship. Therefore, this paper takes the alumni relationship as the hub of information transmission. This paper discusses the influence of the special relationship network mechanism on China's capital market economic behavior.

Second, it promotes existing research on the cost of equity capital in the informal system of alumni relationships. To study the effect of alumni relations on the rights and interests of investors, the cost of capital, for the rights and interests of the influence factors of the cost of capital, provides new evidence and research Angle of view, enrich the literature of affect the cost of equity capital, help investors in measuring risk, provide further considerations, it has reference significance for investors to take rational decision-making behavior.

Third, it discovers the new function channel and governance means of external corporate governance. The connection and communication between auditors and corporate executives through alumni relationships enables the management to adopt a more diversified, multiangle, and multichannel approach to corporate governance, which is of special significance to a better understanding of the role of social relations on economic behavior in the context of economic globalization.

2. Literature review

To better understand the research progress of this topic at home and abroad, this paper will sort out and summarize the relevant literature from the following two aspects: first, the research on the influencing factors of the cost of equity capital; the second is the economic consequences of alumni relations.

2.1 Research on the influencing factors of equity capital cost

There has been abundant research on the cost of equity capital at home and abroad. The influencing factors of the cost of equity capital mainly involve two aspects-internal corporate governance and external corporate governance. The level of investment risk can be improved through internal and external governance behavior. Good corporate governance can bring an additional "governance premium" to investors (Gompers et al., 2003), thus hedging the "risk premium" to a certain extent and reducing the cost of equity capital. In terms of internal corporate governance. In addition, the research shows that the non-tradable share reform weakens the effect of large shareholder cash dividends. While non-tradable shares of large shareholders are in circulation, the large shareholder agency problem is further eased (Tang et al., 2012).

In addition, the statement users will focus on internal control governance. For those listed companies that ignore internal control defects and try to cover up the real operating conditions of the company, investors are more inclined to require a higher cost of equity capital (Chun et al., 2020). On the contrary, the higher the quality of the information of listed companies is, the more it can reduce investor's uncertainty about the future earnings of companies, leading to the reduction of the cost of equity capital (Botosan, 2020); similarly, Mu et al. (2020) took the growth of the company as a starting point ,we found that these high growth companies with great development potential, strong market development ability, outstanding technical ability, and clear development direction have significantly improved the level of information disclosure. Through voluntary information disclosure and mandatory information disclosure and other information acquisition methods, stakeholders can fully understand the fundamentals of enterprises and achieve the purpose of reducing the cost of equity capital. Guan et al. (2022) also drew a similar conclusion by taking high-pollution enterprises as samples.

In the aspect of external corporate governance, the influencing factors of the cost of equity capital are mainly discussed from the perspectives of the legal protection of investors, intermediary institutions, and political relations. A country with a higher degree of legal protection for investors and a better law enforcement effect will be able to obtain a lower cost of equity capital (El et al., 2016). Audit is an effective means of external supervision (Cao and Pham, 2021) and governance (Wu et al, 2022) for investors. After professional judgment and corresponding audit procedures, the quality of the audit report also affects the cost of equity capital, and there is a significant negative correlation between the two (Azizkhani et al., 2010). To allow financial information to play a greater role in resource allocation, a high-quality audit will provide better authentication services, restrict earnings management, and reduce the risk of misstatement (Matthew, 2019) Further, government intervention will also affect enterprise value (Shi et al., 2020)**Error! Reference source not found.** and weaken the risk bearing capacity of enterprises (Shi and Yang, 2022). Under the effect of government intervention, the cost of equity capital increases significantly.

2.2 Economic consequences of alumni relations

The economic consequences of alumni relations have been studied in the literature. Some scholars believe that the alumni relationship will reduce the audit quality. For example, Guan (2016) found that the alumni relationship between the third-party independent auditor and the senior executives of the client company has seriously damaged the audit quality. Coincidentally, when there is an alumni relationship between auditors and members of the audit committee, the quality of the audit is also significantly reduced and the firm charges higher audit fees (He et al., 2017). Qi (2016) took Chinese data as a sample and found that when there is a social connection between the auditor and the CEO or CFO of the client company, the client company is more likely to obtain more objective audit opinions; Botosan (1997) found that alumni nepotism between auditors and client companies will improve the possibility of listed companies to obtain standard audit opinions, and the independence of auditors will also be damaged, making it easier to obtain the purchase of audit opinion purchase.

However, other scholars put forward different views: Kwon et al. (2018) used proprietary data from the Korean audit market to analyze that CEOs and auditors with alumni can produce higher audit quality and audit fee premium; the alumni relationship between auditors and independent directors (ALAWAQLEH et al., 2021) and the alumni relationship between audit teams (Baumann et al., 2020) will significantly improve audit quality by strengthening cooperation and establishing effective communication channels.

To sum up, there is much literature on the influencing factors of the cost of equity capital, but few scholars study the cost of equity capital from the perspective of alumni relationships. In recent years, relevant studies have also found that alumni relations will have certain economic consequences, and most scholars believe that alumni relations will damage audit quality. However, at this stage, few kinds of literature directly study the economic consequences of alumni relationships from the perspective of investor perception, whether investors can perceive the potential risks of this alumni relationship, and whether this risk will change with the change of the informal system of alumni relationships, and then change the cost of equity capital. This topic is rarely discussed in the literature. Therefore, this paper intends to explore the impact of alumni relationships on the cost of equity capital to enrich research in this field.

3. Research hypothesis

Solomon (1963) believes that the minimum rate of return recognized by investors through a series of external and internal factors to ultimately judge the level of investment risk is called the cost of equity capital. When the level of investment risk increases, the cost of equity capital will rise; on the contrary, it will decrease. Investors make corresponding decisions according to the audited financial report and then require an appropriate equity capital cost based on their perceived risk. Then, when there is an alumni relationship between auditors who perform an external independent audit and company executives, will this special social relationship have an impact on the cost of equity capital?

This paper believes that the alumni relationship will affect the cost of equity capital from this perspective: when there is an alumni relationship between auditors and senior executives of the audited unit, investor's direct perceived risk caused by the alumni relationship increases; due to the excessive trust and dependence of auditors and company executives based on the close alumni relationship, the independence of auditors will produce deviation, resulting in poor information content in financial reports. This factor leads to an increase in investor's perceived risk and requires a higher cost of equity capital.

Specifically, on the one hand, the perceived direct risk of investors may increase due to the existence of alumni relationships. The existence of an alumni relationship makes investors subconsciously believe that both sides will transfer interests, thereby damaging their own interests, that is, the management may use this special private relationship to collude with auditors to carry out opportunistic behavior. When investors believe that the possibility of their own interests being encroached upon increases, the required risk reward will increase, and then the cost of equity capital will rise. Moreover, the concentration of China's audit market is low, and the firms are in a highly competitive environment (Chen et al., 2011). The existence of this special relationship will further make investors believe that auditors will use this relationship to maintain old customers and attract new customers, giving up professional principles, resulting in a significant increase in investor's direct perceived risk and a further increase in the cost of equity capital.

On the other hand, due to the alumni relationship, the quality of financial reporting information may decline. Previous studies have found that investors judge the size of current risks according to the information obtained in their hands. The more accurate, complete, and reliable the information, the lower the cost of equity capital required by investors (Francis et al., 2005; Leuz and Verrecchia, 2005). By improving the quality of accounting information, the high-quality audit has further weakened investor's uncertainty about the future operation and development of the company, reduced their sensitivity to risks, and significantly reduced the cost of equity capital.

However, when there is an alumni relationship between auditors and senior managers of the audited unit, this special relationship will affect the degree of disclosure of financial statements information and reduce the quality of information. This is because self-cultivation and self-growth between groups are formed in the interaction between people. After interactive learning in university, the same campus culture precipitation and similar campus experience have created similar outlook on life, values, and world outlook among group alumni, which is easier to produce group identity. This recognition in the audit process may make auditors ignore their own professional ethics, affect their professional judgment due to the alumni relationship between the two sides, and unconsciously adopt random audit methods and loose audit procedures, resulting in a significant decrease in audit quality, a deterioration in the level of disclosure of financial information, and an investor's inability to obtain true financial information and require a higher cost of equity capital.

In summary, the existence of an alumni relationship increases the direct perceived risk of investors and the uncertainty of earnings; and the existence of this special relationship weakens the independence of auditors, reduces the degree of information disclosure of financial reports, increases the information asymmetry between investors and management, and leads investors to require a higher cost of equity capital as a return when facing risks. Based on the above analysis, we propose assumptions:

H1: when there is an alumni relationship between auditors and company executives, the cost of equity capital will rise.

4. Empirical study design

4.1 Sample selection and data sources

This paper selects A-share listed companies from 2007 to 2019 as the research sample, and successively excludes the following companies: financial and insurance companies, ST companies with losses for two consecutive years, PT companies with the suspended listing, and companies with major financial data missing. After processing the above steps, we get 19,838 company-year observations. We manually collate alumni relationships between auditors and company executives. The company's background information on executive education was based on the CSMAR executive resue, and was further manually

Searched with the help of Baidu Encyclopedia, Sina Finance, and other search engines. Use the query system on the official website of CICPA[1] to collect the graduated schools of auditors. At the same time, we also deal with 1% of continuous variables to mitigate the interference of extreme values on the empirical results.

4.2 Variable selection and measurement

4.2.1 Cost of equity capital

At present, the measurement methods of the cost of equity capital have been relatively mature, and most of the researches use the two methods of ex-ante measurement and ex post measurement. At present, the main methods of ex-ante equity capital measurement include the GLS model, OJN model, PEG model and MPEG model. Ex-ante equity capital measurement methods include CAPM model, FFM model, and APT model, and the ex-ante model is generally superior to ex- post model.

Therefore, this paper mainly refers to the research of Attig et al. (2013). The PEG model is used in the main test, and the RP_{PEG2} and RP_{PEG5} values are used, respectively, to represent the level of equity capital cost. PEG model takes into account more value and growth can reflect the size of risk, and is more suitable for the Chinese market environment. In the robustness test, MPEG model (Easton, 2004) and OJN model (Ohlson and Juettner-Nauroth, 2005) were used to calculate the cost of equity capital of enterprises, and RP_{MPEG} and RP_{OJN} indicators were used to represent the cost of equity capital under different models respectively. As an extension of PEG model, MPEG model can also inspect the enterprise value and development speed comprehensively. OJN model only considers future profitability, so it does not need to calculate a book value and return on equity, nor does it need to consider the dividend payment hypothesis. Compared with other models, OJN model has certain advantages in data availability and measurement effect, and the specific calculation is as follows:

$$P_t = \frac{FEPS_{t+2} - FEPS_{t+1}}{RP^2{}_{PEG2}} \quad (1)$$

$$P_t = \frac{FEPS_{t+5} - FEPS_{t+4}}{RP^2{}_{PEG5}} \quad (2)$$

$$P_t = \frac{FEPS_{t+2} + RP_{MPEG} DPS_{t+1} - FEPS_{t+1}}{RP^2{}_{MPEG}} \quad (3)$$

[1] The official website of the Chinese Institute of Certified Public Accountants: http://cmispub. cicpa. org. cn.

$$RP_{OJN} = A + \sqrt{A^2 \frac{FEPS_{t+1}}{P_t}\left(g_2 - (\gamma - 1)\right)} \quad (4)$$

$$A = \frac{1}{2}\left((\gamma - 1) + \frac{DPS_{t+1}}{P_t}\right) \quad (5)$$

$$g_2 = \frac{STG + LTG}{2} \quad (6)$$

$$STG = \frac{FEPS_{t+2} - FEPS_{t+1}}{FEPS_{t+1}} \quad (7)$$

$$(\gamma - 1) = r_f - 0.03 \quad (8)$$

In the above formula, *FEPS* represents future earnings per share, *P* represents year-end stock price, *DPS* represents dividends per share, *LTG* represents long-term growth forecast, and *FR* represents 10-year treasury yield.

4.2.2 Cost of equity capital

The *Match* is a dummy variable of alumni relationships. If any auditor and any member of the client's senior management team graduated from the same university, *Match* is set to 1; otherwise, *Match* is set to 0. In particular, in the master test, this variable does not take into account the degree they received from the same school, that is, the sample includes bachelor's, master's, and doctoral degrees, nor does it emphasize whether they entered the same school, campus and major. This paper argues that if both graduates from the same university, they will have alumni relationship.

In the further test, we subdivide the samples with alumni relationships into graduates of the same year and the same major, to verify the difference in the impact of special alumni relationships and general alumni relationships on the cost of equity capital. Referring to the research of Guan et al. (2016), Lennox and Park (2007), the senior executives considered in this document include the entire senior management team stipulated in the company's association papers, such as chairman, secretary of the Board, general manager, deputy general manager, CFO, COO and CTO.

4.2.3 Control variables

Referring to existing relevant studies (Chen et al., 2011), this paper selected the following indicators as control variables: Asset size (*SIZE*), Return on equity (*ROE*), Asset liability ratio (*LEV*), Book-to-book ratio (*MB*), Operating cash flow (*CFO*), Revenue growth rate (*GROWTH*), Proportion of stock transactions (*VOLUME*), Systemic risk (*BETA*), Independent director ratio (*INDIR*), Marketization index (*MARKET*), and further control the fixed effect of *YEAR* and *INDUSTRY*. Specific definitions of explanatory variables and control variables are shown in Table 1.

Table 1Definitions of Main Variables

Variable code	*Variable names and definitions*
RP_{PEG2}	Equity capital cost, please refer to the above model (1) for the calculation method
RP_{PEG5}	Equity capital cost, please refer to the above model (2) for the calculation method
Match	Alumni relationships, a dummy variable. If there is an alumni relationship between auditors and company executives, *Match* is 1, otherwise it is 0
SIZE	The size of the company, which is the natural logarithm of the company's total assets
ROE	*ROE*, which is the ratio of net profit to net assets
LEV	Asset liability ratio, the ratio of total assets to total liabilities at the end of the period
MB	Market-to-book ratio, the ratio of market value to book value at the end of the period
CFO	Operating cash flow is the ratio of operating cash inflow to total assets
GROWTH	Revenue growth rate, which is the ratio of revenue growth to the total revenue of the previous year
VOLUME	Annual average stock turnover ratio, which is the ratio of stock trading volume to total issuance
BETA	Systematic risk, which is the beta of a company's stock
INDIR	The ratio of independent directors is the ratio of the number of independent directors to the number of board members
MARKET	Marketization index, using the corresponding figures in the "China Provincial Marketization Index Report (2018)"
INDUSTRY	Industry fixed effects
YEAR	Annual fixed effects

4.3 Mpirical model design

To test the hypothesis proposed in this paper the following model was constructed based on the literature of Chen et al. (2011):

$$RP_{PEG} = \alpha_0 + \alpha_1 Match + \sum \gamma Controls + \varepsilon \quad (9)$$

Among them, RP_{PEG} is the dependent variable of the model. In the main regression analysis, the ex-ante measurement method PEG model is used to calculate the cost of equity capital of the enterprise. RP_{PEG2} and RP_{PEG5} are used to measure the cost of equity capital. The *Match* is the independent variable of the model that measures the auditor. Alumni relations with company executives, this paper mainly verifies the correlation between alumni relations and the cost of equity capital. *Controls* is a control variable, mainly including Asset size (*SIZE*), Return on equity (*ROE*), Asset-liability ratio (*LEV*), Market-to-book ratio (*MB*), Operating cash flow (*CFO*), Revenue growth rate (*GROWTH*), Stock trading ratio (*VOLUME*), Systematic risk (*BETA*), Independent director ratio (*INDIR*), Marketization index (*MARKET*), after determining the control variables, year (*YEAR*) and industry fixed effects (*INDUSTRY*) are also in the model get control. We focus on the *Match* coefficient α_1 in the model. If the empirical results show that α_1 is significantly positive, it proves the hypothesis 1 of this paper, that is, when auditors and executives have alumni relationships, the cost of equity capital will increase significantly.

5. Empirical results and analysis

5.1 Descriptive statistics

Table 2 lists the descriptive statistical results of the explanatory variables and the corresponding control variables in the model, and the specific distribution of the samples is relatively clear. The average value of RP_{PEG2} and RP_{PEG5} is 0.097 and 0.106, the median value is 0.085 and 0.092, and the standard deviation is 0.058 and 0.072, respectively, indicating that the overall cost of equity capital is high, and the descriptive statistical results of the two cost estimation models are relatively similar. And similar to the statistical results of previous studies (Chen et al., 2011) further shows that the cost of equity capital estimated by PEG model in this paper is more reliable and reasonable.

Table 2Descriptive Statistics Results

Variable	*Number of samples*	*Mean*	*Standard deviation*	*Minimum*	*Median*	*Maximum value*
RP_{PEG2}	19838	0.097	0.058	0.012	0.085	0.316
RP_{PEG5}	19838	0.106	0.072	0.001	0.092	1.37
Match	19838	0.064	0.245	0.000	0.000	1.000
SIZE	19838	22.03	1.371	19.307	21.844	26.999

ROE	19838	0.074	0.142	-0.669	0.075	0.455
LEV	19838	0.602	0.345	0.074	0.564	2.36
MB	19838	5.037	4.275	1.386	3.885	31.616
CFO	19838	0.055	0.103	-0.283	0.051	0.423
GROWTH	19838	0.235	0.65	-0.617	0.121	4.74
VOLUME	19838	0.741	0.245	0.196	0.773	1.000
BETA	19838	1.096	0.23	0.464	1.108	1.637
INDIR	19838	0.367	0.051	0.286	0.333	0.571
MARKET	19838	7.915	1.928	2.95	7.93	11.71

5.2 Correlation analysis

To preliminarily analyze the correlation between independent variables and dependent variables, *Pearson* and *Spearman* correlation analysis was adopted for each variable, and the results are shown in Table 3. *Spearman*'s analysis results and *Pearson's* analysis results are respectively in the upper right triangle and lower left triangle of the table. As can be seen in the table, the *Spearman* correlation coefficients of RP_{PEG2}, RP_{PEG5}, and *Match* are 0.030 and 0.085, and the *Pearson* correlation coefficients are 0.036 and 0.131, which are significantly positively correlated at the 1% level. This implies that the cost of equity capital increases significantly when there is alumni relationship between auditors and company executives, which is the same as the hypothesis in this paper. In addition, the *Pearson* correlation coefficient and *Spearman* correlation coefficient of RP_{PEG2} and RP_{PEG5} are 0.290 and 0.313 respectively, and there is a significant positive correlation at the 1% level, indicating that there is a high consistency between the two proxy variables of the cost of equity capital. There is a significant correlation between independent variables and control variables, indicating that the choice of control variables is effective.

Table 3Correlation Analysis

	RP $_{PEG2}$	RP $_{PEG5}$	MATCH	SIZE	ROE	LEV	MB	CFO	GROWTH	VOLUME	BETA	INDIR	MARKET
RP $_{PEG2}$	1.000	0.313***	0.030***	0.033***	-0.068***	0.116***	-0.012	-0.035***	0.001	0.028***	-0.003	0.020**	-0.046***
RP $_{PEG5}$	0.290***	1.000	0.085***	0.009	-0.101***	0.107***	0.005	-0.063***	-0.045***	0.055***	0.009	0.010	-0.049***
Match	0.036***	0.131***	1.000	0.040***	-0.019**	0.037***	0.038***	-0.008	-0.033***	0.082***	-0.001	-0.018*	-0.000
SIZE	0.034***	0.014*	0.056***	1.000	0.193***	0.422***	-0.112***	0.052***	0.079***	0.144***	0.138***	0.039***	0.007
ROE	-0.066***	-0.064***	-0.016*	0.160***	1.000	0.132***	0.085***	0.352***	0.393***	-0.177***	-0.107***	-0.032***	0.091***
LEV	0.100***	0.089***	0.023**	0.377***	0.118***	1.000	0.404***	-0.095***	0.251***	-0.016*	-0.006	-0.011	-0.040***
MB	0.019**	0.053***	0.040***	-0.099***	-0.148***	0.251***	1.000	-0.048***	0.078***	0.196***	-0.107***	0.002	-0.044***
CFO	-0.023**	-0.039***	-0.014*	0.031***	0.289***	-0.002	-0.062***	1.000	0.149***	-0.075***	-0.100***	-0.040***	0.003
GROWTH	0.021**	0.007	-0.019**	0.046***	0.255***	0.442***	0.032***	0.178***	1.000	-0.216***	-0.066***	-0.018**	0.020**
VOLUME	0.010	0.044***	0.076***	0.131***	-0.148***	-0.094***	0.170***	-0.080***	-0.204***	1.000	0.144***	0.044***	-0.152***
BETA	-0.003	-0.020**	-0.004	0.097***	-0.067***	-0.021**	-0.140***	-0.094***	-0.062***	0.135***	1.000	0.016*	-0.073***

INDIR	0.004	0.013	-0.023***	0.036***	-0.019**	-0.016*	0.019**	-0.033***	0.008	0.043***	0.014*	1.000	-0.021**
MARKET	-0.041***	-0.043***	0.001	0.009	0.082***	-0.022**	-0.039***	-0.005	0.008	-0.161***	-0.091***	-0.031***	1.000

Note: *, **, and *** represent the significance levels of 10%, 5%, and 1%, respectively. The upper right triangle is the Spearman correlation analysis result, and the lower left triangle is the Pearson correlation analysis result.

5.3 Sample mean and median difference test

In order to preliminarily test whether the alumni relationship is significantly correlated with the cost of equity capital, the sample mean test and the median test are conducted in this paper. We divide the existence of alumni relationships between auditors and executives into two subsamples and compare the significant difference in the cost of equity capital between the different samples. The results in Table 4 show that the mean and median differences between the two are significant at the 1% level, which preliminarily verifies basic hypothesis 1 of this paper.

Variable	*Control group*	*Average value*	*Median*	*Treatment group*	*Average value*	*Median*	*Mean difference*	*Median difference*
RP_{PEG2}	18518	0.096	0.085	1320	0.105	0.091	-0.009***	9.511***
RP_{PEG5}	18518	0.104	0.091	1320	0.142	0.111	-0.038***	7.082***
SIZE	18518	22.011	21.833	1320	22.322	22.004	-0.311***	19.201***
ROE	18518	0.075	0.076	1320	0.066	0.068	0.009**	5.713**
LEV	18518	0.6	0.562	1320	0.632	0.604	-0.032***	15.897***
MB	18518	4.992	3.868	1320	5.684	4.258	-0.691***	19.201***
CFO	18518	0.055	0.051	1320	0.049	0.048	0.006**	2.157
GROWTH	18518	0.238	0.123	1320	0.189	0.095	0.049***	15.781***
VOLUME	18518	0.736	0.763	1320	0.813	0.907	-0.076***	101.530***
BETA	18518	1.096	1.109	1320	1.092	1.103	0.004	0.722
INDIR	18518	0.367	0.333	1320	0.362	0.333	0.005***	0.461
MARKET	18518	7.915	7.93	1320	7.919	8.07	-0.004	4.692**

Table 4Mean and Median Difference Tests

Note: *, **, and *** represent significance levels of 10%, 5%, and 1%, respectively.

5.4 Multiple regression analysis

As mentioned above, when auditors and company executives graduated from the same university, the cost of equity capital will increase. Therefore, we expect that the alumni relationship (*Match*) has a positive correlation with the cost of equity capital (RP_{PEG2} and RP_{PEG5}), that is, the coefficient α_1 of *Match* in the model is positive. This regression result is reported in Table 5, which is completely consistent with our expectations: column (1) RP_{PEG2} and column (2) RP_{PEG5} respectively represent the results of two kinds of equity capital costs. The regression coefficients of *Match* are 0.01 and 0.04 respectively, which are significantly positively correlated at the 1% level. Research results support hypothesis 1, and the regression results of other control variables are basically similar to previous studies (Chen et al., 2011).

Table 5The impact of alumni relationships on the cost of equity capital

	(1)	(2)
	RP_{PEG2}	RP_{PEG5}
Match	0.01***	0.04***
	(2.76)	(5.79)
SIZE	0.00**	-0.00
	(2.49)	(-0.27)
ROE	-0.03***	-0.03***
	(-5.62)	(-3.62)
LEV	0.01***	0.02***
	(5.27)	(6.63)
MB	-0.00	0.00
	(-0.01)	(1.00)
CFO	0.00	-0.01
	(0.03)	(-0.83)
GROWTH	-0.00	-0.00
	(-0.04)	(-0.60)
VOLUME	0.01***	0.02***

	(4.71)	(4.26)
BETA	0.00	-0.00
	(1.15)	(-0.91)
INDIR	0.02	0.03*
	(1.39)	(1.88)
MARKET	-0.00***	-0.00**
	(-3.34)	(-2.14)
CONSTANT	0.05***	0.09***
	(2.68)	(3.79)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	19838	19838
Adjusted R-squared	0.06	0.06

Note: in this paper, the standard errors of all regression coefficients are concentrated at the firm level, and *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

6. Further testing

6.1 The impact of alumni relationships between auditors and different types of executives on the cost of equity capital

We divide the company's senior management into core executives (*CGM*) and non-core executives (*UGM*) and explore whether the effect of alumni relationship between auditors and executives on the cost of equity capital varies with the executive's power. In this paper, according to the existing literature, the chairman, general manager, chief financial officer, and secretary of the board of directors are defined as core executives. Core executives can exert substantial influence on financial report information and have higher control and decision-making power, while non-core executives are not directly related to the accounting information system. If there are alumni relationships between auditors and core executives, it is more likely that the two conspire to manipulate financial reporting information, significantly increasing the risk of investor decisions and raising the cost of equity capital.

Table 6 shows the regression results. Columns (1) and (2) represent the regression results of the alumni relationship between the core executive (*CGM*) and the auditor, while columns (3) and (4) represent the regression results of the alumni relationship between the non-core executive (*UGM*) and the auditor on the cost of equity capital. Table 6 results show: auditors and alumni relations between core executives (*CGM*) and equity capital cost (RP_{PEG2}, RP_{PEG5}) have a significant positive correlation, and the non-core executive (*UGM*) coefficient is not significant, that is, relative to the non-core executives (*UGM*), the degree of influence of alumni relations of equity capital cost in core executives (*CGM*) in samples.

Table 6Distinguishing the test results of alumni relationships between core and non-core executives and auditors

	(1)	(2)	(3)	(4)
	RP_{PEG2}	RP_{PEG5}	RP_{PEG2}	RP_{PEG5}
CGM	0.01 *	0.02 ***		
	(1.68)	(2.72)		
UGM			0.00	0.01
			(0.12)	(1.38)
SIZE	0.00 **	-0.00	0.00 **	-0.00
	(2.57)	(-0.04)	(2.57)	(-0.04)
ROE	-0.03 ***	-0.03 ***	-0.03 ***	-0.03 ***
	(-5.65)	(-3.70)	(-5.66)	(-3.75)
LEV	0.01 ***	0.02 ***	0.01 ***	0.02 ***
	(5.22)	(6.44)	(5.23)	(6.51)
MB	0.00	0.00	0.00	0.00
	(0.08)	(1.24)	(0.04)	(1.08)
CFO	0.00	-0.01	0.00	-0.01
	(0.03)	(-0.84)	(0.02)	(-0.84)

GROWTH	-0.00	-0.00	-0.00	-0.00
	(-0.02)	(-0.56)	(-0.06)	(-0.65)
VOLUME	0.01 ***	0.02 ***	0.02 ***	0.02 ***
	(4.80)	(4.61)	(4.89)	(4.78)
BETA	0.00	-0.00	0.00	-0.00
	(1.18)	(-0.86)	(1.12)	(-0.98)
INDIR	0.02	0.03	0.02	0.03
	(1.32)	(1.62)	(1.30)	(1.60)
MARKET	-0.00 ***	-0.00 **	-0.00 ***	-0.00 **
	(-3.36)	(-2.19)	(-3.34)	(-2.12)
CONSTANT	0.05 ***	0.08 ***	0.05 ***	0.08 ***
	(2.64)	(3.63)	(2.63)	(3.64)
INDUSTRY FE	Yes	Yes	Yes	Yes
YEAR FE	Yes	Yes	Yes	Yes
N	19838	19838	19838	19838
Adjusted R-squared	0.06	0.05	0.06	0.05

Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

6.2 The impact of alumni relationships between different types of auditors and company executives on the cost of equity capital

According to the paper on auditor signature and seal issued by the Ministry of Finance in July 2001 (accounting [2001] no. 1035) and Lennox et al. (2014). The audit report publicly disclosed by the listed company to the public must be signed and sealed by the project leader and the project auditor who are qualified as certified public accountants. Generally speaking, as the core person of the whole team, the engagement partner is responsible for the specific implementation of audit business and personnel allocation, and carries out field visits to the whole business process, to have a more comprehensive and detailed understanding of the entire audit process. The review partner is not required to participate in the engagement. In summary, the project leader has a better understanding of the audit business and plays a more obvious role in the audit results. Therefore, we expect the alumni relationship between the program leader and the senior executive to have a more significant impact on the cost of equity capital than the review partner.

The project leader and the project reviewer can be distinguished by comparing the signing order of the two auditors in the audit report. Generally speaking, the project reviewer is the first in the audit report, followed by the project reviewer. Therefore, this paper adopts this identification method and further divides the signing auditor into project leader (*AUR*) and project reviewer (*AUM*). Columns (1) to (2) show the regression results of the impact of alumni relationship between audit project leader (*AUR*) and company executives on the cost of equity capital. Columns (3) to (4) represent the regression results of the relationship between audit project reviewers (*AUM*) and alumni of the company's senior executives. As shown in Table 7, only the alumni relationship between the project leader (*AUR*) and the company executive has a more significant effect on the cost of equity capital, while the project reviewer (*AUM*) has a less significant effect.

Table 7Inspection results for distinguishing between

project leaders and project reviewers

	(1)	(2)	(3)	(4)
	RP_{PEG2}	RP_{PEG5}	RP_{PEG2}	RP_{PEG5}
AUR	0.01 **	0.02 ***		
	(2.07)	(2.65)		
AUM			0.00	0.01
			(0.11)	(1.22)
SIZE	0.00 **	-0.00	0.00 **	-0.00
	(2.54)	(-0.10)	(2.57)	(-0.04)
ROE	-0.03 ***	-0.03 ***	-0.03 ***	-0.03 ***
	(-5.63)	(-3.65)	(-5.66)	(-3.75)
LEV	0.01 ***	0.02 ***	0.01 ***	0.02 ***

	(5.26)	(6.52)	(5.24)	(6.46)
MB	0.00	0.00	0.00	0.00
	(0.06)	(1.18)	(0.04)	(1.12)
CFO	0.00	-0.01	0.00	-0.01
	(0.03)	(-0.84)	(0.02)	(-0.84)
GROWTH	-0.00	-0.00	-0.00	-0.00
	(-0.04)	(-0.61)	(-0.05)	(-0.62)
VOLUME	0.01 ***	0.02 ***	0.02 ***	0.02 ***
	(4.82)	(4.67)	(4.90)	(4.76)
BETA	0.00	-0.00	0.00	-0.00
	(1.15)	(-0.93)	(1.13)	(-0.95)
INDIR	0.02	0.03	0.02	0.03
	(1.33)	(1.63)	(1.30)	(1.61)
MARKET	-0.00 ***	-0.00 **	-0.00 ***	-0.00 **
	(-3.32)	(-2.10)	(-3.34)	(-2.15)
CONSTANT	0.05 ***	0.08 ***	0.05	0.08 ***
	(2.65)	(3.65)	(2.63)	(3.64)
INDUSTRY FE	Yes	Yes	Yes	Yes
YEAR FE	Yes	Yes	Yes	Yes
N	19838	19838	19838	19838
Adjusted R-squared	0.06	0.05	0.06	0.05

Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

6.3 The impact of auditors and company executives graduating in the same year and major on the cost of equity capital

The cost of equity capital is influenced by alumni relationships between auditors and company executives. When there is an alumni relationship between auditors and company executives, it will affect the cost of equity capital. If auditors and company executives are alumni who graduated in the same year or alumni who graduated in the same major, will this impact be different? Alumni who graduated in the same year may have the same student union experience and social experience, and communicate more through the "circle culture" of the community, so the impact on the cost of equity capital is more obvious. Forged closer ties through "brotherhood" in college and were more likely to pursue the same major after graduation. If auditors and company executives graduate from the same major, intimacy increases significantly, and the cost of equity capital increases significantly.

Therefore, this paper further classifies alumni relationships on the basis of having alumni relationships into alumni who graduated in the same year and alumni who graduated in a different year, and alumni who graduated in the same major and alumni who graduated in a different major, and tests whether there are differences in the degree of influence of special alumni relationships and general alumni relationships on the cost of equity capital through regressions, respectively.

Table 8 and 9 respectively represent the regression results of the cost of equity capital influenced by alumni who graduated in the same year and major. This test is completed in the sample of alumni relationships (1320 samples). In Table 8, if it is the relationship between alumni who graduated in the same year, then $Match_{Year}$ takes the value of 1; in Table 9, if it is the relationship between alumni who graduated from the same major, then $Match_{Major}$ takes the value of 1. Table 8 shows that the regression coefficients of graduation in the same year ($Match_{Year}$) are 0.06 and 0.07 respectively, and are significantly positively correlated at 1% and 10% levels. Table 9 shows that the regression coefficients of alumni graduating from the same major ($Match_{Major}$) are 0.01 and 0.07, with a significant positive correlation. This shows that no matter it is $Match_{Year}$ or $Match_{Major}$, the special alumni relationship has a greater impact on the cost of equity capital than the general alumni relationship.

Table 8Regression analysis of the impact of graduate alumni

in the same year on the cost of equity

	(1)	(2)
	RP_{PEG2}	RP_{PEG5}

Match$_{Year}$	0.06***	0.07*
	(2.95)	(1.70)
SIZE	0.00	-0.01
	(0.17)	(-1.26)
ROE	-0.01	0.03
	(-0.34)	(1.19)
LEV	0.02**	0.03
	(2.01)	(1.55)
MB	0.00	0.00**
	(0.43)	(2.05)
CFO	-0.04	-0.09**
	(-1.29)	(-2.16)
GROWTH	0.00	-0.00
	(0.77)	(-0.34)
VOLUME	0.02	0.01
	(1.10)	(0.38)
BETA	0.01	0.01
	(1.02)	(0.50)
INDIR	0.02	0.29*
	(0.46)	(1.85)
MARKET	-0.00	-0.00
	(-1.04)	(-0.53)

CONSTANT	0.03	0.10
	(0.41)	(0.88)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	1320	1320
Adjusted R-squared	0.14	0.13

Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

Table 9Regression analysis of the impact of alumni of the same major on the cost of equity capital

	(1)	(2)
	RP_{PEG2}	RP_{PEG5}
$Match_{Major}$	0.01*	0.07***
	(1.68)	(6.02)
SIZE	0.00	-0.01
	(0.07)	(-1.17)
ROE	-0.00	0.02
	(-0.09)	(0.85)
LEV	0.02*	0.02
	(1.74)	(1.43)
MB	0.00	0.00
	(0.31)	(1.36)
CFO	-0.04	-0.08**

	(-1.25)	(-2.19)
GROWTH	0.00	-0.00
	(0.77)	(-0.63)
VOLUME	0.02	0.00
	(1.32)	(0.19)
BETA	0.01	0.01
	(0.87)	(0.58)
INDIR	-0.00	0.24*
	(-0.05)	(1.71)
MARKET	-0.00	-0.00
	(-0.98)	(-0.59)
CONSTANT	0.04	0.11
	(0.61)	(1.05)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	1320	1320
Adjusted R-squared	0.11	0.20

Note: t values are adjusted for company clustering, *, **, and *** represent significance levels of 10%, 5%, and 1%, respectively.

6.4 The dynamics of alumni relations

The test aims to further analyze whether the dynamic change in alumni relationships has an impact on the cost of equity capital. Therefore, this paper divides the change of alumni relationships into two types: alumni relationships from non-existent to existing (strengthened alumni relationship group), and alumni relationships from existing to non-existent (weakened alumni relationship group). Accordingly, this paper sets up two dummy variables X_1 and X_2. If the alumni relationship between auditors and company executives changes from "no" to "yes", X_1 takes the value of 1. If the alumni relationship changes from yes to no, the X_2 value is 1. On this basis, the regression model is constructed for the empirical test.

$$RP_{PEG} = \alpha_0 + \alpha_1 X_1 + \sum \gamma Controls + \varepsilon \quad (10)$$

$$RP_{PEG} = \alpha_0 + \alpha_1 X_2 + \sum \gamma Controls + \varepsilon \quad (11)$$

It can be seen from Table 10 that the coefficients of X_1 are 0.01 and 0.02 respectively, and are significantly positively correlated at the level of 5%, which indicates that when alumni relationship starts from scratch (reinforcement group), investors demand higher investment returns in the changing year. The coefficients of X_2 of alumni relationship in Table 11 are not significant, indicating that there is no significant difference between the cost of equity capital and before the change when the alumni relationship changes from existing to non-existent (weakened group). Therefore, this paper further proves the conclusion of this paper from a dynamic perspective: the alumni relationship between auditors and company executives will increase the cost of equity capital.

Table 10Regression analysis of the impact of the alumni relationship improvement group on the cost of equity capital

	(1)	(2)
	RP_{PEG2}	RP_{PEG5}
X_1	0.01**	0.02**
	(2.56)	(2.55)
SIZE	0.01**	-0.00
	(2.24)	(-0.75)
ROE	-0.07***	-0.06*
	(-2.68)	(-1.76)
LEV	0.02	0.03**
	(1.29)	(2.00)
MB	0.00	-0.00
	(1.35)	(-0.68)

CFO	-0.05*	-0.00
	(-1.68)	(-0.03)
GROWTH	0.00	-0.01
	(0.79)	(-0.79)
VOLUME	0.01	0.00
	(0.37)	(0.16)
BETA	0.00	-0.00
	(0.31)	(-0.15)
INDIR	-0.05	0.21*
	(-1.18)	(1.72)
MARKET	0.00	0.00
	(0.60)	(1.24)
CONSTANT	-0.06	0.09
	(-0.69)	(0.98)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	444	444
Adjusted R-squared	0.14	0.08

Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

Table 11Regression analysis of the impact of weakened alumni relationships on the cost of equity capital

	(1)	(2)

	RP_{PEG2}	RP_{PEG5}
X_2	0.00	0.00
	(0.95)	(0.23)
SIZE	0.00	-0.00
	(1.24)	(-0.17)
ROE	-0.03	-0.06*
	(-1.34)	(-1.81)
LEV	0.04***	0.02
	(2.66)	(0.97)
MB	0.00	-0.00
	(0.19)	(-0.17)
CFO	-0.00	0.04
	(-0.11)	(0.76)
GROWTH	-0.01	-0.02*
	(-1.20)	(-1.91)
VOLUME	0.03	0.03
	(1.40)	(1.38)
BETA	0.03**	-0.03
	(2.05)	(-1.32)
INDIR	-0.03	0.07
	(-0.53)	(0.71)
MARKET	-0.00	0.00

	(-0.65)	(0.82)
CONSTANT	0.09 (0.92)	0.23* (1.76)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	374	374
Adjusted R-squared	0.08	0.14

Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

6.5 Endogeneity test

6.5.1 Propensity score matching (PSM) test

To control the comparability between the experimental group and the control group and avoid the experimental error caused by the incomparability of the data, PSM was adopted in this paper to weaken the different degrees of the control group samples. Referring to the research of Chen et al. (2011) and Guan et al. (2016), firstly, we choose Asset size (*SIZE*), Return on equity (*ROE*), Asset-liability ratio (*LEV*), Book-to-market ratio (*MB*), Operating cash flow (*CFO*), Revenue growth rate (*GROWTH*), Proportion of stock transactions (*VOLUME*), Systemic risk (*BETA*), Independent director ratio (*INDIR*) and Marketization index (*MARKET*) as a matching variable; secondly, Logit is used for regression, so the propensity score value of the company is equal to the dependent variable fitting value at the moment; finally, the samples with and without alumni relationship were matched with propensity score values respectively, and the control group matched with the treatment group was finally obtained. The results after matching are shown in Table 12: *Match* regression coefficients were 0.01 and 0.04, respectively, and were significantly positively correlated at the 1% level. It can be seen from the regression results that, consistent with the previous results, the alumni relationship between auditors and company executives is significantly positively correlated with the cost of equity capital.

Table 12Propensity Score Matching Results

	(1) RP_{PEG2}	(2) RP_{PEG5}
Match	0.01*** (3.22)	0.04*** (6.20)
SIZE	0.00 (0.13)	-0.00 (-1.44)
ROE	-0.01	0.01

	(1)	(2)
	(-0.53)	(0.81)
LEV	0.02***	0.02*
	(3.38)	(1.71)
MB	0.00	0.00***
	(0.21)	(2.64)
CFO	-0.03*	-0.05**
	(-1.78)	(-2.21)
GROWTH	-0.00	-0.00
	(-1.00)	(-0.41)
VOLUME	0.01	0.01
	(1.64)	(0.77)
BETA	-0.00	0.00
	(-0.11)	(0.01)
INDIR	-0.03	0.10
	(-0.93)	(1.35)
MARKET	-0.00	-0.00
	(-1.17)	(-0.81)
CONSTANT	0.07*	0.12**
	(1.80)	(2.01)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	2640	2640
Adjusted R-squared	0.09	0.12

*Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.*

6.5.2 Placebo test

To avoid potential interference of self-differences and unobservable variables in the experimental results, the placebo test was used in this paper. The specific idea is: that assuming that the alumni relationship between auditors and company executives does affect the cost of equity capital, it should not produce any significant results in other years. If similar results are detected in other time periods, then the alumni relationship is not the only reason for the change in the results.

For example, if the alumni relationship exists between auditors and company executives in 2007, and the empirical result on the cost of equity capital is significantly positive, then it is assumed that the alumni relationship exists in 2006, but in fact, there is no such relationship, to analyze whether alumni relationship has a significant impact on the cost of equity capital. If significant results are observed in 2006, the effect may be due to other reasons, rather than alumni relationships. Therefore, according to the idea of a placebo test and the experiment of Abadie et al.， (2012), the test time was changed to 2006-2018. Table 13 is the estimated results of the placebo test. The results in columns (1) and (2) show that the coefficients corresponding to *Match* are not significant, which proves that the results in this paper are robust.

Table 13Placebo Test

	(1)	(2)

	RP_{PEG2}	RP_{PEG5}
Match	-0.00	-0.00
	(-1.09)	(-0.06)
SIZE	0.00	-0.00
	(1.60)	(-0.19)
ROE	-0.03***	-0.03***
	(-4.98)	(-3.64)
LEV	0.02***	0.02***
	(4.66)	(5.75)
MB	-0.00	0.00
	(-0.29)	(0.82)
CFO	-0.00	-0.01
	(-0.06)	(-0.81)
GROWTH	0.00	-0.00
	(0.13)	(-0.24)
VOLUME	0.01***	0.02***
	(3.98)	(4.19)
BETA	0.01**	-0.00
	(2.21)	(-0.87)
INDIR	0.01	0.02
	(0.81)	(1.23)
MARKET l	-0.00***	-0.00*

	(-3.25)	(-1.92)
CONSTANT	0.06***	0.09***
	(3.02)	(3.56)
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	18968	18968
Adjusted R-squared	0.05	0.04

*Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.*

6.6 Robustness test

To evaluate the reliability of the conclusion, various tests are carried out to prove the validity of the conclusion.

6.6.1 Use other metrics to measure the cost of equity capital.

PEG model was mainly used for the empirical test in the previous paper. Here, two other common estimation models of ex-post equity capital cost, the MPEG model (Easton, 2004) and the OJN model (Ohlson et al., 2005), were selected for the sensitivity test of equity capital cost. To enhance the robustness of the results, the regression results are shown in Table 14. It can be seen from Table 14 that the regression result remains consistent with the previous one after the measurement method of cost of equity capital is changed.

Table 14Alternative Metrics

	(1) RP_{MPEG}	(2) RP_{OJN}
Match	0.01** (1.99)	0.00*** (2.69)
Controls	Yes	Yes
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	19838	8292
Adjusted R-squared	0.16	0.25

*Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.*

6.6.2 Fixed effects and random effects

To improve the reliability of the sample estimation results, we adopted the fixed effect and the random effect for regression. Columns (1) and (2) show the fixed effect results, columns (3) and (4) represent the random effect results, and the corresponding coefficients of *Match* are significantly positively correlated at the level of more than 5%, indicating that, the alumni relationship does increase the cost of equity capital, and the regression results are consistent with the previous conclusions.

Table 15Fixed and random effects

	(1)	(2)	(3)	(4)
	RP_{PEG2}	RP_{PEG5}	RP_{PEG2}	RP_{PEG5}
Match	*0.00***	*0.04****	*0.01****	*0.04****
	(2.09)	*(7.28)*	*(3.63)*	*(8.87)*
Controls	*Yes*	*Yes*	*Yes*	*Yes*
INDUSTRY FE	*Yes*	*Yes*	*Yes*	*Yes*
YEAR FE	*Yes*	*Yes*	*Yes*	*Yes*
N	*19838*	*19838*	*19838*	*19838*
Adjusted R-squared	*0.09*	*0.07*	*0.08*	*0.06*

*Note: t values are adjusted for company clustering, *, **, and *** represent significance levels of 10%, 5%, and 1%, respectively.*

6.6.3 Take different ways to shrink the tail

This paper changes the tailing degree of continuous variables, increases the winsorize level from 1% to 2%, and makes the regression again. The regression results showed that the coefficients of *Match* were 0.01 and 0.03, and there was a significant positive correlation at the 1% level. The regression results were generally consistent with the results of the main test.

Table 16Different ways of shortening

	(1)	(2)
	RP_{PEG2}	RP_{PEG5}
Match	0.01***	0.03***
	(2.81)	(6.08)
Controls	Yes	Yes
INDUSTRY FE	Yes	Yes
YEAR FE	Yes	Yes
N	19838	19838
Adjusted R-squared	0.06	0.07

Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.

6.6.4 Exclude 2007 data

The new accounting standards were officially implemented in 2007. To avoid the noise caused by the implementation of the new accounting standards, the paper removed the data from 2007 and made a regression again. The regression results are shown in Table 17.

Table 17excludes 2007 data

	(1) *RP_{PEG2}*	*(2)* *RP_{PEG5}*
Match	*0.01**** *(3.27)*	*0.04**** *(6.28)*
Controls	*Yes*	*Yes*
INDUSTRY FE	*Yes*	*Yes*
YEAR FE	*Yes*	*Yes*
N	*18651*	*18651*
Adjusted R-squared	*0.06*	*0.07*

*Note: in this paper, all standard errors of regression coefficients are clustered at the firm level. *, ***, and *** represent significance levels of 10%, 5%, and 1%, respectively.*

7. Conclusions

The results show that the alumni relationship between auditors and executives has a significant impact on the cost of equity capital when external investors measure project risk. This evidence proves that the existence of alumni relationship increases the risk of collusion, investor's decisions are affected to a certain extent, and the cost of equity capital changes. The sampling mechanism shows that the relationship has a more significant impact on the cost of equity capital between core executives and auditors, between audit engagement partner and company executives, and between auditors and company executives who graduated in the same year and major. At the same time, the positive effect of alumni relationships on the cost of equity capital is tested from the dynamic perspective, and the influence of alumni relationships on the cost of equity capital is significantly increased from the nonexistence to the existence.

Alumni relationships between core executives and auditors have a significant positive correlation with the cost of equity capital. For core executives, they have higher control and decision-making power, and can have a material impact on financial reporting. Compared with core executives, non-core executives are not in an advantageous position in financial reporting, and their decisions are not directly related to the accounting information system, and the alumni relationship between the two has no significant impact on the cost of equity capital. As a result, investors should factor in alumni connections between core executives and auditors when considering expected returns.

The alumni relationship between audit project leaders and company executives is positively correlated with the cost of equity capital. The engagement partner is more familiar with the audit process and business allocation of the whole project, which consumes more time and energy, while the project reviewer is required to participate in the audit process only through the review, and shall not interfere in the audit work too much. Therefore, investors should pay more attention to the impact of alumni relationships between the audit partner and company executives when assessing risk.

The alumni relationship between auditors who graduated in the same year and in the same major and company executives has a significant positive correlation with the cost of equity capital. Same year graduation have the same students will experience and similar social experience increased each other communication between the auditor and company executives, and the alumni relationship between alumni of the same major can better form an intimate relationship between the two sides. Through this special intimate relationship, the communication between the two sides can be increased, which is more conducive to the opportunistic behavior of company executives, the construction of collusive channels, and the damage to the interests of report users. Therefore, investors should pay reasonable attention to the influence factor of special alumni relationships.

8. Recommendations

8.1 Increase investor's risk awareness and improve the accuracy of risk assessment.

Investors should be more aware of the risks associated with nepotism. When judging the feasibility of the project, external investors should take personal relationship into consideration, pay attention to the risks brought by alumni relationship between auditors and company executives, improve risk awareness and make prudent decisions.

8.2 Strengthen cooperation and exchange mechanisms and improve corporate governance.

On the premise of ensuring the independence between auditors and company executives, further use of the cooperation and exchange mechanism between auditors and company executives, smooth information exchange, so as to improve the governance level of listed companies.

8.3 To establish a special relationship avoidance system and expand the scope of supervision.

At present, audit standards require auditors to withdraw from the audit process if there is a family relationship between the auditor and the company's senior executives for the sake of independence. However, this code does not involve an alumni relationship. Market supervision departments should focus on the influence of informal systems such as alumni relationships, require listed companies to disclose their association with certified public accountants in detail, and impose strict punishment on insider trading between alumni.

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Pakistani Banks: Evaluating Pre and Post-Pandemic Performance via Corporate Governance and CSR Reporting

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Abstract:

This research delves into the influence of corporate governance policies and rules on corporate social responsibility (CSR) and the banking sector's performance in Pakistan before time and also during the time of pandemic. Utilizing data from 31 banks between 2011-2018 (pre-COVID) and 2019-2020 (COVID era), using STATA we explore how elements like gender diversity, non-executive directors (COMPNEDs), foreign representation, board independence, and size impact the CSR reporting. We additionally examine how attainment discrepancy and organizational slack moderate the connection between corporate governance and CSR. Results show that robust corporate governance positively affects both CSR practices and financial performance, especially in crisis periods. Additionally, attainment discrepancy and organizational slack significantly moderate this relationship. Specifically, board independence, foreign representation, and bank slack were pivotal in CSR reporting during the pandemic, with board composition surpassing board size in significance. This study contributes to understanding corporate governance and CSR in developing markets, offering valuable insights for policymakers, practitioners, and scholars when navigating unforeseen circumstances.

Key Words: Corporate Governance, Corporate Social Responsibility, Attainment Discrepancy, Organizational Slack, Agency Theory, Behavioral Theory of Firm.

Introduction:

Before the rise of CSR initiatives, there existed a substantial debate among scholars and industry experts for the past two decades regarding the most effective corporate governance practices. The financial crisis of 2008 not only marked a pivotal moment for American Corporate Governance but also shed light on the significance of CSR. Furthermore, CSR disclosures play a crucial role in corporate governance by aiding the board in resource allocation decisions and determining the firm's CSR rating, which is essential for investors and customers to gauge its capacity and standing. Considerable research has focused on this aspect, examining key micro and macro financial indicators such as size of company, it's risk management, environmental impact, and position of market (Deegan and Newson, 2002; Roberts, 1992; Herremans et al., 1993; Tilt 1994).

Corporate Social Responsibility (CSR) is defined by Hill et al. (2007) as encompassing the legal, economic, moral, and humanitarian actions undertaken by companies that impact the well-being of key stakeholders. CSR, in essence, elucidates how businesses manage their operations to generate an overall positive impact on society—going beyond mere compliance with monetary and legal obligations. Scholars argue that a flourishing community embodies prosperity, good health, and education, underscoring CSR's pivotal role in fostering such an environment through robust relationships between communities and corporate entities. Based on a survey conducted by Price Water House Cooper's International (2002), around 70% of corporate executives perceive Corporate Social Responsibility (CSR) as essential for a company's growth and continuity (Simms, 2002). Consequently, modern organizations firmly acknowledge that their success is intricately linked to societal well-being; acknowledging that a business cannot exist in isolation but must recognize its place in society. As a result, companies feel a responsibility to reciprocate to society for the advantages and benefits they've gained from it.

Financial institutions, particularly banks, encounter significant pressure to divulge information regarding their business interests and corporate social responsibility (CSR) activities (Gill, 2008; Matten, 2006; Schepers and Money, 2007). Previous studies (Gray et al., 1995b; Scholtens, 2008; Salama et al., 2011; Godfrey et al., 2009; Ghoul et al., 2011) acknowledge the substantial impact of CSR disclosure on stakeholders' perceptions of a firm's performance and value. Furthermore, comprehensive CSR reporting plays a crucial role in managerial oversight and control by reducing information asymmetry between investors, management, and other stakeholders. Therefore, effective boards of directors should actively promote CSR practices (Jamali et al., 2008).

In contemporary capital markets, the correlation among CSR, corporate governance, and financial performance remains uncertain despite their pivotal roles. This study endeavors to fill this research gap by examining the connection between corporate governance practices or traits and CSR in Pakistan's banking sector. It seeks to do so while considering factors such as organizational slack and attainment difference. Essentially, the study delves into how the decision-making process of boards concerning CSR disclosures and sustainability reports is influenced by the effectiveness of Pakistani bankers and their capability to utilize organizational resources.

For a considerable time, studies on CSR predominantly focused on its impact on companies' financial performance (Orlitzky et al., 2003; Graves & Waddock, 1997). However, recent attention has shifted towards understanding why actually businesses engage in CSR practices (e.g., Campbell, 2007; Han & Zheng, 2016) and the mechanisms to enhance their performance (e.g., Santos & Pache, 2013). Organizations are increasingly motivated to bolster their intended CSR actions, especially given pressing social issues like global warming and poverty (Jenkins, 2005). This trend is mostly notable in countries like Japan, where firms are predictable to demonstrate a comprehensive commitment to well-being of employees, customer satisfaction, social responsibility (Suzuki & Hosoda, 2015), and environmental protection.

The emergence of corporate social responsibility (CSR) reporting in banks has become integral to corporate governance, driven by stakeholder demands for increased transparency and accountability. Yet, there's a lack of research exploring the moderating role of attainment discrepancy and organizational slack in the connection between corporate governance and CSR reporting in Pakistan's banking sector. This study aims to compare variable results before and during the COVID period. It aims to assist firms in devising effective strategies to integrate CSR reporting and robust corporate governance amidst changing conditions, highlighting how attainment discrepancy and organizational slack can influence this equilibrium during crises. The significance of study is underscored by its potential to deepen our understanding of the connection between CSR reporting and corporate governance during times of worldwide turmoil and uncertainty, while also offering practical guidance to organizations in navigating these essential practices in an evolving world.

BEHAVIORAL THEORY OF FIRM (BTOF) & CSR

The Behavioral Theory of the Firm, as introduced by James G. March and Richard M. Cyert in their influential book "A Behavioral Theory of the Firm" (Cyert and March, 1963), examines the internal dynamics of companies. It delves into how economic activities, production decisions, scheduling, and inventory management are conducted within organizations. Often termed as a judgement theory, it outlines the conditions influencing operational decisions and their value-adding outcomes. Factors like ownership rights, liabilities, resource control, and authority play a role in shaping these decisions, which are seen as a sequential process involving both logical and irrational components. Cyert and March (1963) suggest that organizations are essentially networks where resource allocation decisions stem from coalition-building among stakeholders or negotiations within stakeholder unions.

Although many banks' social programs can be viewed through this perspective, some researchers haven't given sufficient standing to these social processes. This study considers the performance feedback perspective and behavioral agency aspect of the behavioral theory of the firm. (Scherer & Palazzo, 2007) The theory addresses situations where managers operate under constraints (bounded rationality) and when there's disagreement between owners (shareholders) and managers about goals. It emphasizes the performance of executives, suggesting that if motivated properly, executives' actions align with the interests of shareholders and agents (Gore & Pepper, 2015).

The Behavioral Theory of the Firm (BTOF) applies the perspective of performance feedback to measure how organizational performance affects the association between Corporate Governance (CG) and Corporate Social Responsibility (CSR) reporting. BTOF suggests that organizations, acting as goal-driven systems, adapt their actions based on whether their performance exceeds or falls short of their set benchmarks. When actual performance surpasses expectations, managers tend to wield greater discretionary powers, even with strong corporate governance. Conversely, if performance lags, managers' authority tends to be more restricted, leading to a focus on cost-cutting measures in response to poor performance. Therefore, assessing organizational slack and attainment discrepancy is crucial, as they not only influence corporate governance but also elucidate variations in firms' engagement with CSR activities.

Hypotheses Development & Literature Review:

CSR & Corporate Governance (CG):

Shareholders turned their focus to corporate governance due to several global controversies in leadership and organizational management. According to Dahya et al. (1996), corporate governance (CG) represents how corporations are managed and the responsibility of those overseeing the company's direction to its shareholders. Therefore, corporate managers must effectively utilize resources to benefit all stakeholders, ensuring sound corporate governance. As various parties, including individuals, management, and society, hold a stake in operations, corporate leaders are obliged to protect the interests of all involved and strike a balance between their rights and responsibilities. Trust in management can't be blind until there's a suitable framework guaranteeing transaction transparency. To address this, management should establish a CSR reporting system that satisfies both society and investors, ensuring transparency (Ye et al., 2021). Despite CSR's recognized impact on company performance, understanding how it operates within banks remains unclear (Zaman et al., 2022).

Customers of banks worldwide are increasingly aware of their rights and have substantial influence on a company's performance through their demands for corporate social responsibility (CSR). Consequently, banks globally are intensifying their engagement in CSR activities (Owen and Belal, 2007; Khan et al., 2009). In the realm of corporate governance, the banking industry is placing greater emphasis on critical CSR initiatives (Patten, 1992). High-profile scandals at companies like Enron, Parmalat, and WorldCom have spotlighted ethical disquiets regarding boards, audit teams, risk and control measures, compensation structures, governance, and corporate frameworks (Lindblom, 1993). Unlike other sectors, the banking industry faces more pressure to exhibit transparency by disclosing relevant CSR information to decision-makers and key stakeholders.

Beji et al. (2020) suggest that businesses with a greater ratio of female directors demonstrate enhanced governance standards. Increased female representation on boards is believed to bolster board oversight by bringing diverse talents and experiences, thus enriching the board's human resource and promoting better conduct of board (Terjesen et al., 2009; Hillman & Dalziel, 2003). This diversity in board composition has become crucial in the Pakistani banking sector, as it is recognized that diverse perspectives, experiences, and ideas positively impact a firm's performance, leading to financial improvements (Fields and Keys, 2003). Some banks prioritize their social responsibilities, and in managing differences between management, stakeholders, and owners, non-executive directors act as mediators (Jensen & Fama, 1983). Agency theory posits that boards with a higher proportion of independent directors excel in managing and monitoring management, steering them towards long-term decisions that enhance company value and ensure transparency. Smaller boards are often considered more effective in managing and monitoring, benefiting from increased commitment and accountability among board members, fostering better communication and coordination (Dey, 2008; Ahmed et al., 2006; Bukair et al., 2015).

So, we hypothesize that:

H1a. In the pre-COVID period, Corporate Governance positively influenced CSR Reporting.
H1b. In the post-COVID period, Corporate Governance positively influenced CSR Reporting.
The equation for estimating the corporate governance model is:

$$\text{CSR Reporting}_{i,t} = \beta_0 + \beta_1 \text{FOROWN}_{i,t} + \beta_2 \text{GenderDiversity}_{i,t} + \beta_3 \text{COMPNEDs}_{i,t} + \beta_4 \text{BoardSize}_{i,t} + \beta_5 \text{BoardIndependence}_{i,t} + \varphi_j \text{ControlVariables} + \varepsilon_{i,t}$$

CSR & Attainment Discrepancy

Enterprises usually establish both financial objectives and non-financial goals, such as Corporate Social Performance (CSP) targets. Long-term assets like legitimacy, linked to strong CSP (Doh et al., 2010) and reputation (Oh et al., 2011; Homburg et al., 2013; Tsang & Su, 2015), are pivotal. Financial and non-financial goals differ and can mutually impact each other. Financial pursuits, like cost-cutting, enhancing customer service, and investing in R&D, contrast with non-financial activities, which might relate to both financial and non-financial organizational aims. For instance, CSR disclosures aim to engage social stakeholders like nonprofits (Das et al., 2015), influencing how financial stakeholders perceive the company (McWilliams and Siegel, 2011). Firms augment their societal impact by engaging in CSR endeavors, often showcased in their reputation or legitimacy (Zahra et al., 1993), fostering stakeholder acknowledgment and setting them apart from competitors.

In accordance with the BTOF model, businesses consist of actual and desired performance. When aspirations are not met, managers aim to narrow this disparity (e.g., Lant et al., 1992; Greve, 2003; March & Cyert, 1963). A company's performance concerning its history and industry benchmarks facilitates effective resource allocation. Entities performing below industry norms strive to attain that standard, while those at par aim to reach their desired performance level (Fiegenbaum & Thomas, 1988). This concept is termed "attainment discrepancy," denoting the variance between actual and desired performance (Lant, 1992). The positive attainment discrepancy occurs when actual performance exceeds anticipated performance, while negative discrepancy occurs when desired performance exceeds actual performance. Higher positive discrepancy allows managers more decision-making power in resource allocation, leading to increased investment in CSR activities, higher CSR performance, and comprehensive CSR reporting. According to BTOF, higher discrepancy correlates with better financial performance, whereas lower performance may result in reduced CSR performance and reporting (Arora and Dharwadkar, 2011).

Banks facing a substantial attainment gap may struggle to effectively address challenging situations like a pandemic, potentially leading to concerns about their reputation and a negative public perception (Yadav & Srivastava, 2021). However, banks with a strong history of fulfilling their social responsibility commitments might be better equipped to navigate pandemic-related challenges and maintain stakeholder confidence. This could attract customers, investors, and employees, fostering a more favorable view of the bank's brand and reputation (Khatib et al., 2021). In essence, during the pandemic, the attainment disparity significantly influences banks' CSR reporting. Banks that successfully narrow the gap between their stated commitments to social responsibility and their actual actions and impact may be better prepared to handle the pandemic's challenges, ensuring stakeholder trust and confidence.

Thus, we hypothesize:

H2a. In the pre-COVID period, Attainment Discrepancy had a positive impact on CSR Reporting.

H2b. In the post-COVID period, Attainment Discrepancy had a positive impact on CSR Reporting.

The equation for estimating the attainment discrepancy is:

$$\text{CSR Reporting}_{i,t} = \beta_0 + \beta_1 \text{AttainmentDiscrepancy} + \varphi_j \text{Control Variables} + \varepsilon_{i,t}$$

CSR & Organizational Slack:

The stakeholder theory suggests that different stakeholders affect how a business operates. Therefore, apart from making profits, a company aims to meet the diverse needs of various stakeholders. Companies facing economic challenges and lacking internal resources are more likely to neglect their CSR practices.

Various studies have looked into the relationship between CSR performance and organizational slack. For instance, some research concludes that companies constrained by financial limitations spend more on CSR when their performance is strong. Other studies show that having discretionary organizational slack, particularly related to cash flow, positively influences monetary donations, indicating corporate generosity. However, findings vary. Some studies following agency theory suggest a negative link between financial slack and social performance in a company. Conversely, studies using the behavioral theory of the company establish both positive and negative relationships between absorbed or unabsorbed slack and environmental and societal performance. Thus, the relationship between slack and CSR remains vague. Nevertheless, CSR disclosures in annual reports provide comprehensive information for stakeholders to understand a company's CSR activities better, enabling investors to assess a company's long-term value and sustainability. Banks often concentrate their CSR information in the corporate sustainability section of annual reports. A shortage of organizational slack might constrain a bank's dedication to CSR and sustainability reporting. Banks with more personnel than necessary can adapt their human resource capacity to collect data and create voluntary sustainability and CSR reports. Organizational slack has a positive impact on enhancing CSR performance by signifying potential resources that aid companies in adopting particular strategic paths. Accessible resources enable businesses to endorse social initiatives and meet stakeholder expectations. However, research findings differ regarding the relationship between slack and financial performance. Some studies show a positive relationship, while others suggest a non-linear or threshold-based association, indicating a point where excess slack becomes wasteful. Some studies fail to consider uncommitted liquid resources and absorbed costs, essential components of slack. This study specifically examines CSR concerning high discretion. High discretion can be categorized into potential slack and availability slack. The debt-to-equity ratio gauge potential slack, illustrating a company's capability to swiftly obtain cash if necessary. Higher slack tends to increase CSR, while lower slack lowers CSR. So, the hypothesis is:

H3a. In the pre-COVID period, Organizational Slack had a positive impact on CSR Reporting.
H3b. Organizational Slack had a positive impact on CSR Reporting in Post-COVID Period.
The model equation for organizational slack is:

$\text{CSR Reporting}_{i,t} = \beta_0 + \beta_1\text{OrganizationalSlack} + \varphi_j\text{Control Variables} + \varepsilon_{i,}$

Integrating CSR Reporting, CG & Moderators:

Figure 1 displays the interaction between Corporate Governance (CG) and Corporate Social Responsibility (CSR), moderated by attainment discrepancy and organizational slack (firm performance satisfaction). The table details the expected relationships among these variables. Firm performance, including resource availability and financial goal achievement, guides CSR allocation decisions along the horizontal axis. Board size, board gender diversity, independence, non-executive directors, and representation of foreign non-executive directors' impact CG effectiveness on the vertical axis (Arora and Dharwadkar, 2011). While these trends generally apply, individual banks might deviate from them based on their specific circumstances. As of now, we anticipate these connections to be generally applicable.

Based on this, we draw hypothesis that:

$H4a_1$: Low organizational slack coupled with a high level of attainment discrepancy results in a reduced level of CSR reporting.

$H4a_2$: A high level of organizational slack combined with a high level of attainment discrepancy results in a moderate level of CSR reporting.

H4a₃: A high level of organizational slack paired with a low level of attainment discrepancy leads to a high level of CSR reporting.

The model estimation technique for moderation is:

CSR Reporting$_{i,t}$ = $\beta_0 + \beta_1 CG + \beta_2 AD + \beta_3 CG{*}AD + \beta_4 OS + \beta_5 CG{*}OS + \varphi_j Control\ Variables + \varepsilon_i$

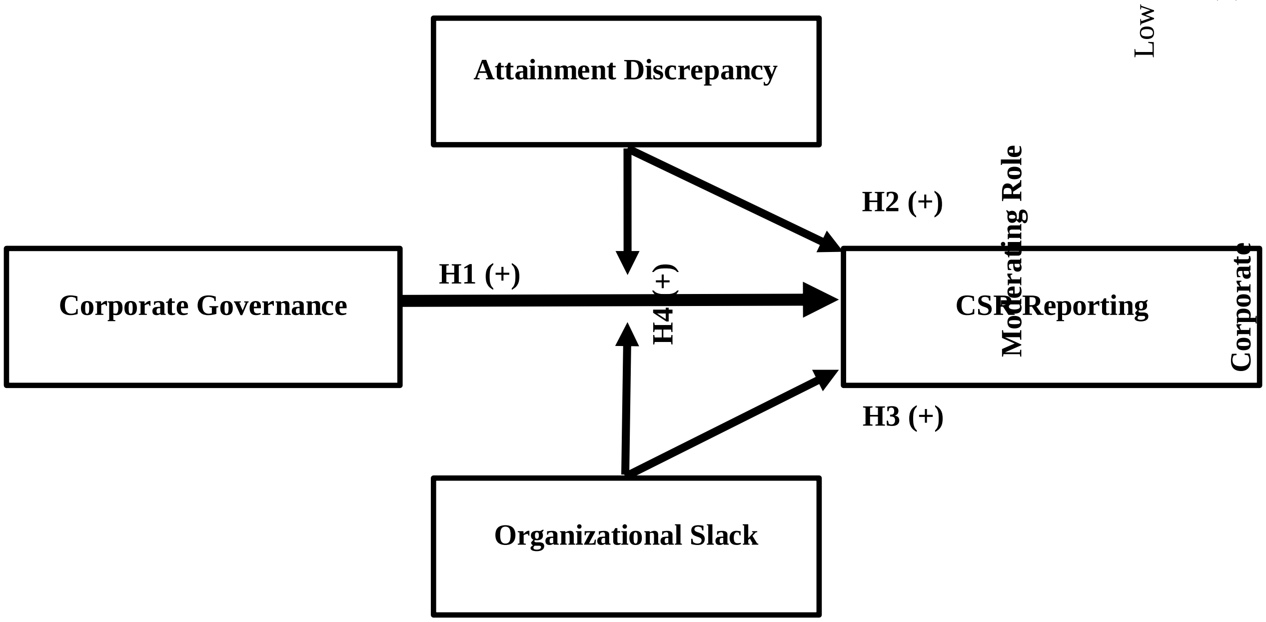
Fig. 1.

Moderating Role	***Low***	***Moderate***	***High***
Corporate Governance	High discrepancy Low slack	High discrepancy High slack	Low discrepancy High slack
Strong	Low CSR Reporting	Moderate CSR Reporting	High CSR Reporting
Weak	No CSR reporting	Low CSR Reporting	Moderate CSR Reporting

Moderating Role	Low	Moderate	High
	Low organizational slack, High attainment discrepancy	High organizational slack High attainment discrepancy	High organizatio Low attainment d
Corporate Governance Strong	Low level CSR reporting	Moderate level of CSR reporting	High level CSR

RESEARCH MODEL

Fig. 2



METHODOLOGY

Study Sample

This study aims to explore two main aspects: firstly, the relationship between corporate governance and CSR reporting within Pakistani Banks before and during the pandemic, and secondly, whether this relationship is influenced by organizational slack and attainment discrepancy. Data was collected from annual reports of banks covering the period from 2011 to 2020, with COVID period data specifically from 2019 and 2020. To ensure consistency and uniformity, banks with missing data were excluded from the sample, resulting in a total of 31 banks, 22 of which are registered with the State Bank of Pakistan. This data forms a balanced panel, providing 51 observations for each year and totaling 310 observations across 10 years for the 31 banks. The sample was divided into two periods: pre-COVID (2011-2018) with 248 observations, and during-COVID (2019-2020) with 62 observations for further analysis and comparison.

Table 1. Banks Name

Allied Bank Ltd (ABL)	Habib Bank Ltd.	Samba Bank
Askari Bank	Habib Metropolitan	Silk Bank
Bank Al-Habib Ltd.	JS Bank	Sindh Bank
Bank Alfalah	MCB	Soneri Bank Ltd.
Bank Islami	Meezan	Industrial Development Bank
SME Bank	Bank of Khyber	Al-Baraka Bank (Pakistan) Ltd.
United Bank Ltd (UBL)	Zarai Taraqiati Bank	Bank Islami Pakistan Ltd.
The Bank of Punjab (BOP)	Citi Bank	Dubai Islamic Bank Pakistan Ltd.
Faysal Bank	Deutsche Bank AG	Standard Chartered Bank
National Bank of Pakistan (NBP)	Summit Bank	The Punjab Provincial Cooperative Bank
Industrial and Commercial Bank of China		

MEASURES

Corporate Governance:

The measures employed for corporate governance encompass gender diversity, presence of foreign and non-executive directors (COMPNEDs), board independence, and board size. The calculations for these measures are detailed in Table 2. Notably, CEO duality is excluded due to State Bank of Pakistan (SBP) regulations prohibiting banks from having CEO duality, necessitating separate individuals to hold the roles of CEO and Chairman.

Table 2. Measures OF Corporate Governance

FOROWN	Foreign directors on board/ Total BOD
COMPNEDs	Non-executive directors/ Total BOD
Gender Diversity	Women on the board/ Total BOD
Board Independence	Independent directors/ Total board members
Board Size	Ln (Members of BOD)
Board Independence	Independent directors/ Total board members

Corporate Social Responsibility (CSR) Reporting:

Following the framework proposed by Gray et al. (1995a), we crafted a measure for CSR reporting that encompasses Social Products and Service Quality, Employees, Environment categories and Community Involvement, each including respective sub-categories (listed in Appendix A). Employing content analysis technique, we coded the data content for each sub-category, adhering to the approach used in previous research within the Pakistani commercial context (Ali et al., 2008; Khan et al., 2009). For coding, if a company disclosed specific information, it was coded as 1, and if not, it was coded as 0, simplifying data analysis. Subsequently, a Corporate Social Responsibility Index (CSRI) was computed for each bank by averaging its performance across all sub-categories for a specific year using the formula:

$CSRI_n$ of Bank X = Sum of all sub-categories/total subcategories

Where n represents the year (2011, 2012…,2020), X denotes the bank name, and the total subcategories amount to 27.

Attainment Discrepancy:

It is determined by assessing the difference between actual and desired bank performance. The desired performance, it's aligned with the industry average ROA, gathered from State Bank's sector-specific financial reports available on their website. The actual performance is gauged by the Return on Assets, determined by Net Income divided by Total Assets. For banks performing below the industry average, that average becomes their desired performance benchmark (Bromiley, 1991). However, for banks exceeding the industry average, their last year performance is multiplied by 1.05, signaling a 5% increase. The results will be interpreted accordingly: a progressive attainment discrepancy denotes that actual performance surpassed the anticipated level, while a negative discrepancy indicates actual performance fell below the aspired one. If the discrepancy is zero, the bank achieved the desired level of performance.

Organizational Slack:

Organizational slack refers to the surplus resources a company possesses, such as financial reserves, to invest in various endeavors like CSR. It encompasses both available and potential slack. Available slack comprises cash and accounts receivable, while potential slack is represented by the debt-to-equity ratio. These measures indicate highly flexible resources. To compute available slack, we log-convert cash and accounts receivables and then aggregate both measures (Punit and Ravi, 2011).

Controlling Variables:

These are:

Firm Size:

Burke et al. (1986) observed that larger companies frequently face increased scrutiny and greater pressure to meet stakeholder expectations. Instead of using the total sales and assets, typically used in previous studies, we opted to gauge company size based on the number of employees. This decision aims to prevent potential issues of multicollinearity, as metrics like ROA already incorporate total assets. By utilizing staff count, we sidestep this concern without compromising information. Also, given that company size can be skewed and deviate from a normal distribution, we log-transform this variable.

Meetings of Audit Committee with board

The frequency of audit committee meetings serves as a control variable, reflecting the efficiency of audit processes, regular financial audits, and effective interdepartmental communication. It's quantified by the number of annual audit committee meetings.

Infection Ratio:

The infection ratio is determined by dividing Non-Performing Loans (NPLs) by the Total Gross Advances, that serves as a control variable representing the inefficiency in recovering non-performing loans. This metric indicates a bank's performance and adherence to corporate governance standards, with a higher ratio reflecting inefficiency and less compliance by bank managers.

RESULTS

Descriptive Statistics

The table 3 shows the total number of observations that are 310 and the variables' mean, standard deviation, minimum and maximum values.

Table 3. Descriptive Statistics

Sr.#	Variables	Obs.	Mean	Std. Dev.	Min.	Max.
1	CSRRI	310	.7525	.1035	.4814	.9629
2	Foreign Directors (FOROWN)	310	.1579	.1905	0	.7142
3	Gender diversity	310	.2096	.3230	0	.9259
4	Non-executive Directors (COMPNEDs)	310	.4104	.1202	.2222	.7142
5	Board Size	310	2.065	.1093	1.791	2.197
6	Board Independence	310	.3209	.1184	0	.7142
7	Infection Ratio	310	.2175	.2134	0	.7781

8	Audit Committee (A.C.) Meetings with Board	310	.5361	.1195	0.301	.7781
9	Firm size	310	3.261	.7563	1.945	4.322
10	Attainment Discrepancy (A.D.)	310	.0727	.2146	-.0016	.9985
11	Organizational Slack (O.S.)	310	18.56	11.50	-8.968	65.02

#1: Dependent Variable, #2 to #6 are Independent Variables, #7 to #09 are the Control Variables and #10 & #11 are Moderators.

Correlation

We followed Cohen's (1988) guidelines in interpreting Table 4, assessing correlation strength between variables. According to Cohen's criteria, values between 0.1 to 0.3 suggest a small correlation, 0.3 to 0.5 imply moderate correlation, and values surpassing 0.5 indicate a strong correlation, ranging from -1 to +1. In Table 4, gender diversity and CSRRI display a significantly positive but small correlation, suggesting a slight rise in CSRRI with increased women's representation on the board. Foreign directors also positively correlate with CSRRI, indicating a minor rise with increased foreign ownership. Similarly, COMPNEDs, gender diversity, and foreign ownership show a significant yet small association, implying a slight increase in gender diversity and foreign ownership with rising COMPNEDs. Board independence exhibits a significant negative correlation with gender diversity and COMPNEDs, strongly linked to gender diversity and less strongly to COMPNEDs. However, it shows a slight positive correlation with board independence, suggesting a minor increase with a larger board. Firm size significantly correlates with various factors, notably negatively with gender diversity and slightly with COMPNEDs. Conversely, it moderately increases foreign ownership and board size, while notably increasing board independence in larger firms.

Table 4. Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11
CSRRI	1										
Gender diversity	.3120*	1									
FOROWN	.2246*	-.0977	1								
COMPNEDs	.2067*	.3271*	-.1018	1							
Board Independence	-.0250	-.4557*	.0330	-.1804*	1						
Board Size	.1061	-.0750	-.0315	-.1621*	.1943*	1					
Firm size	.0122	-.8477*	.1320*	-.3510*	.5219*	.1817*	1				
A.C. Meetings	.4636*	.2360*	.0599	.3917*	-.0932	.0797	-.1564*	1			
Infection Ratio	.1670*	.8956*	-.1852*	.3612*	-.4296*	-.1384*	-.8012*	.2526*	1		
A.D.	-.2872*	.4820*	-.2321*	.1725*	-.4333*	-.1460*	-.5640*	-.0717	.4606*	1	
Organizational Slack	-.1135*	-.8390*	.1350*	-.3204*	.4221*	.1043	.8157*	-.1499*	-.7596*	-.5356*	1

** Correlation is significant at 0.05 confidence interval (Two-tailed)*

Hypotheses Testing

Pre-COVID Analysis (2011-2018)

The multiple regression analysis in Table 5 reveals several key findings. Gender diversity exhibits a significant positive relationship (coefficient value = .4455, p-value < 0.05) with CSR reporting in Pakistani banks during the pre-COVID period. This outcome supports our hypothesis that greater female representation on the board corresponds to increased CSR reporting, aligning with previous studies by Shaheen et al. (2021) and others.

Table 5.

Variables	*Coefficient*	*t-statistic*	*p-value*
Gender Diversity	.4455***	10.71	0.000
Foreign Ownership	.0373	1.59	0.113
Non-Executive Directors (COMPNEDs)	.1209***	3.14	0.002
Board Independence	-.0613	-1.53	0.128

Board Size	-.0353	-0.87	0.385
Firm size	.0879***	7.22	0.000
Audit Committee Meetings with Board	.2548***	6.29	0.000
Infection Ratio	-.2079***	-4.06	0.000
Attainment Discrepancy	-.1663***	-6.57	0.000
Organizational Slack	.0017**	2.17	0.031
Mod1 (A.D. × Gender Diversity)	1.212*	1.86	0.065
Mod2 (A.D. × Foreign Ownership)	-.1800	-0.18	0.861
Mod3 (A.D. × COMPNEDs)	.2292	0.59	0.553
Mod4 (A.D. × Board Independence)	-.5470	-0.97	0.335
Mod5 (A.D. × Board Size)	-1.597***	-3.86	0.000
Mod6 (O.S. × Gender Diversity)	.0154***	3.04	0.003
Mod7 (O.S. × Foreign Ownership)	.0032***	2.92	0.004
Mod8 (O.S. × COMPNEDs)	.0035*	1.76	0.080
Mod9 (O.S. × Board Independence)	.0003	0.15	0.878
Mod10 (O.S. × Board Size)	.0035*	1.65	0.100
Adjusted R^2	.6133		
F-Statistic	40.18		
Prob > F	0.000		
N	248		

*$p \leq 0.1$, **$p \leq 0.05$ & ***$p \leq 0.01$

The analysis disputes H2a on foreign ownership (p-value = 0.113), showing an insignificant effect on pre-COVID CSR reporting. This aligns with Branco and Rodrigues (2008), possibly due to limited foreign board involvement and a small sample size. On the other hand, pre-COVID findings reveal a significant positive link (p-value = 0.002) between non-executive directors (COMPNEDs) and CSR reporting, supporting enhanced CSR with their presence. However, board independence shows no significant relation (coefficient = -0.163) to CSR reporting pre-COVID, aligning with Siddiqui et al (2019) and Bhuiyan et al (2018). Similarly, board size lacks significance (p-value = 0.385) in CSR reporting, indicating other factors' importance. Conversely, larger banks tend to report more on CSR activities (beta=.0879). Audit Committee meeting frequency positively associates (beta = .2548), while the infection ratio negatively correlates (-.2079) with CSR reporting. Attainment discrepancy negatively relates (coefficient = -0.1663) to CSR reporting, possibly due to lower CSR confidence in banks with performance gaps. Conversely, pre-COVID organizational slack positively influences CSR reporting, in line with prior studies (Al-Dmour et al., 2019; Slimane et al., 2019). Significant interactive terms from moderation analysis underscore the link between factors like organizational slack and attainment discrepancy and their impact on CSR reporting. The adjusted R^2 of .633 and F-Stat of 40.18 affirm the model's significance with a sample size of 248 in the regression analysis.

Post-COVID Analysis (2019-2020)

Regression analysis in Table 5 for the pandemic period unveils significant correlations. Gender diversity shows a notable association (p-value = 0.001) with CSR reporting, indicating that an increase in gender diversity on boards leads to increased CSR reporting. This moderate positive relationship aligns with prior studies, suggesting that diverse gender representation enhances CSR initiatives and decision-making processes (Kapardis et al., 2021; Lu et al., 2021). The presence of foreign directors also exhibits a meaningful relationship (p-value = 0.010) with CSR reporting. With a coefficient value of 0.0946, the link suggests that higher participation of foreign directors on boards tends to increase CSR reporting, albeit with a weak positive association. This implies that having more foreign directors on boards could positively influence CSR reporting by introducing new perspectives. This outcome supports the notion that foreign directors might contribute to emphasizing social responsibility within organizations (Wang et al., 2020). The statistically significant p-value of 0.006 reveals a meaningful link between the presence of non-executive directors and CSR reporting. With a coefficient value of 0.1802, this indicates a positive association, signifying that an increase in the ratio of non-executive directors on a bank's board is correlated with heightened CSR reporting. This moderately strong relationship suggests that a higher proportion of non-executive directors may contribute positively to CSR reporting, supporting the accepted hypothesis H3b (Khatib, 2021). The p-value of 0.000 signifies a significant statistical relationship between board independence and CSR reporting, suggesting a highly unlikely chance of this association occurring by random chance. With a correlation coefficient of 0.5666, a strong positive connection is evident between board independence levels and CSR reporting. This indicates a clear tendency for increased CSR reporting as board independence strengthens. This substantial relationship suggests that greater board independence significantly contributes to enhanced CSR reporting, indicating that companies with more independent directors on their board are more liable to report on their CSR activities.

Table 4.5.

Variables	*Coefficient*	*t-statistic*	*p-value*
Gender Diversity	.1889***	3.45	0.001
Foreign Ownership	.0946***	2.68	0.010
Non-Executive Directors (COMPNEDs)	.1802***	2.86	0.006
Board Independence	.5666***	7.34	0.000
Board Size	.0348	0.59	0.559
Firm size	.0199	1.05	0.298
Audit Committee Meetings with Board	.1328**	2.24	0.030
Infection Ratio	-.1217*	-1.82	0.074
Attainment Discrepancy	-.1222***	-3.33	0.002
Organizational Slack	-.0002	-0.26	0.796
Mod1 (A.D. × Gender Diversity)	1.980	0.57	0.572
Mod2 (A.D. × Foreign Ownership)	1.361	0.36	0.724
Mod3 (A.D. × COMPNEDs)	-2.728*	-1.69	0.097
Mod4 (A.D. × Board Independence)	1.342	0.41	0.683
Mod5 (A.D. × Board Size)	-0.703	-0.10	0.918
Mod6 (O.S. × Gender Diversity)	.0027	0.45	0.658
Mod7 (O.S. × Foreign Ownership)	.0038**	2.05	0.046
Mod8 (O.S. × COMPNEDs)	.0082**	2.33	0.024
Mod9 (O.S. × Board Independence)	.0278***	5.64	0.000
Mod10 (O.S. × Board Size)	.0026	0.76	0.452
Adjusted R^2	.7629		
F-Statistic	20.31		
Prob > F	0.000		
N	62		

*$p \le 0.1$; **$p \le 0.05$ & ***$p \le 0.01$

The study indicates that greater CSR reporting might stem from a board with substantial independence (Elmarzouky et al., 2021). Therefore, our hypothesis i.e., H4b concerning the influence of independent directors on CSR reporting during the pandemic stands affirmed.

However, the analysis reveals no significant relationship between board size and CSR reporting (p-value = 0.559). The weak positive link (coefficient value = 0.0348) indicates that board size might have minimal influence on CSR reporting. Hence, it's likely that factors like board independence and diversity hold more sway over CSR reporting than board size (Elgharbawy, and Ganna, 2022). Our hypothesis H5b concerning board size's role in CSR reporting during the pandemic is rejected, supporting the null hypothesis. Similarly, firm size displays a weak positive relationship with CSR reporting (p-value = 0.298, coefficient = 0.0199), indicating a minor tendency for larger firms to engage more in CSR reporting. Conversely, the frequency of audit committee meetings exhibits a significant positive relationship with CSR reporting (p-value = 0.030, coefficient = 0.1328). This implies that there is a tendency for businesses to increase their reporting on CSR activities when there is frequent interaction between the audit committee and the board. The infection ratio appears to have a slight positive correlation with CSR reporting, but it doesn't significantly impact reporting on CSR initiatives. On the other hand, a significant negative relationship exists between attainment discrepancy and CSR reporting (p-value = 0.000, coefficient = -0.1222). A wider gap between actual and desired performance can deter businesses from disclosing CSR efforts, affecting reporting negatively. Regarding organizational slack and CSR reporting during the pandemic, although there's a very weak negative association (coefficient = -0.0002), it isn't practically significant, as indicated by the insignificant p-value. Therefore, our hypothesis that organizational slack significantly influences CSR reporting during the pandemic is found false, with the null hypothesis being accepted. Among the moderation effects, only four out of ten interactive terms are statistically significant during the pandemic. These significant interactions either strengthen or weaken the relationship between the independent and dependent variables. The regression model's adjusted R2 value of 0.7629 suggests that the included independent variables explain about 76.29% of the variance in the dependent variable. The F-Stat (20.31) demonstrates the statistical significance of the model, with a low p-value (0.000) rejecting the null hypothesis. The sample size used in the regression analysis is 62 (N = 62).

Discussion & Conclusion

The analysis compared variable relationships before and during COVID-19. Gender diversity, non-executive directors, and attainment discrepancy were significant in pre and post COVID periods. Board independence and foreign directors were insignificant before COVID but gained significance during the pandemic. However, the organizational slack's influence changed from significant to insignificant during this time. Notably, board size did not consistently affect CSR reporting, potentially due to regulatory or resource constraints. It emphasizes that board composition, not just size, impacts CSR reporting. However, these findings are limited by data and methodological constraints and may not be universally applicable. Further research across diverse settings is needed to understand these relationships better.

Recommendations include promoting gender diversity, especially in times of crisis like pandemics, proves beneficial for CSR reporting. Introducing international and non-executive directors enhances CSR reporting during crises. Increasing the frequency of board meetings with audit committees positively influences CSR reporting. While maintaining adequate board independence is vital despite its potential drawbacks on CSR reporting during a crisis. Focusing on reducing organizational slack and addressing attainment disparities before the pandemic enhances and inversely affects CSR reporting, respectively. Smaller banks may benefit by investing in sustainable initiatives since firm size consistently impacts CSR reporting positively, irrespective of the period.

Limitations & Future Directions:

The study has limitations, like its focus on one country's public firms and the absence of external factors. Future research should explore these aspects for a clearer understanding. Ultimately, strong corporate governance is crucial for guiding CSR reporting during crises and fostering responsible industry leadership.

APPENDIX A – CSR CATEGORIES:

Sr.#	Category of CSR	Sub-Category of CSR
1	Workers	• The number of workers; policies and procedures for health and safety • Gender Equality • Employee assistance and benefits • Employees' welfare fund • Employee compensation • Employee backgrounds and expertise • Employee appreciation • Issues related to the recruitment process • Photos to document employee welfare (such as at social activities and award ceremonies)
2	Social products and services quality	• A wide range of social services, such as climate products and educational loans • A discussion of the different kinds of social products; • A discussion of the geographical distribution and marketing network for the social products that are offered; • A discussion of customer feedback; • Assistance for customers who are disabled, frail, or hard to reach; • Investments in activities that promote social responsibility; • Customer loyalty programs and gifts
3	Community involvement	• Support for students to continue their education and sponsorship of sports activities • Sponsorship of health programs • Sponsorship of arts and culture • Support for projects pertaining to sports and/or recreation • Participation in social government campaigns
4	Environment Aspect	• Environmental policies and concerns of banks • Set up systems for managing the environment • Conducted environmental projects like recycling and protecting natural resources • Saved energy while running the business

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Examining the Effect of Hedonic Value and Electronic Word-of-Mouth on Impulse Buying with the Mediating Role of Emotional Arousal and the Moderating Role of Perceived Risk: Evidence from the Apparel Industry.

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Abstract:

The aim of this research is to propose an extensive framework of impulsive buying that takes into account the impact of hedonic value and Electronic Word-of-Mouth on buying behaviour as a tool for purchasing preparation or self-regulation.

A survey method was conducted by using a structured questionnaire involving 461 respondents. The data was examined through PLS-SEM version 3.0. The findings reveal that the hedonic value and e-WOM have positive impact on impulse buying. Moreover, there was a positive mediating effect of emotional arousal on the relationship of hedonic value and e-WOM on impulse buying. Furthermore, there was a positive and significant moderating effect of perceived risk on the relationship between emotional arousal and impulse buying. This study may helpful for the new researchers and have a rich literature to know about the shopping in apparel industry.

Keywords: Apparel Industry, Hedonic Values, e-WOM, Impulse Buying

Introduction:

The term "impulse buying" refers to unplanned and unexpected purchases (Rook, 1987). Impulse buying usually happens by the existence of a sudden stimulus object and is usually accompanied by psychological states of pleasure and excitement, as well as an overwhelming desire to purchase it (Rook, 1987). Impulse buying has been studied since 1950s but in online context it is comparatively a new phenomenon that is now gaining the interests of several researchers (Bayley & Nancarrow 1998; Dawson & Kim 2010). With the dynamic changes in technology and e-commerce it is a high time to study the dynamic shopper's behavior and their buying decisions. Electronic impulse Buying (e-impulse buying) at some extent explains the shopper's buying decisions and behaviors over the internet. Impulse Buying is described as the hedonically unplanned and spur-of-the-moment purchase of a product via the internet without any prior intention or planning (Verhagen & Dolen 2011). It is evident that shopper's often go with the flow of impulse buying with respect to different stimuli of this phenomenon. Impulse Buying and several stimuli has been identified and studied. Promotional techniques and communication tools are evolved as one of the significant stimuli for the impulse buying. In the context of shopping, marketers frequently implement different strategies to promote their products which involve product recommendations, items that are featured, items on sale, anduse of several other promotional strategies. Impulse buying over online platforms is a significant phenomenon to both the consumer and marketer these days, because upgraded and added on items are usually purchased because upon impulse. Impulse purchase influences retailer's profit, accounting up to 80% of the total sales revenues (Yazdabifard, 2015). It provides opportunities to the marketers to stimulate the urge to impulse buy in consumers so as to boost up the overall sales revenues. It therefore, confirms that impulse buying behavior gives a key role to modern retailers (Alton, 2016). As discussed earlier, it is easier for consumers to buy impulsively, it is therefore important to investigate in detail how these marketing factors stimulate impulse buying and whichones are of greater influence than others (Lee, Jeon, Li & Park, 2015). Positive emotionsin a person are stimulated by one's opinion and content, this in turn triggers impulse buying (Djafarova & Bowes, 2021). These days, consumers no longer follow the conventional marketing funnel stages when making purchase decision (Hudson and Thal 2013). As internet technologies have advanced, more consumers make use of the internet for information about a product or a firm, consequently resulting in the advent of e-WOM (Hennig- Thurau, Gwinner et al. 2004). According to past studies, E-wom communications, is the most significant means for consumers to get information about the quality of a service or a product (Chevalier and Mayzlin 2006). Consumers who have hedonistic tendencies seek satisfaction to get immediate gratification, in the form impulse buying (Chang, Eckman et al. 2011). While examining the willingness of the consumers to make impulsive purchases, consumers rely on their sentiments and emotions but they overlook the extent of perceived risk (Lee and Yi 2008). However, yet not any researcher has studied customer income and perceived risk as a moderator between hedonic value and impulse buying so far. Based on the previous literature review, limited studies have studied that how electronic WOM and hedonic value influence impulse buying with mediating role of emotional arousal and studies in these areas have been conducted mostly in the Western nations, so it is important to examine them in a developing country like Pakistan. Impulse buying has been studies mostly in retail, fast-moving consumer goods, groceries, cosmetics, and electronics sector but there are scarce studies available on impulse buying in apparel Industry. In the apparel sector of Pakistan, there is an insufficiency of such research that can help apparel managers and practitioners to enhance their market values by using the impulse buying as a strategy to align their marketing practices and to increase their market share and sales in a competitive market. In the apparel sector, this research can help to propose a feasible solution to the problem of the effects of e-WOM and Hedonic value on impulse buying. Furthermore, it helps female apparel businesses to develop e-WOM marketing strategies that encourage consumers to buy. This study’s findings may also be unique because of its different cultural context since culture vastly affects the empirical result of research (Durmaz, 2014). This research seeks to build up on prior studies and the valuable contribution of e-WOM as well as hedonic value on impulse buying. Therefore, the research objectives of this study is to investigate the impact of hedonic value and e-WOM on impulse buying of female apparelin the context of Pakistan with the mediating role of emotional arousal and the moderating role of customer income and Perceived Risk between emotional arousal and impulse Buying of female apparel industry in the context of Pakistan

For this current research affect-as-information theory is used as a foundation for theoretical framework. According to the affect-as-information theory, emotions convey information about a person's current available cognitions and tendencies (Schwarz & Bohner, 1996); as a result, individuals use personal feelings to make decisions that ultimately affect their behaviour and attitudes (Higgins, 2006; Gino & Shea, 2012). This perspective states that when information is few or confusing, customers base their decisions on their feelings and emotions to make judgements. The affect-as-information idea proposes that in the case of impulsive buying, customers depend upon the feeling of satisfaction and pleasure they experience when assessing what they are buying as an indicator of the product's value (Gino et al., 2012). Empirical research has offered support for this idea by proving that person’s feelings and state of mind can influence their opinions and choices in the shopping arena. According to Isen and Geva (1987), people in a state of joy were much more probable than those in an unfavourable mood to indulge in impulsive purchases. In summary, the affect-as-information theory explains the significance that feelings play in buying decisions for consumers, including impulse purchases.

The remaining part of the article is structured as follows. Initially an overview of the literature on Hedonic value, E-WOM, and emotional arousal on impulse buying is presented. Section three then conveys the methodological approach and arguments for the selections, while section four presents the quantitative study outcomes. Section 5 discusses the results of the quantitative analysis provided by the literature review. Section six presents the summary while the final chapter discusses future research possibilities and study limitations.

2. 2 Literature Review and Research Hypothesis

2.1 Impulse Buying

As defined by Rook (1987), impulse buying takes place when a buyer has a sudden, frequently overwhelming, and persistent want to acquire something right away. The buying drive is hedonically tricky and can cause distress. Furthermore, spontaneous purchases are more likely to occur with little regard for the adverse effects. The above definition, according to Piron (1991), does not adequately reflect this extensive phenomenon, which he summarized in the following way: An impulse purchase is one that's unplanned, triggered by a stimulus, and made on the spot. When consumer makes a purchase, they experience emotional as well as cognitive reactions. Beatty and Ferrell (1998) also extend Rook's definition and according to the researchers "Impulse buying is a sudden and immediate purchase with no-pre shopping intention either to buy the particular product or to fulfill a specific buying task" (p. 5). Beatty and Ferrell (1998) expand on Rook's definition, arguing "Buying on impulse means purchasing on the spot without planning ahead for the purchase, either for a specific product or for a specific purpose." (p. 5). Beatty and Ferrell (1998) indicate that impulse buying arises after having a strong desire to buy and that customers participate in emotional reactions when shopping. An unplanned buy characterized by quick judgement and a subjective tendency to acquire the thing is commonly referred to as impulse buying (Rook and Gardner, 1993).

A study by Themba, (2019) explained that impulse buying is a sudden, unexpected and unplanned buying behavior shown by the consumer. The decision making is relatively fast and gratifies the personal satisfaction. This impulsive buying and consumer behavior provides certain benefits since the buying is being done without planning or any careful thinking (Amrullah, et al, 2019). Febriani & Purwanto (2019) stated that impulsive purchases were significant affected by fashion involvement andshopping lifestyle. (Welsa, et al, 2021) have also argued that there is a positive and significant impact of fashion involvement and shopping lifestyle upon Impulse Buying.

Hedonic Value

Hedonic value refers to the use of sensory input such as touch, taste, smell, andsound, as well as the imagination, to create emotional arousal (Tifferet and Herstein 2012). Hedonic values are those values which are associated with feeling of gratification through having fun, through fantasy, playfulness or enjoyment (Bora, Özhan et al. 2021). An individual with a hedonic value is assumed to aim to enjoy life. Such individuals make it important for themselves to have a good time (Caprara, Schwartz et al. 2006). A hedonic lifestyle is directly associated with an individual's emotional desires for a pleasant and joyful experience of shopping (Paramita 2014). According to (Ismayuni and Saraswati, 2015) hedonic value in consumers is high when the positive energy appears in them. This value is associated with customer as a feeling of happiness, satisfaction and comfort when they go shopping. (Chauhan et al, 2021) revealed that hedonic value of a consumer is an individualistic trait and is contrary for different people. Apparel has also been categorized as a product with high hedonic shopping value. Impulsive buying is described as a fast, persuasive, and hedonically complex buying behaviour that does not entail careful examination of possible alternatives or available information (Parboteeah, Valacich et al. 2009). Impulse buyers, for instance, avoid looking for information and evaluating in favour of depending on previous experience and emotional triggers during the purchasing process (Rook 1987). Previous purchases and emotional reactions have a key role in inducing the compelling need to buy, leading to impulsive purchases (Beatty and Ferrell 1998, Verhagen and Van Dolen2011).

E-WOM

According to Alhidari et al., (2015) electronic word of mouth (e-WOM) is defined as the statements, either negative or positive, given by a potential customer, which subscribes customer or an excustomer experience about a product or the company itself through the use of internet. Rajaobelina et al., (2021) defined the electronic word of mouth to be an ongoing and a continuous process, where by information is exchanged between a former customer, a potential customer or an actual customer, about the services, the products or the company. Such information is widely available to many individuals and institutions over the Internet. **Additionally, E-WOM has played a significant role in the promotion of a product as well as service, particularly for firms who have established shops on online stores. Feedback and information spread quickly with E-WOM, and honest customers are easily welcomed. This builds a devoted consumer base, enabling them to interact with the brand and share insights with others, helping businesses extend their reach to a broader population.**

Customer Income

Income is generally categorized into several kinds such gross income, net income and per capita income (Lyeonov, Pimonenko et al. 2019). Purchasing power ofCustomer is known to be determined by the Income (Kneebone and Wilkins 2021). As Kumar and George (2007) stated that a customer’s lifetime value can be calculated by the total expense that was incurred on retention of the customer and the aggregate income that the consumer spent on the product.

Hedonic Value and Impulse Buying Yap, C.Y., and Depari, G.S. (2022)

Babin and Attaway (2000) explained that there are two dimensions of customer values are utilitarian and hedonic. Utilitarian values are those which are task-specific values of shopping. They reflect the accession of products in an efficient way. Whereas hedonic values are those which are associated with the pleasant feelings coming from the act of shopping. Yap and Depari (2022) reported that hedonic value significantly impact impulse buying. Additionally, there is a positive association of customers’ utilitarian and hedonic values with that of satisfaction and impulsive buying behavior (Wang, Zhao, & Zhao, 2017). It has been explained by researches that both the hedonic and utilitarian values positively impact impulsive buying as well as the satisfaction of customer (Xiang et al., 2016). Impulse buying for the apparel items is normally a spontaneous decision taken within the showroom premises. Emotional or hedonic incentives drive impulsive buying (Yu and Bastin 2017). It has been observed that hedonic oriented consumers seem to seek satisfaction and gratification for their immediate pleasures which impulse buying brings. The feeling of being entertained facilitates customer's positive feelings, which impacts the impulse buying (Chang et al., 2011). Consumer emotions and feelings are known to impact hedonic value positively and result in impulsive buying (Chung, Song et al. 2017). A study conducted by (Picot-Coupey et al., 2021) conducted that consumer's experience of shopping with hedonic shopping values happens to increase in buying for hedonic goods. Various researches have explained and found that there is a positive correlation between hedonic shopping value and impulsivepurchasing online (Alba & Williams, 2013). The emotions and pleasant feelings of consumers happen to enhance hedonic value that positively influence impulsive purchase behavior online (Chung, Song, & Lee, 2017). As a result of these arguments, it can be concluded that hedonic value significantly affect impulse buying.

H_1: There is a significant and positive relationship between hedonic value and impulse buying

E-WOM and Impulse Buying

Impulse Buying a sudden urge to buy something spontaneously without any prior planning of shopping. This has come up as the one of the interested issues in online context. Online retailers, researchers and academicians are keen to get the deeper insights about this phenomenon and its stimuli. E-WOM practices are recognized as one of the stimuli of impulse buying through exploratory research (Singh & Verma, 2017). Study conducted by (Yap and Depari 2022) expressed that e-WOM importantly effect impulse buying. The compliments from peers and others may increase the desire to buy something impulsively also, website communication and information may have an impact on impulse purchases (Yu and Bastin 2017). Electronic word of mouth has a positive effect on impulse purchases, indicating that e-WOM influences a person's stimulus to make an unplanned purchase (Husnain, Qureshi et al. 2016). (Singh and Verma 2017) identified various e-WOM practices like social networking sites, blogs, reviews, you tube, Instagram, coupons, QR code and so on. And also indicate a significant and noticeable role of above e-WOM practices in facilitating the impulse buying. Customers are likely to rely upon the personal advice and suggestions they receive as well as recommendations by peers and friends when they make purchase decisions. Such personal exchange of information and communication between individuals is known as word-of-mouth. Such practices relating to word-of-mouth have quickly spread in e-commerce because of advances of internet. Since such practices are referred to as electronic-word-of mouth and have evolved over the time because of the availability of powerful tools available, such as social media, to retailers and marketers. The use of social media acts as a platform where electronic word of mouth is exchanged. This makes it more likely for consumers to do impulsive shopping (Abdullah and Artanti 2021). Similarly, (Astuti et al., 2020) stated conclude that other factors such as e-WOM and hedonic shopping incentives positively affect impulse buying. Research conducted by (Yu and Bastin 2010) concluded that the urge to impulsepurchase increases when praise or recommendations are received from friends or otheracquaintances. Therefore, from this whole discussion it can be said that information exchange and positive word of mouth through online impact impulse buying.

H_2 :There is a significant and positive relationship between *e-WOM and impulse buying*

The Mediating Role of Emotional Arousal

In the context of traditional or conventional shopping, there is more probability for people with positive emotions to do impulsive shopping or to overspend their budget (Lin and Lo 2016). A study by (Saputri and Rachmatan, 2016) explained that hedonism is such a belief about life, that makes people assume as if finding happiness will reducetheir feelings of pain. Hence, the tendency of people with hedonic value to do impulsivepurchasing is because they are engaging in the activity of shopping as a pleasure- seeking pursuit (Sari and Yasa 2021). One study by Ismayuni and Saraswati (2015) has explained that individuals with high hedonism experience the positive energy, so they have the feeling of happiness, comfort and satisfaction during shopping. Paramita (2014), illustrated that a hedonic lifestyle is about the emotional needs of a person, who seeks pleasure and interest in shopping. Korry and Dwiya (2017) stated that opinions, interests and activities are such hedonic consumption tendency factors that are quite associated with the impulsive purchase behavior.

It is not the utilitarian value of possessions that hedonic shoppers are generallyfulfilling but rather the emotional hedonic values that bring them satisfaction. These values are associated with the appearance, design and brand of the product rather than pricing or the quality. Additionally, hedonic shoppers are also more likely to seek novelty and are variety-oriented (Eren, Eroğlu et al. 2012). Lim and Yazdanifard (2015)have further explained that individual characteristics like hedonic lifestyle, shopping habits as well as perceived shopping emotions influence the internal factors. This is categorized into pleasure, arousal as well as dominance. (Sharma, Sivakumaran et al. 2010) stated that since some shoppers are more emotional than others, the hedonic behavior is associated with emotional and psychological motivations.

Lo and Yao (2019) have explained that those reviews which are written by experts help consistently and bring benefits. They provide with ratings and bring credibility to the store or retailer. Various empirical studies have assessed and concluded how reviews in e-commerce continuously help consumers to make purchase decisions. Earlier researches have also indicated the influence of credibility upon the perception of consumers as well as their behaviors when they purchase a product or get services (Gretzel 2006, Lin and Xu 2017). When consumers are on the hunt for discounts and cheap products, they show price-sensitive and rational behavior. The discounts positively impact their arousal, and urges them to take advantage of sales ordiscount opportunities available (Destari, Indraningrat et al. 2020). Liu et al., (2019), As per Liu, Li et al. (2019), there is a significant impact of information upon consumerarousal. This is similarly also shown in the presence of higher number of variety of products as well as brands. (Zheng, Men et al. 2019) Study illustrated that there is an association and correlation between between e-WOM and impulse purchasing.

H_3: *Emotional arousal positively* mediates the association between *hedonic value and impulse buying*

H_4: *Emotional arousal positively* mediates the association between *e-WOM and impulse buying*

The Moderating Role of Perceived Risk

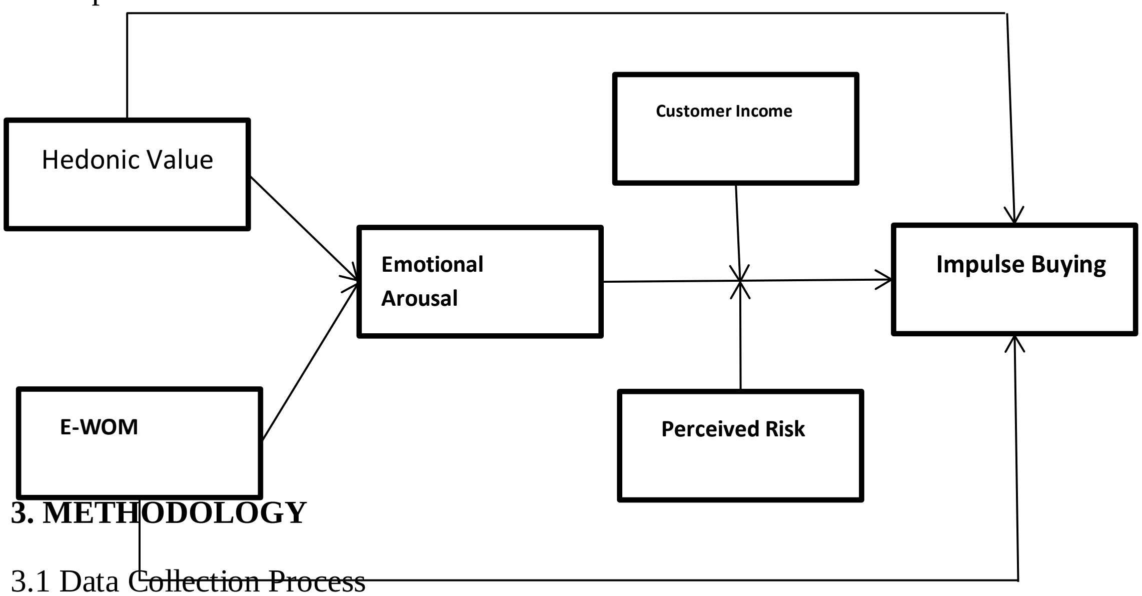
If the level of perceived risk is high, consumers are likely to rely on strategies that reduce the risk. This can include things like warranties, recommendations, reviews, the reputation of the brand, and other supporting information (Wu, Chiu et al. 2020). In case of lack of a link between perceived risk and impulsive intention to buy, it could be because of nature of the purchase intention. That in simple words can be called the willingness or desire to make a purchase. Additionally, it's also likely that consumers ignore their feelings of discontent or perceived risk and focus instead on their emotions when they are judging their own willingness to buy during an impulsive purchase (Lee& Yi 2008).
Consumers often sense a particular level of perceived risk when they buy, but that level of risk is different for each product and for each person (Hoover, Green, andSaegert 1978). The act of decision making, which also involves risk, is about successfully making a choice. The perceptions about risk, therefore, impact their judgement, choice and behavior. The factors associated with perceived risk are the effectiveness of advertisement, proper information exchange through word-of-mouth, the adoption of new product, acquisition of information, selection of store as well as brand loyalty. There are models present in the literature which have explained perceived to consist of two components. One component is the uncertainty that the consumer hasabout the outcome, whereas the other is uncertainty that the consumer has about the consequence or significance of loss (Boksberger, Bieger, and Laesser 2007).

The two components are bound together multiplicatively and represent the inclusive perceived risk. The perceived risk becomes greater with higher level of uncertainty and higher chances of possible negative results. Perceived risk happens to give way to risk aversion as well as risk handling activities. Dowling and Staelin (1994) also found that perceived risk had impact upon search behavior. It is about engaging in risk-reducing strategies so as to reduce the perceived risk level. Erdem (1998) has also illustrated that it is more likely for consumers to purchase from a known brand rather than an unknown new one, in the presence of greater perceived risk. Therefore, consumers happen to become averse to risk when there is a higher level of perceived risk.

Although one characteristic of the act of impulsive buying is minimal cognitivecontrol, when consumers do face high purchase decisions with greater levels of risk, they undergo cognitive processes. There has not been much documentation of about how perceived risk influences impulsive buying. However, there is also an assumption that those individuals with high perceived risk will be likely to undergo risk aversion. Therefore, they will not take impulsive buying decisions. On the other hand, those individuals with lower perceived risk will be disregard their cognitive processes and therefore, be involved in more impulsive buying behavior (Lee & Yi, 2008).

H_5: *Perceived Risk positively moderates* the association between *emotional arousal and impulse buying*

Conceptual Framework



3. METHODOLOGY

3.1 Data Collection Process

The purpose of this research is to investigate the impact of e-WOM and hedonic value on impulse buying with the mediating effect of emotional arousal and moderating effect of customer income and perceived risk from apparel Sector of Pakistan. Female customers who are buying apparel in Punjab province of Pakistan were considered as the population of the study. For this study 471 respondents were selected as sample. The purpose of doing this analysis is to explore objectives, answer the research questions, and moreover to accomplish the study's aims. In order to achieve the study's goal, the researcher used the positivist research paradigm. Using the positivist lens, this study used numeric measures of the study variables and examine the behavior of individuals to develop objective reality. Study is quantitative in nature, in order to conduct quantitative study an empirical approach is directed by applying convenience sampling technique. Deductive approach was used in this study where authors intended to test the existing theories or propose hypotheses based on the existing literature and theories. This study has proposed hypotheses based on existing theories and literature. Therefore, this study was intended to use a deductive research approach. This study was supported by primary and secondary data. In this study primary data examined through a survey questionnaire and secondary data assembled from various books, articles, dissertation, journals and conferences for makeup of introduction and review of literature. In the introductory analysis, descriptive statistics frequencies were applied to the data.

When survey start, respondents are requested to provide their socioeconomic characteristics and the responses of self-administered questionnaire with honesty. In the current study 590 questionnaires were distributed to the respondents. Later on removing questionnaires with missing values or errors 461 effective responses are used for analysis of the data. This shows that 78.13% of the questionnaires were considered as the valid ratio for responses, which is regarded sufficient for survey research (Sekaran and Bougie, 2010). Furthermore, the impact and relationship among variables were examined by the help of PLS-SEM , construct reliability, factor analysis (outer loading's), external and internal validity and descriptive statistics by using IBM SPSS STATISTICS (version 22.0).

Table 1: Respondents Demographic

Characteristics		**(N= 461)**	
		Frequency	**Percentage**
Gender	Female	461	100
Marital Status	Single	260	56.4
	Married	201	43.6
Age	20-25	80	17.4
	25-30	120	26.0
	30-35	151	32.7
	36 above	110	23.9
Education	Intermediate	150	32.6
	Graduation	210	45.5
	Post-Graduation	90	19.5
	PHD	11	2.4
Employment status	House wife	96	20.8
	Student	298	64.7
	Lecturer or Professor	59	12.8
	Other	8	1.7
Monthly Income	20000 to 45000	54	11.8
	46000 to 65000	168	36.4
	66000 to 80000	189	41.0
	More than 81000	50	10.8

3.2. Questionnaire Development

Questionnaire contains the questions concerning impulse buying, hedonic value, e-WOM, emotional arousal, perceived risk and customer income. All items were measured by uutilizing five point Likert scale. The range for this scale is from strongly disagree to agree (1 = Strongly Disgree, 2 = disagree, 3 = Neutral, 4 = Agree, 5 =Strongly Agree). Likert scale provides data for each single element of the scale so that the respondent can know exactly what are they choosing (Boone and Boone, 2012).

For this study, structured questionnaire was adapted; to measure impulse buying (IB) questionnaire was adapted from (Lee & Yi 2008) with seven items while hedonic value (HV) questionnaire was adapted from (Chang, Burns et al., 2004) with eight items whereas, e-WOM (EW) questionnaire was adapted from (Kala and Chaubey, 2018) with five items. To measure Perceived Risk (PR) questionnaire was adapted from (Corbitt et al., 2003) with six items and Emotional Arousal (EA) questionnaire was adapted from (Mehrabian and Russell, 1974) with four items.

Result

The findings of this study, as well as the hypotheses stated in the conceptual model, were validated using the Partial least squares (PLS) 3.3 software. PLS is the most appropriate choice for analyzing primary data and is well-recommended as a progressive approach for data analysis. Partial Least Square (PLS) is an approach to estimate SEM which is variance-based. In order to estimate the correlation between the variables, minimizing the error, PLS-SEM is quite useful (Chin, 2010; Hair et al., 2014). A majority of previous research indicated PLS-SEM as the most suitable method to conduct statistical analysis (Henseler and Hubona, 2016; Hair, 2017). PLS was carried out in this study by two key models, namely the measurement and the structural model. The first phase is to assess construct validity as well as reliability to estimate the measurement or outer model. The structural or inner model is then assessed by computing the path between each concept and establishing its prospective significance and magnitude. PLS-SEM is used as a method in this study for numerous reasons. The PLS technique is often recommended for complicated modeling, specifically for mediation and moderation analysis (Richter et al., 2016; Hair et al., 2017). In this study, emotional arousal is used as a mediator across hedonic and e-WOM with impulse purchases. As a result, PLS-SEM is the best technique for this type of study.

4.1. Measurement Model

First, in PLS, the measurement model is calculated to check the reliability and validity of the indicators. The primary goal of a model for measurement is to check both the inner and outer validity as well as the validity of all of the data in order to evaluate whether the gathered data is reliable for the purpose of the study or not. Composite reliability (CR), Cronbach alpha, average variance extracted (AVE), discriminant validity, and outer loadings (CFA) are used for assessing this (Hair et al., 2017).

Internal Consistency Reliability

Reliability of internal consistency is the degree in which all sub scales assessed the similar approach (Sun et al., 2007). Mostly, Cronbach's Alpha coefficient and composite reliability were computed to check the internal consistency of scale in research settings (Bacon et al., 1995; McCrae et al., 2010; Peterson et al., 2013). Composite reliability for ascertaining the internal consistency reliability was adopted in this study.

There are two important aspects for selecting composite reliability over Cronbach's alpha. First, the estimates provided by composite reliability are less than the Cronbach's alpha coefficients because the Cronbach's alpha undertakes equal participation of all the indicators towards the particular variable individually (Barclay, et al., 1995; Götz et al., 2010). Second, the reliability of scale may be over or under- estimated by Cronbach's alpha. Whereas, composite reliability provides the same involvement of all the indicators of construct with different loading and interprets in the same way but internal consistency reliability greater than 0.7 is considered appropriate. Bagozzi and Yi (1988) and Hair et al., (2011) advocated that more than 0.7 coefficient is acceptable for research this is also inline by Ringle, Wende and Becker (2005). Table 4.3 indicates the reliability value between .709 to .832 and composite reliability (ρc) .711 to.876 that is acceptable by (Bagozzi and Yi, 1988; & Hair et al., 2011). Composite reliability (ρc) presents the outer loadings of every indicator variable (Hair et al (2014). Therefore, the adequacy of internal consistency reliability of the measures was utilized in the current study.

Convergent Validity

Convergent validity is defined as the variance of proportion of each construct. It is related to what is actually expected to be measured. AVE is used to assess the convergent validity of the constructs (Fornell & Larcker, 1981). It is the sum of squareloadings of items when allied with a construct divided by the number of indicators. This is equivalent to the communality of a construct. The acceptable value for AVE isa value 0.5 or greater for convergent validity (Hair et al., 2014; Urbach & Ahlemann, 2010). As all the AVE value exceeded the minimum acceptable level of 0.5 proposed by Bagozzi and Yi (1988).

Table2: Internal consistency and convergent validity

Constructs	Alpha	Rho-A	CR	AVE
Hedonic Value	0.711	0.712	0.822	0.537
e-WOM	0.832	0.828	0.876	0.543
Emotional Arousal	0.725	0.731	0.829	0.548
Perceived Risk	0.813	0.821	0.865	0.516
Impulse Buying	0.709	0.711	0.821	0.534

Discriminant Validity

The external consistency of the model was investigated by the discriminant validity (Fornell & Larcker, 1981). Fornell-Larcker Criterion and HTMT were used to examine discriminant validity. According to Fornell-Larcker and cross loading, the value of latent construct should be greater than other (Hair et al., 2014; Urbach & Ahlemann, 2010).

Table 3. Fornell-Larcker Criterion

Constructs	CI	EA	HV	IB	PR	EW
CI	**.998**					
EA	.009	**.733**				
HV	.004	.392	**.737**			
IB	.099	.545	.332	**.740**		
PR	.057	.572	.238	.452	**.718**	
EW	.089	.524	.375	.491	.422	**.731**

Note(s): CI = Customer Income, EA = Emotional Arousal, HV = Hedonic Value, IB = Impulse Buying, PR = Perceived Risk and EW = e-WOM

Table 4. Heterotrait-Monotrait Ratio (HTMT)

Constructs	CI	EA	HV	IB	PR	EW
CI						
EA	0.025					
HV	0.028	0.494				
IB	0.113	0.751	0.422			
PR	0.063	0.739	0.271	0.574		
EW	0.104	0.736	0.470	0.678	0.551	

Note(s): CI = Customer Income, EA = Emotional Arousal, HV = Hedonic Value, IB = Impulse Buying, PR = Perceived Risk and EW = e-WOM

Structure Model Assessment (Pls-Sem)

Hair et al. (2014) discusses the hypothetical model and states that structural model is the dependent relationships connecting the variables or constructs. Since, the structural model is an important element of inter correlation among constructs and it enlightens the correlation between latent constructs (Chin, 1998). The hypothesized relationship of the study was tested through the structural model. In this current study, the structural model was determined for collinearity issues such as, effect size (f2), predictive relevance (R2) and cross-validated redundancy (Q2). Moreover, path coefficient and indirect specific effect were conducted to determine the direct and indirect effects between the study variables. As recommended by Hayes (2012) and Henseler et al (2009) it is comprehensive approach of PLS-SEM for testing the hypotheses on the bases of multiple correlations. Ee, Halim, and Ramayah (2013); Sang, Lee, and Lee (2010) discussed that the structural model indicates the causal relationships between the constructs, for this purpose path coefficient and specific indirect effect was estimated. The t-value > 1.96 and p-value < .05 was carried out and guidelines given by distinguished scholars werefollowed in this study (Hair et al., 2014; Hair et al., 2011; Henseler et al., 2009). The summary of the result of the structural model is displayed in Table 4.6 and figure 4.2. Table 4.6

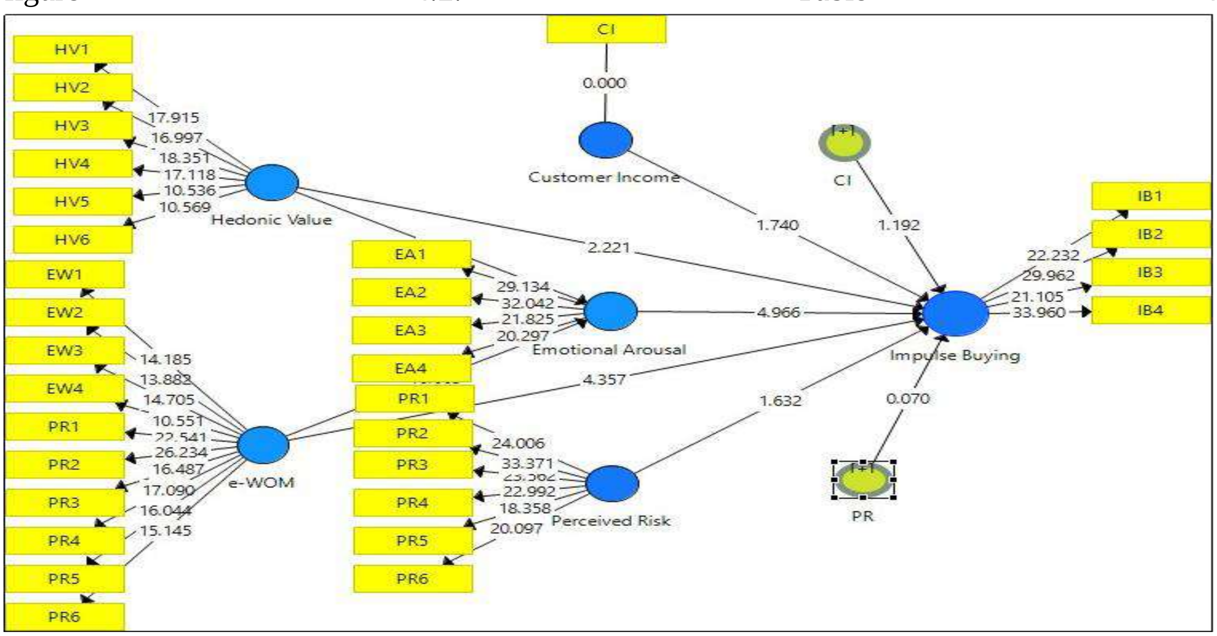


Table. 5 Path Coefficient (Direct Effects)

Constructs	Original Sample (O)	SD	T Statistics (|O/STDEV|)	P Values	Hypothesis
H1: HV -> IB	.092	.046	2.004	.04*	Accepted
H2: E-WOM -> IB	.228	.051	8.525	.00**	Accepted

Note(s): * p < 0.05; ** p < 0.01; *** p < 0.001

Table. 6 Path Coefficient: *Mediating and Moderating effect* **(indirect Effects)**

Constructs	Original Sample (O)	SD	T Statistics (|O/STDEV|)	P Values	Hypothesis
H3: HV -> EA ->IB	.068	.020	3.349	**.00***	Accepted
H4: E-WOM -> EA -> IB	.130	.028	4.600	**.00***	Accepted
H5: EA -> PR -> IB	.092	.035	2.650	**.00***	Accepted
H6: EA -> CI -> IB	.001	.004	.153	**0.87**	Rejected

Note(s): * p < 0.05; ** p < 0.01; *** p < 0.001

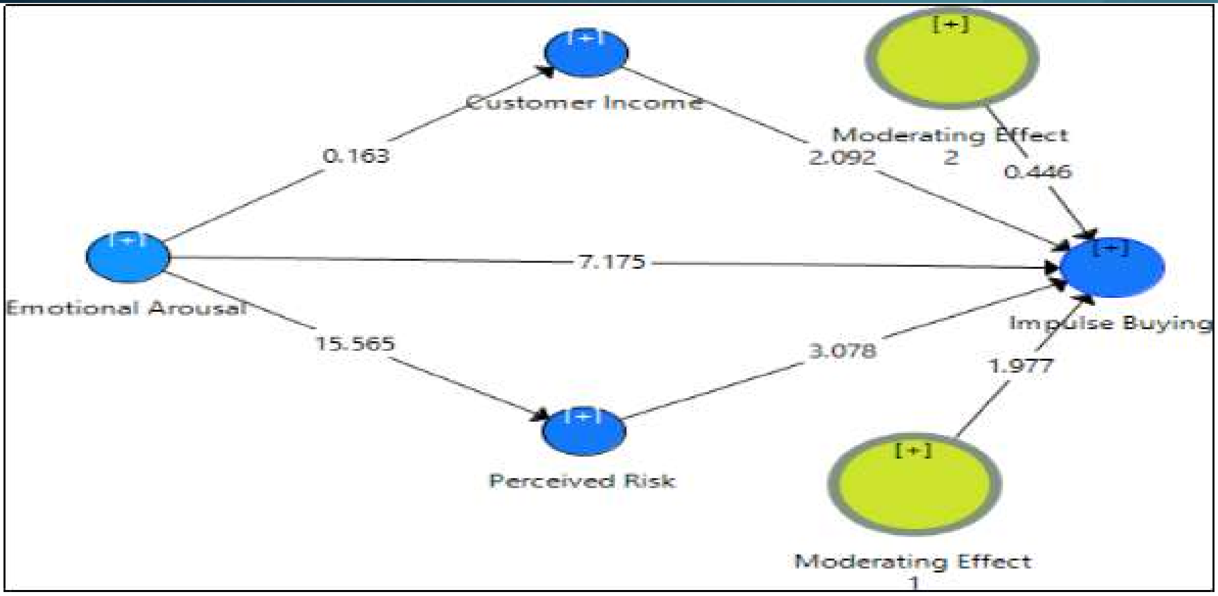


Figure 4.3. Moderating Effect

Coefficient of Determination (R^2)

The R2 is known as the Coefficient of Determination, it is an indication of the strength of a presented model. Moreover, it is an indicator that helps recognize the relationship in between the present variables. It is a measure of validity, showing the ability of independent variable, the exogenous as well as the dependent, endogenous variable (dependent variable) (Elliott & Woodward, 2007; Hair et al., 2014; Henseler et al., 2009). Nevertheless, the value of 0.10 as per Falk and Miller (1992) is known to be admissible. Moreover, if the value of R2 is 0.67, 0.13 and 0.19, these values are said to be moderate, substantial and weak respectively, as stated by Chin (1998). Table 4.7 shows that the R2 value is 0.383 which can be adjudged to be moderate for impulse buying. It therefore, brings forth that 38.3% of variance is explained by hedonic value, e-WOM, emotional arousal, perceived risk and customer income altogether. Hence this model is adjudged to be an acceptable one because of its shown predictive accuracy (Lei & Chu, 2015).

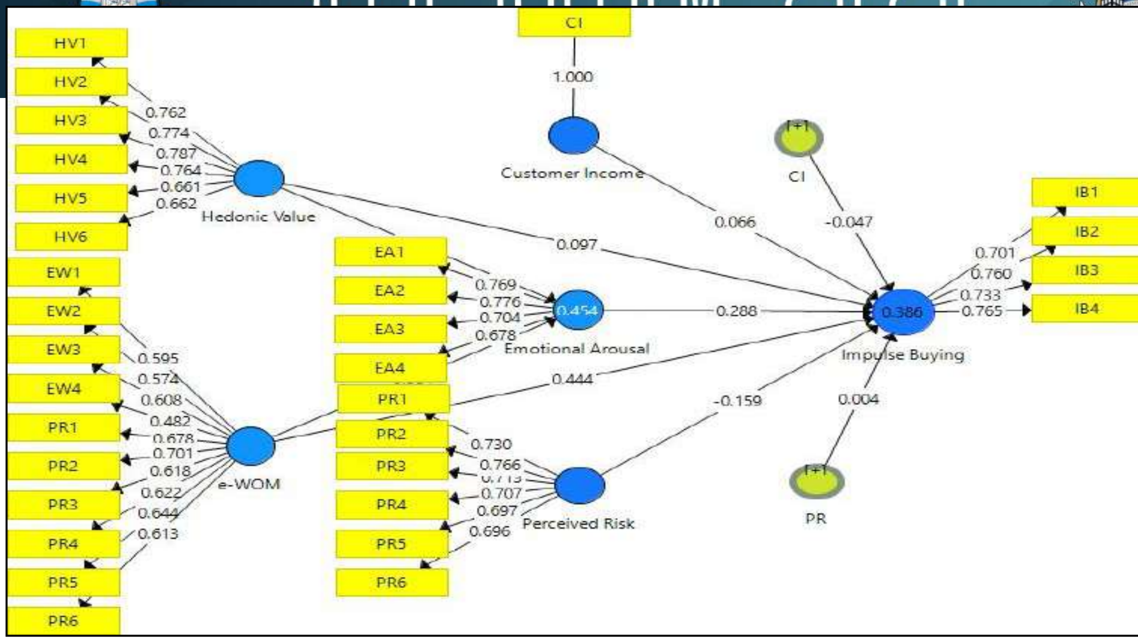


Figure 4.4. Predictive relevance (R^2)

Effect Size (f^2)

The effect size, f2, is a quantity or measure that explains the relationship between the exogenous and endogenous constructs. It is the extent to which a specific exogenous construct impacts the endogenous one. In order for R2 value to be determined, when an exogenous variable gets subtracted, the change that occurred in R2 value was also found out to find the effect size (Hair et al., 2014; Gim, Desa, & Ramayah, 2015). The effect size being a useful measure and practical way to explain and discern a correlation between two variables was also stated by Preacher and Kelley(2011). While other researches (Gim et al, 2015) also suggested similarly, explaining that the effect size is a measure of correlation. Chin (1998) also illustrated that effect size explains the relationship between two variables, the exogenous and endogenous variables. Cohen (1988) has discussed about f2 values in detail. He has postulated that 0.02 is considered weak, whereas 0.15 moderate and 0.35 being strong. The effect sizes of these five exogenous latent constructs are shown in Table 7.

Table 7. Effect size (f^2)

Relationship	**f^2**	**Range**
HV → IB	.092	Weak
HV → EA	.227	Moderate
e-WOM → EA	.438	Strong
EA→ IB	.297	Moderate
PR → IB	.160	Moderate
CI → IB	.066	Weak

Note(s): CI = Customer Income, EA = Emotional Arousal, HV = Hedonic Value, IB = Impulse Buying, PR = Perceived Risk and EW = e-WOM

Discussion:

In this study hedonic value and e-WOM were administered as independent variables while emotional arousal was used a mediator variables, perceived risk and customer income as moderator variables and impulse buying was treated as dependent variable. The quantitative research paradigm was used to conduct survey research design and questionnaires were delivered to the sampled respondents. Previous literature waslooked at and reviewed so as to get to know the link that exists between dependent variables, the impulse purchasing and the independent variables, the hedonic value ande-WOM, as well as other moderating variables that were perceived risk and customer income.

This section of the study is where research questions are discussed along with research findings and other discussions. The detailed discussion of impulse buying of females as well as the mediating effect of emotional arousal on the relationship of hedonic value and e-WOM with impulse buying and moderating effect of perceived risk and customer income between the relationship emotional arousal and impulse buying. These findings are in lined with previous researches, Singh and Verma (2017) posited the evident that online shoppers often go for the e-impulse buying with respect to different stimuli of this phenomenon. Impulse Buying has been studied and several stimuli of this have been identified. Promotional techniques and communication tools are also evolved as one of the significant stimuli for the impulse buying. In the context of online shopping, marketers frequently make use of promotional strategies. They promote up and cross-sell using suggested coordinated and un-coordinated items, the recommendations of products, offers of promotions, sales and featured items. It is because impulse often plays a part when the added on and upgraded items are purchased, impulse purchasing by customers online is an important phenomenon. It is important to both online marketers as well as consumers. Chang and Tseng (2014) advocated that the increased number of post- purchase arguments leads to a strongly positive effect on online impulse purchase satisfaction. Dawson and Kim (2010) relationship between the retailers‟ Web sales and the external impulse buying cues (sales, promotions, ideas and suggestions). Impulsivebuying refers to the unplanned and instantaneous buying behavior of customers (Li, 2015).

In determining the impact of hedonic value on impulse buying of female apparelin the context of Pakistan, the findings of structural equation modeling revealed that hedonic value is positive and significantly related to impulse buying. The finding fromthis study is in line with several previous studies that examine the impact of hedonic value on impulse buying. Consumers that are likely to satisfy their hedonic values, findgratification in activities like impulse purchasing. When it brings the consumers joy, it becomes associated with positive feelings, this affects impulse purchase behavior (Chang et al., 2011). Consumer emotions and feelings are likely to enhance hedonic value and positively affect impulsive buying (Chung, Song et al. 2017).

Investigating the impact of e-WOM on impulse buying of female apparel in the context of

Pakistan. The previous researches also strengthen this view. The e-WOM and impulse buying are executed commonly. It is also possible to conclude that other factors, including such e-WOM affect impulse buying (Astuti, Khasanah et al. 2020). (Singh and Verma 2017) identified various e-WOM practices like social networking sites, blogs, reviews, you tube, Instagram, coupons, QR code and so on. And also indicate a significant and noticeable role of above e-WOM practices in facilitating the impulse buying. The research from (Zheng, Men et al. 2019) showed that there is a positive and significant effect between e-WOM on impulse buying.

In determining the mediating role of emotional arousal between hedonic value and impulse buying of female apparel in the context of Pakistan. this study found that these variables positively and significantly associated between each other. The previous researchers also endorsed this view that the tendency of hedonic value can be looked upon as individual to engage in activities that produce pleasure while shopping (Sari and Yasa 2021). (Ismayuni and Saraswati, 2015) illustrated that when hedonism in consumers is high, the positive energy is produced. This is why they have the feeling of happiness, comfort and satisfaction when they shop. As per (Paramita, 2014), a hedonic lifestyle is associated with an individual's emotional need to have a pleasant as well as an interesting shopping experience. (Korry and Dwiya, 2017) also found that hedonic consumption tendency factors such as interests, opinions and activities are positively and to a great extent related to impulsive purchasing behavior. It is not the utilitarian value that the hedonic buyers are fulfilling bur rather they are satisfying the emotional and hedonic value like brand, appearance and design instead of price or quality. Additionally, hedonic buyers are also more likely to seek novelty and they are variety-driven (Eren, Eroğlu et al. 2012). (Lim and Yazdanifard, 2015) also explained further that the characteristics of a person like hedonic lifestyle, shopping emotion and shopping habits greatly influence internal factors. This is categorized into pleasure, arousal, and dominance

To examine the mediating role of emotional arousal between e-WOM and impulse buying of female apparel in the context of Pakistan. The findings indicate that there is a positive significant mediating effect of emotional arousal between e-WOM and impulse buying. The past studies also in line with these findings, (Lo and Yao, 2019)found that those reviews which are written by experts consistently benefit and help in providing ratings, with a much higher perception, as well as providing credibility. Other empirical studies have found and shown how online reviews are helpful in assisting consumers to make buying decisions. Earlier research found that online reviews impact consumer perceptions giving credibility, and also influences their behavior when they adopt any product or get services (Gretzel 2006, Lin and Xu 2017). When consumers are hunting discounts for low-priced goods, they show price-sensitive and logical behavior. This increases their arousal, and it also makes them take advantage of the opportunities offered through discounts (Destari, Indraningrat et al. 2020). (Liu et al., 2019). As Per (Liu, Li et al., 2019), information exchange also plays a key positive impact upon consumer arousal, upon the number of choices as well as the number of products and brands. (Zheng, Men et al. 2019) has indicated that between e-WOM and impulse buying, there is a positive and significant relation. To discover the moderating impact of Perceived Risk between emotional arousal and impulse buying of female apparel industry in the context of Pakistan, the findings of this study shows that with a high level of perceived risk, consumers can adopt risk reduction strategies such as relying on warranties, reliable recommendations, good reputation, and supporting information. The lack of an association between perceived risk and impulsive buying intention could be due to the nature of purchase intention, which is simply the desire or willingness to make a purchase (Lee & Yi, 2008;(Wu, Chiu et al. 2020).

In determining, the moderating impact of Customer Income between Emotional Arousal and impulse Buying of female apparel in the context of Pakistan. The results of this study revealed that there was not a significant moderating effect of customer income between the relationship emotional arousal and impulse buying. Lazim, Sulaiman et al (2020) indicated that variation in income has a great impact on after purchase behavior which varies amongst gender. Various personal traits and demographic factors, such as income levels, have been studied as moderators (Chang, Eckman et al. 2011). Munir, Abbas et al. (2021) in Pakistan described income as a factor that account for the quantity and quality of products to be purchase and whether unplanned purchase will occur.

Conclusion

Conclusively, this study was done in order to find out the influence that hedonic value and e-WOM have on impulse buying. Moreover, the mediating role of emotional arousal, the moderating role of perceived risk as well as the customer income of individuals from apparel industry of Pakistan were also investigated. Quantitative research design was used and standardized questionnaires were used in order to gather data from respondents. SPSS-25 was used along with Smart PLS-SEM_3 in order to doanalysis. The study concluded from the results that women were moderately satisfied with all the constructs; namely hedonic value, e-WOM, emotional arousal, perceived risk, customer income and impulse buying. Hence, the conclusion that impulsive buying is directly impacted positively by hedonic value and e-WOM was concluded. Moreover, there was a positive mediating effect of emotional arousal on the relationship of hedonic value and e-WOM on impulse buying. Furthermore, there was a positive and significant moderating effect of perceived risk on the relationship between emotional arousal and impulse buying. Additionally, there was not found a significant moderating effect of customer income on the relationship between emotional arousal and impulse buying. Analysis of this study illustrates that R2 value is 0.383, which demonstrates that 38.3% of variation in impulse buying of females, are explained by hedonic value, e-WOM, emotional arousal, perceived risk and customer income

Theoretical and Managerial Implication

This study did not just offer practical and theoretical underpinnings, but methodological contributions were also underlined here. This research, its findings andconclusions can serve as a reference and source of citation for future studies planning to use the hierarchical model of structural equation modeling. Another methodological contribution is the usage of partial least square structural equation modeling techniques. Previous scholars have conceptualized impulse buying differently but this study re-conceptualizes into various constructs, which makes this study more significant for researchers and practitioners. As apparel industry play has major contribution for development of the business growth in the countries. Therefore, it will bring about greater preservation helping to directly reduce the cost of choosing in apparel industry particularly in the context of Pakistan. As such, this study exposes to how the females can manage the impulse buying appropriately. As revealed in this study, of all the five exogenous constructs; hedonic value, e-WOM, emotional arousal, perceived risk and except customer income are more persuasive towards impulse buying tracked by females. The key stakeholders such as businessmen in apparel industry can gather information about their contribution to give way to a healthy environment in the apparel industry where impulsive purchasing takes place. Moreover, it may be helpful to utilize potential and better opportunities to the customers for the development of the apparel industry.

Limitation and Future Research

Pakistan is a developing country, which means it has vast potential to grow and get ahead in the race of development. With the progress the country will make business will grow naturally with its other assets. It is one of the basic key for the development as well as growth of the country. Therefore, to achieve the desired objectives it is necessary to boost the standards which encourage customer behavior towards online shopping. Additionally, as found out in the coefficient of determination, 38.3 % of variation in impulse buying as explained by hedonic value, e-WOM, emotional arousal, perceived risk and customer income. The remaining 61.7 % are determined by other factors or variables. Further studies should be done so as to investigate what other variables may be at play that may be influencing impulse buying among the females. Additionally, this study was carried out among the major cities in Pakistan, it should be conducted in other regions of the country.

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Assessment of Retail Investors Behavior Through Mediating Effect of Financial Literacy and Moderating Effect of Risk Tolerance

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Abstract:

The descriptive status of behavioral economics theories has faced criticism about whether they may be predictive a mainstay of traditional economics. An investigation into the factors that influence individuals' financial choices is required to ensure a more efficient and stable financial market that is less vulnerable to asset pricing bubbles. Therefore, the purpose of this research study is to find out the factors affecting individual investor’s investment decisions with mediating effect of financial literarcy and moderating effect of risk tolerance in Pakistan Stock Exchange. More specifically, researchers examine the most important factors under the headings of organizational, personal and markets factors. The researcher considers individual investors investing in Pakistan stock exchange as population of this study. The sample size consists of those individual investors who are frequently investing in PSX within the region of Lahore stock market. The results showed that overall market factors, personal factors and organizational factors are the most important factors influencing individual investor’s investment behaviour. Moreover, the results further revealed that financial literacy mediate the relationship between observed variables. Lastly, the findings indicated that risk tolerance moderate the relationship between observed variables. The research will be able to provide new insights for investors, brokerage firms, management and government, helping them to make an appropriate decision.

Keywords: Behavioral Bias, Personal factors, Market factors, Organizational Factors, Financial literacy, Risk tolerance, Individual Investors

Introduction:

A financial market is very volatile; the unpredictability and uncertainty cause high fluctuation in the turnover. Investors do not receive the desired outcomes because investors are human beings, and their behaviour has been questioned since long (Yüksel, S., & Temizel, E. N. 2020). The apparent reason behind this fluctuation is the fallibility of financial measuring tools and standards such as CAMP, APT, or portfolio theory (Zahera & Bansal, 2018). Investors rely on these tools to create rationality in their decisions. However, these tools and standards are unable to provide the certainty of correct decision making that leads to profit maximization. This happens because investors being human cannot be rational all the time. The irrationality factor hinders their decision making. Reason for irrational decisions is psychological and social factors (Francisco, D. S. B. 2020). Cognitive and emotional factors influence the decision-making process too. All these phenomena are explained by the new emergent field within Finance, which is called “Behavioral Finance” (Bakara & Yia , 2016). classical financial theories have not been providing alternatives for rational decision making; the psychological factors affect decision making (Alsabban, S., & Alarfaj, O. 2020).

Literature on behavioural finance has tried to analyse the behaviour of investors in an effort to improve our understanding on how investors manage their investments (Fatima et al., 2018; Chen et al., 2018; Oehler et al., 2018). Tan & Tas (2019) claimed that the sentiments of investors influence the trade volume and prices of assets in stock markets. According to Chari at el. (2017), investors get affected by any announcement from the company. Their investment decisions are modified according to the current news prevailing in the market. Different researcher suggested that overconfidence, herding, financial literacy, experience and risk tolerance etc. effected investors investment behavior (Yang, Bi, & Liu, 2020, Chen, Ho, & Liu, 2019, Zheng, Gao, & Ruan, 2019, Lapanan, 2018).

institutional and retail investors are the main investors operating on the Pakistan stock market, and their importance has never been underestimated. Although evidence have shown that institutional investors’ portfolio size is greater than that of retail investors (Aren et al., 2016), we, however, believe that no study could provide adequate understanding of the financial markets without understanding retail investors, who are units in the market but together carry a lot of weight and tend to push markets beyond their weights. Researchers believe that institutional investors are better informed and are working to offset the irrational exuberance of uninformed retail investors. They also assume that retail investors are misinformed, confused and conflicted between what they desire and what they actually get (Akhtar and Das, 2019). Retail investors face more issues while making rational or accurate decisions in contrast to fund managers. They do not contain all relevant data and access to official information for rapid, rational or logical decision making for the investment process (Lu, 2010) so, they make rushed decisions.

Behavioral finance argues that numerous investors possess a risk-averse attitude and influenced by others (Guiso & Jappelli, 2006), that lead them toward behavioural biases (Kahneman, Knetsch, & Thaler, 1991). Individual investors are influenced by different psychological and emotional elements, which may lead them towards irrational investment behaviour (Campbell, 2006; Goetzmann & Kumar, 2008; Kumar & Goyal, 2016). The rational investment decision-making process requires complete information regarding investment, rational thinking and proper analysis of information associated with investment (Rubaltelli, Pasini, Rumiati, Olsen, & Slovic, 2010). Individual Investors are misled and confused about their investment objectives and fail to achieve their investment goals because they cannot align their projected returns with their risk-taking attitude (Hoffmann & Post, 2017). According to Al-Tamini and Anood's research (2009) with respondents of UAE investors, there is a positive relationship between financial literacy and investment decisions which explains that the higher a person's financial literacy will encourage someone to invest and choose the right investment instrument. Mahfudh's (2014) research from investor respondents in Kenya shows that investors in the Kenyan capital market are investors who have sufficient financial literacy.

We cannot ignore the behavioral aspect of human nature while explaining the stock market functioning and volatility. To understand the investors' behaviour, it is important to find out which specific behavioural factors influence the decisions of investors when they are categorized on the basis of different demographics. Many studies have been conducted on the impact of behavioral biases and investment decisions in developed countries, but a handful of studies are available in developing countries like Pakistan. Pakistani investors have the tendency to follow herd behavior, and they are influenced by different factors (Hudson, Yan, & Zhang, 2020). Another critical factor is that the findings of studies conducted in developed countries cannot be generalized to the developing countries because of the difference in culture, values, the infrastructure of financial markets, financial literacy, and education level. It is, therefore, becomes necessary to see which behavioral biases impact the decision making of investors in Pakistan stock exchange.

Therefore, the purpose of this research study is to find out the factors affecting individual investor's investment decisions with mediating effect of financial literacy and moderating effect of risk tolerance in Pakistan Stock Exchange. More specifically, researchers examine the most important factors under the headings of organizational, personal and markets factors. This research will be able to provide new insights for investors, brokerage firms, management, corporate governance and government, helping them make appropriate and powerful decisions that eventually stabilize the market.

2. Literature review

2.1 Prospects Theory

Prospect theory is a behavioral financial theory that covers decisions between alternatives that include risk, in which the probability of the outcome is known. The theory explains that investors make decisions based on potential estimates of profit and loss rather than final results. In addition, from the perspective of potential theoreticians, investors evaluate links to the basic principles of behavior. They found that behavioral factors depend on the use of heuristic methods for losses and profits (Kahneman, 1979).

2.1 Empirical studies and hypothesis devolpement

Different factors are affecting stock selection decision of investors. Parveen, Satti, Subhan, and Jamil, (2020) conducted a study in pakistani context in order to know the effect of representative, heuristic and overconfidence on investors investment decision. The findings of the study suggested that there is a significant effect of observed variables on stock selection decision of Pakistani investors. Another study conducted in china in order to know the effect of financial literacy and investor's financial welfare. The findings of the study suggested that highly literate retail investors are take their investment decision batter by considering different factors. So, it can enhance the financial welfare of investor's (Jiang, Liao, Wang, & Xiang, 2020). Huang, Tang, & Zhang (2020) find out that investors information search relevant to different investment avenues are significantly effected on investors investment decision. Another study conducted in UK in order to know the effect of herding on mutual funds investors investment decision. The results of the study shows that herding is a very significant factor which is effecting investor's investment decision (Hudson et al., 2020). Recently one study was conducted in order to know the investment behavior of Arab women in stock market. The results suggested that there are different factors that are significantly affect the behavior of women investors like, confidence, risk tolerance, herding and financial literacy (Salem, 2019).

Ahmad (2017) argued that organizational and market factors are the factors which are majorly affected on investors decision. Azam and Kumar (2011) examined variables that influence investor behavior by conducting research. According to the results of the survey, the growth rate of EPS, FDI and GDP is the main link and has a significant influence on the price of companies listed on the KSE (Caracas Stock Exchange). Different companies issue financial statements in order to provide financial information to stakeholders and investors. This financial information has a significant impact on investors' decisions on investment (Hillenbrand & Schmelzer, 2017). Some other researchers examine different qualities of personality that can affect investors' behavior. The research findings of this study indicate that problems in the relationship with other investors and businesses are the major factors affecting investor's behavior (Bucciol & Zarri, 2017). One study is conducted on the topic of the relationship between herding behavior and the attitude of wine investors (Aytaç, Coqueret, & Mandou, 2017).

Babatunde & Razali (2016) found that the company's dividend, expected rate of return and financial stability are important considerations for individual investors. The national culture of the organization affects the behavior of investors (Chang & Lin, 2015). Levinson and Peng (2007) have studied the impact of cultural background on financial decisions in the United States and China. Their findings show a sensational cultural difference in the expression of biases related to framing and ethical quality. Hossain and Nasrin (2012) in a study of Bangladesh concluded that the eight most important factors influencing investor retention are company-specific attributes reputation, net asset value, accounting information, business opportunities, publicity, the owner structure, influence of people and personal finance needs. One researcher found that high-risk investors are investing more in equities in order to earn high returns (Hoffmann, Post, & Pennings, 2015). The findings of one research suggest that broker recommendations and friends' opinions are major while family member opinion is the least considerable factor for investors (S. Ahmad, 2017). Risk tolerance and investment decisions have a positive relationship.

Investors tend to rely on stock market information to make investment decisions. Changes in stock prices can affect investor behavior (Waweru, Munyoki, & Uliana, 2008). Shafi (2014) discusses the importance of coverage of press, and Government authorities Information are very crucial factors for decision making of the investment. Some other researchers studied this particular topic and suggested that strong religious beliefs have a significant impact on investor's behavior (lein, Turk, & Weill, 2017). Therefore, the following research hypothesis is proposed. Merika (2016) believes that economic factors are affected by the overall trends of the market at the time of the survey. Proper understanding of the financial and economic condition of the country can enhance better investment decision-making (Babatunde & Razali, 2016). Maini (2017) examines the issue of individual investors and explains that unpredictable prices of the market are a major factor affecting individual investor's decisions. Due to a lack of information objectivity and enough financial experts, most decisions of the Tehran Stock Exchange are based on political and psychological factors.

Mahfudh (2016) conducted research on investors at The Nairobi Securities Exchange using a questionnaire that took a sample of 400 respondents using non-probability sampling techniques, with the result that there was a significant relationship between financial literacy and the investment decision making process. Research by Muhammad and Khan (2018) which took samples of students, lecturers, and individuals who have investment experience. The number of respondents taken was 310 respondents using non-probability sampling techniques through questionnaires. From this study the results showed that there was a significant positive relationship between financial literacy and investment intention.

Acording to Heouristic theory, behavioral factors depend on the use of heuristic methods for losses and profits invstors The field of behavioral finance is a very broad and different way to investigate the intentions of investors in different investment avenues (Mak & Ip, 2017). Irshad et al. (2016) on Pakistani stock market investors shows that investors are affected by representativeness bias. According to this study, investors are using past performance as representative of future performance when making investment decisions. Hussain et al. (2017) apply both qualitative and quantitative approaches and findout that investors' decisions are likely to be affected by three heuristics, although investors with higher level of education and experience are less likely to be affected by these heuristics compared to others with low level of education and experience. As pakistani retail investors investment decision is effected by different factos so, researchers tested the hypothesis of prospect theory in Pakistam stock market by using mixed method approach. Therefore, the following research hypotheses are proposed based upon existing literature:

H1: There is a significant effect of organizational factors on Individual investor's investment decision.

H2: There is a significant effect of Personal factors on Individual investor's investment decision.

H3: There is a significant effect of Market factors on Individual investor's investment decision

H4: There is a significant mediating effect of financial literacy between organizational, personal, market factors and investors decisions

H5: There is a significant moderating effect of risk tolerance between between organizational, personal, market factors and investors decisions

3. Methodology

In the current study, quantitative techniques were used to test and verify the behavioral factors and their effect on the decisions of individual investors on the Pakistani Stock Exchange. All the individual investors investing in PSX are considered as the population for this study. The sample size consists of those individual investors who are frequently investing in PSX within the region of Lahore stock market. Convenience and Snow ball sampling technique was used as the sample selection method. The 490 questioner were sent to investors from which researcher received 465 responses. The sample was selected according to item to rate theory.

The behavior of individual investors was measured through a modified questioner that consists of two subscales. The first section examined behavioral factors which determine the decision making of the individual investors such as accounting information, firm image, firm culture, personal finance needs, consultation, self-image, Market information and market uncertainty, financial literacy, risk tolerance and investment decision. The second section is about demographic information such as age, gender, level of income and experience. The modified questioner was developed in light of the five behavioral based of individual investors developed by (DAS, 2012; Hussein, Hassan, & Al-Tamimi, 2006). Utilizing these literature sources as the basis, items were develop to evaluate investor's basic decision making questioner in the present survey. Various data analysis tools and techniques have used in current research in order to validate data. Various techniques that have been used in current study analysis were comprised of Reliability analysis, descriptive statistics, correlation and Regression Analysis. The tool used for data analysis of this research is IBM SPSS analytical tool.

4.0 Data Analysis

4.1 Demographic Profile

Table 1: Frequency Analysis

Variable	Frequency	Percent
Gender		
Male	381	81.94
Female	84	18.06
Age of Respondents		
Under 30 Years	110	23.65
31-40 Years	182	39.15
Above 40 Years	173	37.20
Qualification of Respondents		
Bachelor	215	46.24
Master	139	29.89
M.Phil/professional	111	23.87
Investment Experience		
1----5	181	38.92
5----20	201	43.22
Above 20	83	17.86

Table 4.1 demonstrates the demographic profile of the respondents. The findings suggested that majority of the respondents are male (81.94%). Further, the table demonstrate that majority of the respondents age was 31 to 40 years (39.15%) having majorly qualification of Bachelor (46.24%) and majority of the investors experience was between 5 to 20 years (43.22).

4.2 Measurement Model

In order to test the measurement and structural models, Anderson and Gerbing (1988) state that two phases of data analysis were performed. The researcher investigated the measurement model's fit. Prior to making any judgments about the link between constructs, this established the reliability and validity of concept measures (Albort-Morant et al., 2018). As seen in Table and figure 1, our data met the convergent validity criteria since all variables in this study had standardised factor loadings larger than 0.4 (1999, Holland).

The researcher use variance inflation factor for analyzing multicollinearity issue in the data. Multi-collinearity is acceptable if the number is below five, according to Hair et al. (2011). All calculated VIFs for our model variables were less than 3.154. The reflecting constructions have a construct reliability of above 0.70 (Nunnally and Bernstein, 1994). Furthermore, table 1 indicated that the values of (Rho A) and C-A are higher than the acceptable limit i.e. .70. The AVEs obtained for all constructs ranged from .514 to.716, suggesting high construct reliability and convergence of measurement models. Finally, as demonstrated in Table 2, the discriminant validity of the measurement model was determined.

Table 2: Reliability Analysis

Construct	F-items	FA	VIF	AVE	CR	Rho_A	C-A
Organizational Factors	Accounting Information	0.640	2.124	0.514	0.832	0.775	0.754
	Cultural Values	0.449	1.478				
	Firm Age	0.912	1.164				
Personal Factors	Self-Image	0.733	1.251	0.572	0.869	0.767	0.713
	Personal Finance need	0.831	1.324				
	Consultation	0.607	1.270				
Market Factors	Market Information	0.864	2.305	0.716	0.833	0.803	0.632
	Market Uncertainty	0.869	2.501				
Financial	FLI	0.723	3.154	0.56	0.832	0.775	0.754

Literacy							
	FL2	0.536	2.205				
	FL3	0.792	2.861				
	FL4	0.487	3.085				
	FL5	0.71	2.275				
	FL6	0.761	2.865				
Risk Tolerance	RT1	0.652	2.782	0.583	0.902	0.888	0.878
	RT2	0.621	1.355				
	RT3	0.446	2.138				
	RT4	0.647	2.205				
	RT5	0.792	1.861				
	RT6	0.775	1.203				
	RT7	0.802	2.671				
	RT8	0.686	2.113				
	RT9	0.718	2.235				
	RT10	0.739	2.498				
Investors Behaviour	IB1	0.763	1.92	0.572	0.869	0.815	0.809
	IB2	0.811	1.902				
	IB3	0.807	1.973				
	IB4	0.763	2.575				
	IB5	0.620	1.259				

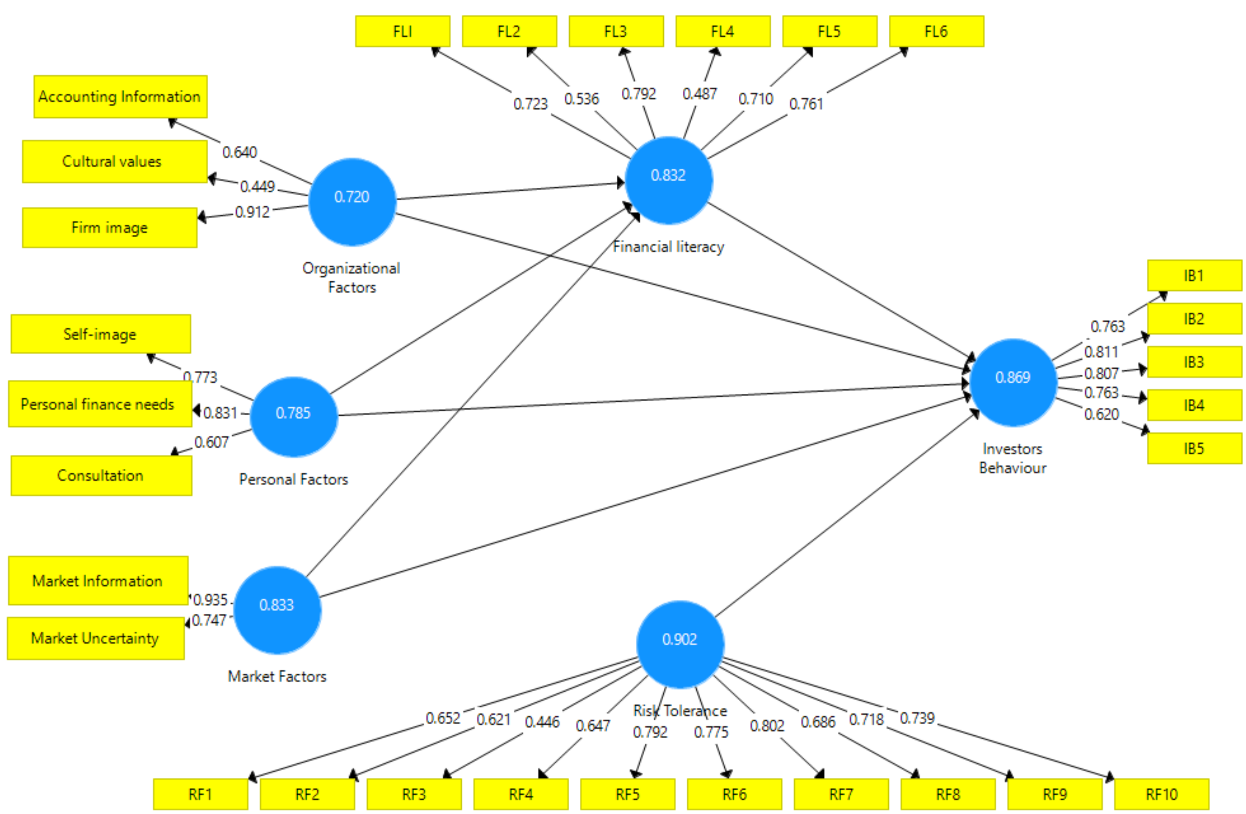
FLI
FL2
FL3
FL4
FL5
FL6
0.723
0.536
0.792
0.487
0.710
0.761
Accounting Information
Cultural values
Firm image
0.640
0.449
0.912
0.720
Organizational Factors
0.832
Financial literacy
Self-image
Personal finance needs
Consultation
0.773
0.831
0.607
0.785
Personal Factors
0.869
Investors Behaviour
IB1
IB2
IB3
IB4
IB5
0.763
0.811
0.807
0.763
0.620
Market Information
Market Uncertainty
0.935
0.747
0.833
Market Factors
0.902
Risk Tolerance
0.652
0.621
0.446
0.647
0.792
0.775
0.802
0.686
0.718
0.739
RF1
RF2
RF3
RF4
RF5
RF6
RF7
RF8
RF9
RF10

Figure 1: Reliability and validity analysis

The discriminant validity was examined using Fornel and Larcker (1971) by comparing the square root of each AVE in the diagonal with the correlation coefficients (off-diagonal) for each construct in the relevant rows and columns. Overall, discriminant validity can be accepted for this measurement model and supports the discriminant validity between the constructs. Table 4 indicated the HTMT result which is another measure of discriminant validity. According to the results, the values are between 0.47 and 0.85 indicating discriminant validity (Farooq et al., 2018).

Table 3: Discriminant Validity_ Fornell Larcker Criterion

	FL	**IB**	**MF**	**OF**	**PFN**	**RT**
Financial literacy	0.678					
Investors Behaviour	0.175	0.756				
Market Factors	0.274	0.432	0.46			
Organizational Factors	0.905	0.33	0.421	0.694		
Personal Factors	0.492	0.83	0.445	0.486	0.443	
Risk Tolerance	0.299	0.236	0.303	0.501	0.475	0.695

Table 4: Discriminant Validity_HTMT

	FL	IB	MF	OF	PFN	RT
Financial literacy						
Investors Behaviour	0.232					
Market Factors	0.455	1.19				
Organizational Factors	1.21	0.56	0.797			
Personal Factors	0.818	1.01	1.177	1.364		
Risk Tolerance	0.382	0.28	0.423	0.843	0.883	

4.3 Structural Model

Researcher evaluated the hypothesized structural relationship between variables. Our findings show that Personal factors has an influence on investors behaviour (Beta=0.568, T= 19.647, P=.000) which supports the first hypothesis (H1). Our findings confirm H2's claim that organizational factors influences investors behaviour (Beta= 0.103, T= 3.186, P=.010). Our findings confirm H3’s claim that market factors influences investors behaviour (Beta= 0.600, T= 11.212, P=.000).

Furthermore, the findings indicated that financial literacy has direct impact on investor investment behaviour (Beta= 0.277, T= 7.625, P=.000) (Table 3). As a direct effect, the findings evaluated that personal factors has significant effect on investors investment behaviour (Beta= 0.168, T= 5.139, P=.000). Further, the findings evaluated that organizational factors has significant effect on investors investment behaviour (Beta= 0.899, T= 39.878, P=.000). Lastly, as a direct effect the findings evaluated that market factors has significant effect on investors investment behaviour (Beta= 0.136, T= 4.354, P=.001). Researcher evaluated financial literacy predicted mediating effects between market factor, organizational factors and personal factors. The results indicated the significant mediating effect between independent and dependent variables. The findings supports the fourth hypothesis that financial literacy ha mediating effect between personal, market, organizational factor as independent and investors behaviour as a dependent variables.

Lastly, the findings indicated that risk tolerance has direct impact on investor investment behaviour (Beta= 0.177, T= 14.007, P=.000) (Table 4). Researcher evaluated risk tolerance as a predicted moderating effects between market factor, organizational factors and personal factors. The results indicated the significant moderation effect between independent and dependent variables. The findings supports the fifth hypothesis that risk tolerance ha mediating effect between personal, and organizational factor as independent and investor's behaviour as a dependent variables. The findings indicated that risk tolerance as a moderating variable has insignificant effect between market factors and investors behaviour.

Table 4: Testing of Hypothesis

Relationship	Beta -Value	T-Value	P-Value	Decision
Direct Effect				
Personal Factors -> Investors Behaviour	0.568	19.647	0.000	H1 Accepted
Organizational Factors -> Investors Behaviour	0.103	3.186	0.010	H2 Accepted
Market Factors -> Investors Behaviour	0.600	11.212	0.000	H3 Accepted
Mediation Analysis				
Direct Effect (without mediator)				
Financial literacy -> Investors Behaviour	0.277	7.625	0.000	-
Personal Factors -> Financial literacy	0.168	5.139	0.000	-
Organizational Factors -> Financial literacy	0.899	39.878	0.000	-

Market Factors -> Financial literacy	0.136	4.354	0.001	-
Mediation Model				
MF -> FL -> IB	0.038	3.185	0.01	H4 accepted
OF-> FL -> IB	0.249	8.851	0.000	H4 accepted
FP -> FL -> IB	0.047	3.388	0.007	H4 accepted
Moderation Analysis				
Direct Effect (without mediator)				
Risk Tolerance -> Investors Behaviour	0.177	14.007	0.000	-
Moderation Model				
OF>RT>IB	0.085	2.209	0.052	H5 Accepted
PF>RT>IB	0.107	2.509	0.031	H5 Accepted
MF>RT>IB	0.022	1.963	0.078	H5 Rejected

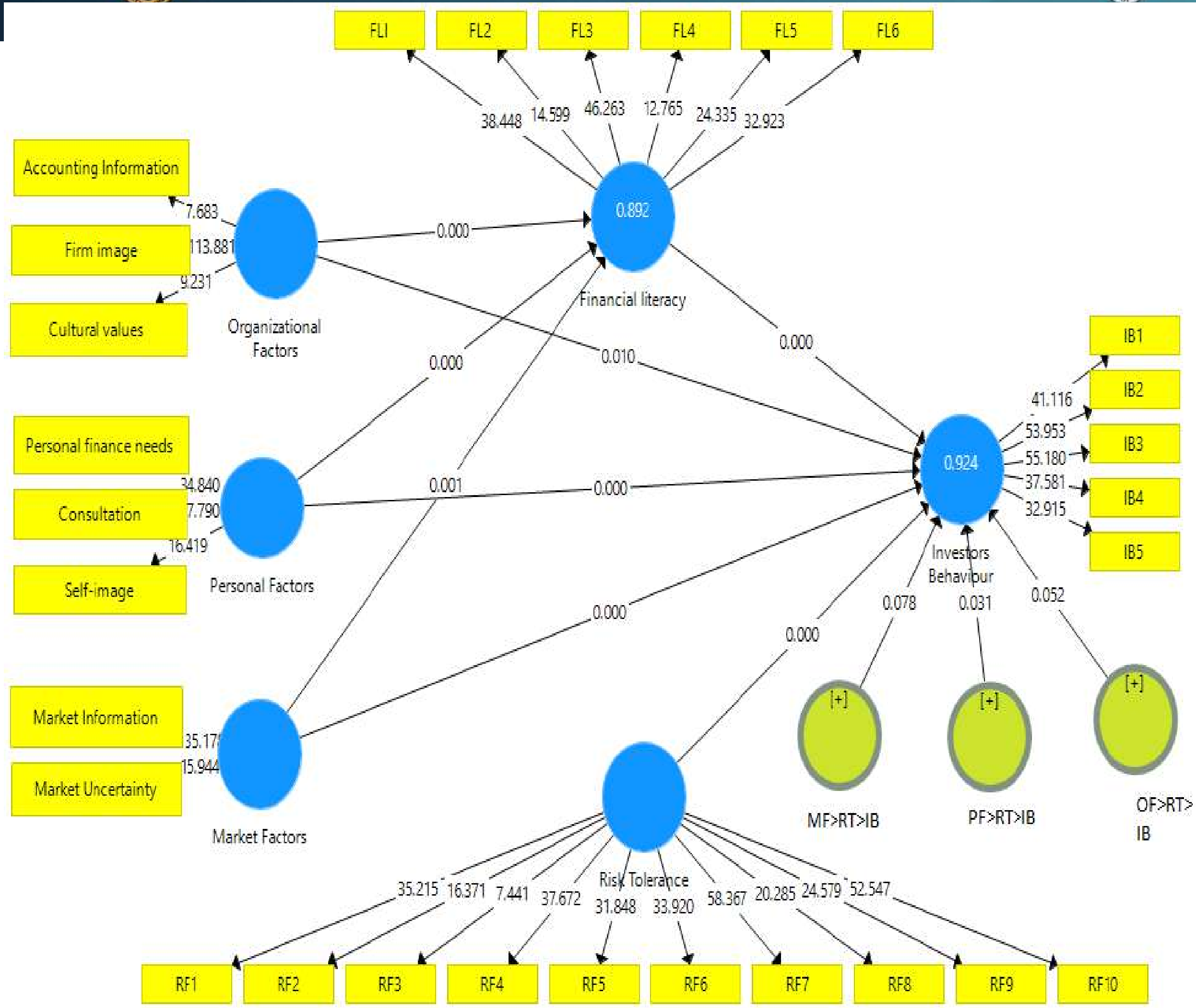

Figure2: Structural Equational Model Results

5.0 Discussion

The results of this study show that market factors, organizational factor and personal factors are affecting individual investors in Pakistan. It is consistent with previous studies (Chandra & Kumar, 2011). Sara (2017) also found that there are different factors affecting JSX private investor's decisions which include; political, environmental, innovative social and legal factors. In addition, Chong and Lai (2011) confirmed this hypothesis by discussing the investment behavior of Malaysian investors. The results of this study show that profit/return is one of the most important factors that can affect individual investors' investment behavior in Pakistan. Similar results are found during the study of PSX and KSX which are conducted by Azam and Kumar (2011) and Tanha and Halid (2011).

Personal biases are considerable factor for investors as they believe that such companies give more returns inconsistent basis. Hussein and Hassan (2006) study the same topic in the UAE stock market and their findings are consistent with the findings of this study. However, some researchers' observations are not consistent with the current study results. Sultana and Pardhasaradhi (2010) and in addition Chou, Huang and Hsu (2010) research on Taiwan investors and they observed that personal investment experience can change the concept of risk. The findings of results clearly show that the organizational factor of the firm has a certain influence on investor behavior. The findings also suggest that market information and market uncertaninty greatly influence the decision making of investors. The market situation of the factors influences the behavior of investors (Chang & Lin, 2015).

As a result of the present research, financial literacy mediate the relationship between observed variables. Its shows that the more litrate individual investors tend to make rational decisions and also act as a facilitator between the relationship of multiple behavioral, market, organizational factors and investors behaviour. The findings of this result are consistent with Hussein and Hassan (2006) in the United Arab Emirates market. The findings of this study also insist that risk tolerance moderate the relationship between observed variables which clearly indicate that the tolerance level of risk moderare the choice of investors investment and it is a significant contributo. Overall the results of the study are consist with the previous studies (Yang, Bi, & Liu, 2020, Chen, Ho, & Liu, 2019, Zheng, Gao, & Ruan, 2019, Lapanan, 2018).

This research will be able to provide new insights for investors, brokerage firms, management, corporate governance, and government, helping them make appropriate and powerful decisions and eventually stabilize the market. The contribution of the study to the theory is that to improve our insight and understanding of the relationship between behavioral factors and investor decisions. The researcher also uses a holistic approach to study internal and external factors in the meantime. The selected sample and quantitative approach is a limitation of the study. Future researchers may use mixed method approach to check the observed variables.

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Strategic Insights: Unveiling Investor Decision Dynamics and Business Sensitivities via the Betting Against Beta Approach

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Abstract:

The effectiveness of utilizing "betting against beta" investing strategy is examined in this study with context of investor regret and market sentiment. By shorting low-beta assets and buying high-beta assets, an investor who is betting against beta is deviating from the standard risk-reward relationship. However, psychological factors like investor regret and market behaviors may have an impact on this strategy's effectiveness. Investment dissatisfaction a behavioral bias that has been extensively investigated, may have a big impact on investing choices. Investors may feel guilty for deviating from the common understanding of pursuing greater returns through greater risk when adopting the betting against beta method. The implementation and execution of the technique may be constrained by the fear of losing out on possible advantages by deviating from the conventional risk-reward ratio. The efficacy of betting against beta is not significantly influenced by investor remorse and market mood. Investors may better traverse the complexity of the approach and perhaps improve their investing results by recognizing and taking into account these issues.

***Key** terminologies BAB(betting against beta),HML(High minus low),SMB(Small minus big),MRP(Market Risk Premium),LTM ,,FREG (Financial regrets),FSENT(Financial Sentiments)*

Introduction

A variety of techniques and factors are taken into account while deciding where to deploy cash in the world of banking and investment. One such tactic that has gained popularity recently is referred to as "betting against beta." By frequently shorting low-beta assets and buying high-beta assets, this strategy involves entering positions that are at odds with the conventional risk-reward relationship. There are various where firstly stocks were studied by (Tahaoglu et al., 2020) in which the beta is the only factor affecting than the relation between the market and the beta line becomes flat. “In equilibrium, capital asset prices have adjusted so that the investor, if he follows rational procedures (primarily diversification), can attain any desired point along a capital market line.”(Sharpe) there were other models which explained the long run of stocks in the market (Dávila et al.,) that investors information will certainly save them from investing in more risky assets but there are securities that could remain unrecognizable by the miss information Certain factors contributes-Ute sky beta securities which eventually end up a loss for the investors when there is a typical discussion that greater the risk greater the profit (Frazzini and Pedersen 2014) presented the model further there was a discussion that this model does seems to be successful for the time being but there are certain factors that contribute towards its failure indeed that could be investors regret, sentiments, bad news, arbitrage, expensive equity

Investor regret is a psychological term for the feelings and biases people experience as they think back to their prior investing choices. It is essential to understand investor behavior and may greatly influence how well investing plans work. The regret factor may show up in a variety of ways when betting against beta. Investors, for example, can later regret not taking positions that fit the conventional risk-reward relationship because they were worried, they could miss out on prospective returns. Alternatively, if the current market emotions are precise, they can regret taking positions that went against them.

The High minus low factor, which measures the return on investment of high-value stocks against low-value stocks, could have a bearing on the effectiveness of this betting against beta strategy. If High minus low exhibits a positive connection with the beta, it indicates that high-beta assets have higher values, thus minimizing the strategy's profitability. A negative correlation between High minus low and beta, on the other hand, would confirm the strategy's efficacy.

The Small minus big factor, which compares the returns of small-cap stocks to big-cap companies, may have an impact on the efficiency that applies to betting against the beta method. A positive association between Small minus big and beta would imply that high-beta assets are often smaller, thus restricting the strategy's profitability. A negative link between Small minus big and beta, on the other hand, would confirm the strategy's effectiveness.

The Market risk premium, which represents a market's risk premiums, can also have an impact on the profitability of beta betting. A positive correlation between MRP and beta indicates that high-beta assets provide larger returns, thus lowering the strategy's profitability. A negative correlation between MRP and beta, on the other hand, would confirm the strategy's efficacy.

Apart from all of these financial elements, the Last Twelve Months factor, which includes negative news, pricey equities, and arbitrage possibilities, may have a major effect on the financial viability of betting against the beta approach. The particular connection between the LTM and beta is determined by the factor's fundamental dynamics. If LTM has a positive association with the beta, it means high-beta assets are connected with bad news, costly valuations, or possible arbitrage opportunities, thereby diminishing the strategy's profitability. A negative correlation between LTM and beta, on the other hand, would confirm the strategy's efficiency.

Additionally, the effectiveness of betting against the beta approach can be significantly affected by market attitudes, which can frequently be affected by elements that include news events, economic data, and social media influence. High-beta assets frequently perform better than low-beta assets when investors and the market are optimistic. In these kinds of situations, a risk-taking approach like betting against beta may encounter difficulties and produce less-than-ideal outcomes.

Conversely, low-beta assets may outperform high-beta assets during times of negativity or market downturns, making a betting against beta approach enticing and even rewarding. Asset prices and investment flows can be greatly impacted by sentiment, which is affected by psychological biases as well as external variables. Academic research has shown that market sentiments may influence investors towards specific asset classes depending on existing narratives and feelings, such as the work of (Ding et al., 2019). Investors may favoring-beta assets during upbeat and upbeat periods, which might reduce the potential profitability of betting against beta. Conversely, low-beta assets could grow popular during periods of gloom and doom, offering possibilities for contrarian strategies.

For evaluating the effectiveness of betting against beta, it is important to understand how investor regret and market sentiment interact. It necessitates taking into account not only the fundamental characteristics of assets but also the behavioral traits and market factors that might affect the results of an investment. Investors may make smarter decisions and alter their strategy if they're aware of these components and their possible consequences.

The relationship between betting against beta, investor regret, and market state of mind has been the subject of several research in the field of finance and investments, providing insight into the complicated nature of these aspects and their combined influence on investment outcomes.(Frazzini and Pedersen 2014) conducted a significant study that looked at the profitability of the betting against beta approach across multiple market situations. The authors found that the approach often works well during times of market instability or high volatility, suggesting that market attitudes are crucial when assessing the method's efficacy.

These studies have shed light on how these variables interact to influence the results of investments. In evaluating the strategy's efficacy, they stress the significance of market circumstances, investor behavior, and sentiment analysis. Investors may make wise selections in light of investor regret and market emotions by incorporating these insights into the way they make decisions and gaining a more thorough grasp of the opportunities and challenges involved with betting against beta.

Objective

The purpose of this study is to look at the link among HML, SMB, MRP, LTM, investor regret factor, market attitudes, with the financial viability of the betting against beta strategy and most importantly to investigate the individual and aggregate impact of HML, SMB, MRP, LTM, investor regret factor, and market attitudes on the performance of the BAB strategy. Another appropriate objective of this study is to discover the key features and triggers that have a substantial impact on the return on investment associated with the betting against beta approach, considering account of both financial and psychological elements. This study is conducted to determine how investor guilt and market sentiment interact with financial parameters (HML, SMB, MRP, LTM) when determining the results from the BAB strategy.

Another useful purpose of this study is to give investors with insights and advice on how to include HML, SMB, MRP, LTM, investor regret factor, and market emotions into the way they make decisions while adopting the betting against beta approach.

The objective of this research topic is to take a peek at the combined impact of these components on the BAB approach. The study tries to identify the primary drivers and factors of the strategy's effectiveness through analyzing the correlations among HML, MOM, SMB, MRP, LTM, investor regret factor, market emotions, and strategy profitability

SIGNIFICANCE AND CONTRIBUTION OF STUDY

The study provides a deeper understanding of the variables that impact the profitability and results of the strategy through taking into account both financial and psychological components. This research offers useful insights and advice to investors interested in applying the BAB approach. Investors may make better informed decisions and alter their approach by recognizing the primary variables or causes of the strategy's efficacy. The findings of the study can help investors include HML, MOM, SMB, MRP, LTM, investor regret factor, and market emotions into their decision-making processes, improving their likelihood of success. The research emphasizes the significance of addressing investor mood or the possible misconceptions related to regret aversion by investigating the influence on those psychological and behavioral components. This knowledge can assist investors in better managing their exposure to risk and making more balanced selections.

RESEARCH GAP

While certain individual components, including market risk premium as well as particular anomalies in the market such SMB, HML and MRP have been studied in connection with betting against beta, there is minimal research that addresses the overall effect of each of these factors in a single study. Understanding the combined influence of these elements on betting against beta is critical for having a better understanding the overall strategy's performance and risk-reward profile. Furthermore, incorporating the investor regret component and investor sentiments into the research adds another degree of complication. Investigating how these behavioral and psychological features of individuals interact with conventional risk indicators and market anomalies may provide insight into the choice-making processes that drive bets against beta strategies.

Researchers can give a more thorough picture of the elements driving the strategy's success or failure by evaluating the simultaneous influence on HML, SMB, MRP, LTM, investor regret factor, and investor attitudes on betting against beta. This might have serious consequences on managing a portfolio, managing risks, and investment decisions. Studying through the psychological factor altogether and their impact on the BAB portfolio is the major research gap been found through the literature review. Between the variables in question over time to fill this research gap. Furthermore, combining data from diverse market circumstances and geographical locations might result in more strong and generalizable conclusions

RESEARCH QUESTION

How does HML, SMB, MRP, LTM, the investor regret factor, and market emotions affect the financial viability overall effectiveness of the betting against beta approach as a whole?

LITERATURE REVIEW

Size and book-to-market equity, two commonly measurable variables, combine to represent the cross-sectional volatility in average stock returns related with market, dimensions, leveraging, book-to-market equity, and earnings-price ratios. In addition, when the analyses account for non-size variations in , the relationship between market and average return remains flat, regardless of whether serves as the only explanation variable.(Fama and French 1992)

The relationship between betting against beta, investor regret, and market state of mind has been the subject of several research in the field of finance and investments, providing insight into the complicated nature of these aspects and their combined influence on investment outcomes. (Frazzini and Pedersen 2014) conducted a significant study that looked at the profitability of the betting against beta approach across multiple market situations. The authors found that the approach often works well during times of market instability or high volatility, suggesting that market attitudes are crucial when assessing the method's efficacy.

Investors might show more regret aversion at times like these, which could result in better adherence to the conventional risk-reward relationship and enhance the profitability of the strategy. The study conducted by (Baker, Kumar et al. 2019) utilized the concept of investor regret and investigated the part regret plays in the effect of disposition, a well-known behavioral bias where investors remain onto losing assets for an excessive amount of time and sell profitable stocks too fast.

The authors found that regret aversion had a major impact on investors' making choices, with those who anticipate regret being more likely to realize profits (selling winners) and less likely to realize losses (selling losers). This research suggests that investors' decisions to deviate from or stick with the betting against beta strategy may be affected by regret aversion according to how likely they believe they would be faced with regret.

In an investigation examining how opinions about the market affect investing choices (Ding et al., 2019) looked at the connection between investor attitude and stock returns. According to the authors, market sensations can be a contrarian hint since they have found that periods of robust sentiment tend to be followed by periods of reduced future returns. This study shows that the effectiveness of a strategy like betting against beta may be decreased during periods of high market mood, when investors are more upbeat and risk-tolerant.

In addition, a research by (Fieger 2017) investigated the effect of investor sentiment on the price of idiosyncratic risk, an important aspect of beta. The authors found that investor sentiment significantly impacts how idiosyncratic risk is determined, indicating that market mindsets can change an asset's beta characteristics. This finding emphasizes the need of taking market sentiments into consideration when assessing the success of betting against beta.

Research in the field of behavioral finance has revealed the substantial effect that investor regret plays on choice-making. (Strahilevitz, Odean et al. 2011) the study found that investors who resist regret tend to stick to traditional ideas of risk and reward. Investors could be guilty of departing from the common understanding of seeking bigger returns through more risk when implementing the betting against beta method. This regret-driven behavior can prevent the approach from being adopted and from being successful since investors may be reluctant to take positions that seem to go against the conventional risk-reward ratio.

When sentiments is high, nevertheless, these stock categories yield in comparison modest future returns.(Ding et al .,2019) The cost of aggregated volatility risk in a broad range of stock returns. We find that equities with significant sensitivity to changes in aggregation volatility have poor average returns, and this is consistent with theory.(Ang, Hodrick et al. 2006) The volatility influence in developing markets is very barely connected to the volatility effect in developed stock markets, throwing out a common-factor explanation.

(Blitz, Pang et al. 2013) causes for this volatility impact and categorizes each explanation based on the the CAPM method hypothesis to which it is related. Several possibilities relate to rational investor behaviour in the presence of external financial incentives or limitations, which could clarify why the volatility impact has been so stable over time.(Blitz, Falkenstein et al. 2014) The main impact occurs for extremely small businesses, with minimal variation in return among medium and big firms.

It is unclear if size constitutes the cause of the impact or if size is simply a substitute for a number of genuine unknown elements that have to do with size.(Banz 1981) These results point to the presence of shared global dangers, that is describe using a three-factor model. Global finance liquidity risk is one cause of these patterns, which are only visible when value and momentum are examined together across markets.(Asness, Moskowitz et al. 2013) We discover value premium in average returns throughout all four regions studied (North America, Europe, and Japan, and Asian Pacific), and substantial momentum returns in all but Japan. Our new research focuses on how global values and momentum returns differ by business size.(Fama and French 2012)

The exploitability of BAB trading portfolios shows that they create considerable unusual profits that can't be explained by the usual asset-pricing features such as size, book-to-market, and movement.(Auer and Schuhmacher 2015) Whenever investors differ about the future of the stock market, high-beta commodities are more vulnerable to this aggregated disagreement, have deeper dispersion of view regarding their payoffs, but are overvalued due to short-sales limits. Due to risk-sharing, the Security Market Line slopes higher if aggregate disagreement is low. When beta is resilient, projected returns may actually decline.

We use an indicator of disagreement regarding stock market profits to corroborate our theory.(Hong and Sraer 2016) A well-diversified mix of time-varying momentum methods spanning all asset classes produces significant abnormal returns while subjecting investors to few standard asset price variables and performs best under serious market conditions. We discover how speculation gain from historical movement at the cost of hedgers when they examine the trading activity of speculation and hedgers.(Moskowitz, Ooi et al. 2012)

The model's efficacy is unaffected by how its factors are specified. By the inclusion of investment and profitability factors, the value component of the FF three-factor model is rendered obsolete for characterizing the average return in the sample under consideration.(Fama and French 2015) Portfolio-level analysis and cross-sectional regressions at the company level show a significant and negative correlation between the greatest daily return during the previous month (MAX) and predicted stock returns.

The average monthly difference in raw and risk-adjusted returns among stocks in the lowest and top MAX deciles exceeds 1%.(Bali, Cakici et al. 2011) The beta anomaly emerges only when the price effect of lottery demand occurs primarily in high-beta equities and is focused in shares with low levels institutional ownership.(Bali, Brown et al. 2017) demonstrates ownership concentration, directors' and executives' equity-based incentives, and the reputations of outside directors vary negatively increasing the profits rapidity, and that ownership concentration and directors' equity-based incentives rise with business complexity.

The number of board members and the proportion of inside directors, on the other hand, do not vary much either earnings timeliness or business complexity.(Bushman, Chen et al. 2004) The conditioned beta of a high-minus-low beta portfolio fluctuates in inverse proportion to the equity premium and in inverse proportion to market volatility. As a consequence, the unconditionally alpha is a pessimistic approximation of the genuine alpha.

(Cederburg and O'DOHERTY 2016) Merton's notion that market segmentation caused by imperfect information is an essential component of IV's impact on the broad range of returns is well supported.(Chichernea, Ferguson et al. 2015) The stock's potential return is unconnected to the firm's prior accounting-based success, but it is significantly correlated with the "intangible" return, which is perpendicular to the company's past performance. Indeed, because it is an excellent proxy for intangible values, the book-to-market ratio anticipates returns. A composite issuance of equity metric, which is connected to intangible returns, also forecasts returns independently.(Daniel and Titman 2006) When traders with the lowest values do not trade, pricing will reflect the positive outlook.(Diether, Malloy et al. 2002) Prior to the news release date, considerable price discovery connected to news items happens through institutional trading.(Hendershott, Livdan et al. 2015) the stocks return in winners portfolio shows more return then the losers portfolio(Jegadeesh and Titman 1993) the beta anomaly only exist with the overpriced stock if this sticks removed from the portfolio then beta anomalies become insignificant(Liu, Stambaugh et al. 2018)

CONCEPTUAL FRAMEWORK

Financial Considerations:

HML (High Minus Low): The factor that compares the return on investment of high and low-value equities. It may impact the success of beta betting by signaling whether high-beta assets have higher or lower values. A beneficial connection between HML and beta might diminish the strategy's profitability, but an adverse connection would increase its efficacy.

SMB (Small Minus Big): SMB compares the results of small-cap stocks to the performance of large-cap equities. Its impact on beta betting is determined by the link among SMB and beta. A positive association between SMB and beta would imply that high-beta assets are often smaller, thus lowering the strategy's profitability. A negative association, on the contrary hand, would confirm the strategy's efficacy.

MRP (Market Risk Premium): MRP is the excess return on the market over the risk-free rate. Based on its association with beta, it can influence the outcome of betting against beta. A positive association among MRP and beta would imply that high-beta assets offer higher returns, thus lowering the strategy's profitability. A negative association, on the other hand, would confirm the strategy's efficacy.

LTM (poor News, costly Equity, and Arbitrage) variables: LTM variables include poor news, costly equity, and arbitrage chances. Their impact on beta betting is determined by the underlying dynamics. A high correlation between LTM and beta might diminish the strategy's profitability, whilst a negative correlation would boost its efficacy.

Psychological Aspects:

Investor Regret: Aversion to regret could discourage investors from departing from the usual risk-reward relationship. Higher degrees of regret may diminish the adoption and efficacy of the anti-beta technique, as lower levels may boost it.

Market Sentiments: Based on dominant narratives and emotions, market sentiments may affect investor preferences regarding particular asset classes. Positive market sensations could decrease the return on investment of a bet against beta approach, but negative market sentiments may increase it.

$$BAB = HML + SMB + MRP + LTM + FREG + FSENT$$

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6$$

Y = BAB = dependent variable ,X1,X2,X3,X4,X5 are denoted as independent variables

$\beta 0$ can be termed as a constant term

$\beta 1, \beta 2, \beta 3, \beta 4, \beta 5, \beta 6,$ are denoted as coefficients

$X1\ is\ denoted\ as\ HML$ (High minus low)

$X2$ is denoted as SMB (Small minus big)

$X3\ is\ denoted\ as\ MRP$(Maket Risk Premium)

$X4\ is\ denoted\ as\ LTM$(Bad News, Expensive Equity, and Arbitrage**)**

$X5\ is\ denoted\ as\ FREG$(Investor Regret Factor**)**

$X6\ is\ denoted\ as\ FSENT$(Investor Sentiments)

Theoretical framework

Behavior Finance

Prospect Theory: The theory of prospect proposes that people make choices based on perceived rewards and losses compared to an initial point. Investors may display aversion to risk or risk-seeking behavior while betting against beta, according on their anticipated gains or losses from diverging from the typical risk-reward connection. This theory explains the impact of the shareholder regret factor on strategy adoption.

Herding Behavior: Herding behavior emphasizes how investors prefer to follow the group and imitate others' activities. Market emotions, which are affected by herding behavior, may affect the acceptance and popularity of specific investing techniques, such as betting against beta. Positive market sentiment could boost interest in high-beta assets, lowering the strategy's efficacy.

Pricing of asset theory

CAPM (Capital Asset Pricing Model): The CAPM model sheds light on the link among an asset's beta and its projected return. The success of the approach in the setting that betting against beta is determined by the connection among high-beta assets with their predicted returns. HML, MOM, SMB, MRP, and LTM risk variables may introduce new risk factors that affect asset returns, hence impacting the financial viability of a betting against beta portfolios.

The Arbitrage Pricing Theory (APT): an APT expands on the CAPM by taking into account different risk variables that affect asset returns. HML, MOM, SMB, MRP, and LTM components can be viewed as possible systematic risk factors influencing high-beta asset returns. The responsiveness if high-beta assets towards these variables will determine the efficiency of this betting against beta approach.

HYPOTHESIS

H1; HML will show statically significant result with Bab portfolio.

H2; SMB will produce positive results with betting against beta strategy.

H3; MRP variable will be significant with Bab portfolios.

H4; FREG will show a relationship with BAB portfolio.

H5; LTM will show association with BAB portfolio.

H6; FSENT will conversely have a relation with BAB portfolio.

Methodology

Data analysis

The data was collected from authentic authors sites from their data library with the results hml, smb, mrp data was collected from the ANDREA FRAZINNI WEBSITE and freg and ltm data was collected TG BALI website and sentiments data was collected from investor sentiment index.

Sample range

The time zone selected for the measurement is 1990 to 2022 and the overall data is on monthly basis capture a range of market conditions, including various economic cycles and sentiment phases. The sample range was selected long to surpass the short-term fluctuations and to generalize results easily

Analytical considerations

The BAB portfolio is regress against the hml, smb, mrp, freg, ltm, sent to check the significance of the hypothesis

Regress bab mrp hml smb freg ltm sent

Source	SS	df	MS
Model	.273715547	6	.045619258
Residual	.287957172	389	.00074025
Total	.561672719	395	.001421956

Number of Obs	=	396
F(6,389)	=	61.63
Prob > F	=	0.0000
R-squared	=	0.4873
Adj R-squared	=	0.4794
Root MSE	=	0.02721

Bab	Coefficient	SD error	t	P>|t|	[95%conf	Interval]
mrp	2915073	0452451	6.44	0.000	.2025517	0.3804628
hml	-.0130469	.0603528	-0.22	0.829	-.1317053	0.1056115
smb	.6182286	.071013	8.71	0.000	.4786113	0.757846
freg	-.0038575	.0008861	-4.35	0.000	-.0055996	-0.0021154
Itm	-.0060042	.0005677	-10.58	0.000	-.0071202	-0.0048881
Sent	-.0000329	.0021597	-0.02	0.988	-.004279	0.0042132
cons	.0040276	.0015165	2.66	0.008	.001046	0.0070093

Based on the regression outcomes, the hypothesis is generally significant, as evidenced by an F-statistic using a p-value = 0.0000. The R-squared coefficient of 0.4873 suggests that the variables that are independent in the model can explain about 48.73% of the heterogeneity in the variable that is dependent "Bab" (betting against beta).

For each independent variable, it's coefficients and p-values are as follows:

1. **MRP (Market Risk Premium):**

The coefficient result shows 0.2915073 with a statistically significant p valueof 0.000 which depicts a positive and significant relationship between market risk premium and strategy of betting against beta

The coefficient is favorable, showing that a rise in the premium for market risk (MRP) is connected with an increased bet against beta (Bab).

2. **HML (High Minus Low):**

The coefficient value of -0.0130469 with a statistically high p value of 0.829indicates an insignificant relationship between HML and betting against beta strategy .Negative coefficient value and value of p which is higher than 0.05 shows that HML and bab are negatively associated with each other Although the coefficient is unfavorable the p-value has been elevated (higher than 0.05), showing that there's no significant association between HML and beta betting.

3. **SMB (Small Minus Big):**

The coefficient value shows 0.6182286 and p value shows 0.000 indicates a significant relationship between increasing SMB and usage of increased betting against beta strategy .After the analysis of these results those investors who are looking to optimize their portfolios through the utlization of betting against beta strategy can take profitable decisions**.** The coefficient is favorable, indicating that increasing SMB is connected with increased betting against beta (Bab).

4. **FREG (Investor Regret Factor):**

Negative value of coefficient (-0.0038575) and p value shows 0.003 and its mean that due to enhanced high investor regret factor they are not willing to use betting against beta strategy to much extent.So it can be determined high investor regret factor is associated with lower betting against beta**.**The coefficient is unfavorable showing that larger amounts of investor regret are related to lower beta betting (Bab).

5. **LTM (Bad News, Expensive Equi g g gty, and Arbitrage):**

Negative value of coefficient (-0.0060042) and p value (0.000) shows that there is no correlation between LTM and utilization of betting against beta strategy.Its mean that LTM factor can play a significant role in changing or shaping the behaviour of investors towards the usage of beta against betting strategy.The relationship coefficient is unfavorable indicating that LTM is inversely related to betting against beta (Bab).

6. **SENT (Investor Sentiments):**

Negative value of coefficient (-0.0000329)and p value(0.990) shows an insigificant relationship between invesor sentiments and utlization of beta against betting strategy.Negative coefficient with p value which is greater 0.005 depicts that investors decision of using beta against betting strategy is not really afftected due to the sentiments of investors. Although the coefficient is unfavorable the p-value is quite high (more than 0.05), showing that there's no meaningful association between investor emotion and beta betting. Please note that the When sentiments is high, nevertheless, these stock categories yield in comparison modest future returns. When sentiments is high, nevertheless, these stock categories yield in comparison modest future returns.

Linear regression

Number of Obs	=	396
F(6,389)	=	50.91
Prob > F	=	0.0000
R-squared	=	0.4873
Root MSE	=	0.02721

Bab	Coefficient	Robust SD error	t	P>|t|	[95%conf	Interval]
mrp	.2915073	.0476657	6.12	0.000	.1977926	0.385222
hml	-.0130469	.0799957	-0.16	0.871	-.1703248	0.1442311
smb	.6182286	.0826768	8.71	0.000	.4556794	0.7807778
freg	-.0038575	.0012803	-3.01	0.003	-.0063747	-0.0013403
Itm	-.0060042	.0008001	-7.50	0.000	-.0075772	-0.0044311
Sent	-.0000329	.0026681	-0.01	0.990	-.0052786	0.0052132
cons	.0040276	.0015165	2.58	0.010	.000964	0.0070913

The model remained significant overall, as evidenced by the F-value with a p-value of 0.0000 depending upon the robust regression findings. The R-squared coefficient of 0.4873 indicates that each of the independent factors in the model can explain about 48.73% of the variance in the variable that is dependent on "bab" (betting against beta).

When we compare the correlation coefficients and p-values to the prior regression, we observe that the use of robust standard errors had no significant effect on the significance levels of the coefficients or the overall results. The standard errors, however, have been corrected to account for probable heteroscedasticity in the data.

The robust coefficients and p-values for each independent variable are as follows

1. **MRP (Market Risk Premium):**

The coefficient result shows 0.2915073 with a statistically significant p valueof 0.000 which depicts a positive and significant relationship between market risk premium and strategy of betting against beta

2. **HML (High Minus Low):**

The coefficient value of -0.0130469 with a statistically high p value of 0.871indicates an insignificant relationship between HML and betting against beta strategy .Negative coefficient value and value of p which is higher than 0.05 shows that HML and bab are negatively associated with each other

3. **SMB (Small Minus Big):**

The coefficient value shows 0.6182286 and p value shows 0.000 indicates a significant relationship between increasing SMB and usage of increased betting against beta strategy .After the analysis of these results those investors who are looking to optimize their portfolios through the utlization of betting against beta strategy can take profitable decisions**.**

4. **FREG (Investor Regret Factor):**

Negative value of coefficient (-0.0038575) and p value shows 0.003 and its mean that due to enhanced high investor regret factor they are not willing to use betting against beta strategy to much extent.So it can be determined high investor regret factor is associated with lower betting against beta.

5. **LTM (Bad News, Expensive Equity, and Arbitrage):**

Negative value of coefficient (-0.0060042) and p value (0.000) shows that there is no correlation between LTM and utilization of betting against beta strategy.Its mean that LTM factor can play a significant role in changing or shaping the behaviour of investors towards the usage of beta against betting strategy.

6. **SENT (Investor Sentiments):**

Negative value of coefficient (-0.0000329)and p value(0.990) shows an insigificant relationship between invesor sentiments and utlization of beta against betting strategy.Negative coefficient with p value which is greater 0.005 depicts that investors decision of using beta against betting strategy is not really afftected due to the sentiments of investors

In general, the robust results of the regression reflect the prior study's findings and the conclusions about the relationships among the variables remain constant. In the context of heteroscedasticity or similar data-related difficulties, robust standard errors can assist tackle potential heteroscedasticity and give more trustworthy inferencesOur Wald chi-squared test across a p-value of 0.0000 indicates that the model stays significant overall depending upon the bootstrap-robust regression findings with 50 replications. The R-squared coefficient of 0.4873 indicates that the factors that are independent in the framework can explain about 48.73% of the variance in the variable that is dependent on "bab" (betting against beta).

When we compare the bootstrap-robust coefficients as well as p-values to the prior regression findings, we find that the use of bootstrap-robust standard errors resulted in slightly smaller confidence intervals but did not significantly change the significance levels of the coefficients or the overall conclusions.

In general, the bootstrap-robust regression outcomes match the prior studies' outcomes, and the findings about the variables' connections remain consistent. By accounting for sampling uncertainty and probable heteroscedasticity in the data, bootstrap-robust standard errors give a more trustworthy inference.

The model stays significant overall, as evidenced by an F-statistic using a p-value of 0.0000, based upon the robust regression findings using cluster-robust standard deviations (adjusted for 395 clusters). The R-squared coefficient of 0.4873 indicates that the factors that are independent in the model can explain about 48.73% of the variance in the variable that is dependent on "bab" (betting against beta).

All cluster-robust standard errors, that account for probable grouping in the data, were adjusted for 395 clusters, giving more trustworthy inference where observations within clusters may be dependent on one another.

In general, the cluster-robust regression outcomes reflect the prior studies' findings, and the conclusions about the variables' correlations remain consistent. In the case of clustered data, cluster-robust standard errors take into consideration potential clustering impacts and give more trustworthy inferences.

Conclusion

Overall the tests were collected from 1990 to 2022 in this finding we find that the model overall was significant with 48.735% but the variable itself seems to be insignificant results with betting against the beta portfolio.There is no prominent relationship between LTM, FREG, and SENT of investors that could in some studies show positive results. The hetroscardisity robust, bootstrap robust, and cluster robust were run to estimate the tests.These insights can help investors and financial professionals understand the aspects that influence betting against beta techniques and successfully managing portfolio risk. However, a greater study into additional elements that may impact betting against beta under numerous market circumstances and settings may be necessary.

Practical and Managerial Implications

The findings of this study offer multiple practical implications for entrepreneurs. Managers and owners need to understand that BAB strategy can get target highest number of nvestors satisfaction towards their product and investors can easily rely on their product efficiency if the environment of company is sustainable. Top management of different business sectors of Pakistan need to understand the importance of BAB strategy for the enhancement of their profitability ratios. If organizational finance department will promote this strategy then investors are more likely to be satisfied in doing investment.Financial executives need to understand that adoption of Bab startgy is also very crucial for the successful running of business operation .Through the startegy of BAB strategy domestic and international investors are ready to do an investment in different projects which will provide adequate perks to a specific organization and it will also helpful in the betterment of economic conditions of Pakistan. This study is not only practicable in Private sectors of Pakistan but also in other influential sectors of Pakistan because there is an immense need for the implementation of BAB startegy in order to target the foreign and other influential investors for doing investment in the projects of Pakistan

Limitations and Future directions

This study is conducted in Private sector but future researchers should conduct this research in government and other influential sectors of Pakistan. This research is limited to some options but Future researchers should conduct research about the exploration of options which are available for companies to deploy the betting against beta strategy . Future researchers should also investigate about how to deal with the sentiments of investors and top management of the company not only within the Pakistan’s business world but also thay should explore about such knowledge for dealing with the tantrums of investors .This research is limited to BAB components but future researchers should conduct research about the time-series component (i.e., the beta-parity component) which is the most robust source for the profits of the BA-type strategies, both before and after taking transaction costs into account.

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Factors affecting the Digital Financial Adoption: The Moderating role of Customers Experience.

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Abstract:

Digital Financial service users are facing challenges in the acceptance of digital finance. The study, therefore, intends to identify factors affecting the adoption of digital finance. The study includes factors, namely: security risk, financial risk, transaction cost and awareness. The conceptual model adopted based on the theory of reasoned action, the theory of planned behaviour and technology acceptance models. This research aims to fill the gap of factors affecting the trust and digital financial adoption. There is no study conducted on the customer's experience as a moderating variable. Data will be collected using questionnaire from customers who are familiar with digital financial services. Regression analyses will be used to show the results and association among variables. The findings of this study will help digital financial managers to improve their services and make decisions related to customer security. The study is useful to enhance digital financial adoption.

Keywords*:* financial and security risk, transaction cost, awareness, digital financial adoption.

Introduction:

Technology and innovation drive change and impact in almost every aspect of life (Suzianti et al., 2021). This study identifies how financial risk, security risk and benefits affect the digital financial adoption by consumers who use digital financial services. Technological innovation and enhancement have become a necessity to keep up with the changes in the economy (Jain & Raman, 2022). The financial sector has inculcated these changes and has adopted technological advancement to provide financial services to its users with convenience and ease (Jain & Raman, 2022).

The acceptance and adoption of technology by the country's citizens is one of the most important factors in determining the country's growth (Jain & Raman, 2022). Researchers found that digital finance tools have a positive impact on the well-being of individuals (Karlan et al., 2016). In the era of technological development, consumers are seeking convenience and easy access to financial services (Jain & Raman, 2022).

Digital finance is increasingly gaining acceptance, yet users are still reluctant and sceptical to adopt digital financial services due to the unforeseen risks involved (Jain & Raman, 2022). Transparency in transactions, reduced costs and access to financial information are some of the benefits attached to online financial services, which empower an individual (Zavolokina et al., 2016). Therefore, Consumers will only adopt a technology if it offsets the risks and improve the benefits (Jain & Raman, 2022). Therefore, the study highlights the risk–benefit framework in adopting digital finance (Liu et al., 2012). Users consider benefits and risks and then decide to adopt when the perceived benefits outweigh the risks (Pentina, 2016). Security risk (SR) has been explained as digital fraud and identity theft attached to digital financial services (Jain & Raman, 2022). Financial risk (FR) is the risk associated with monetary losses due to fraud and maintenance costs in the usage of digital finance (Jain & Raman, 2022). Transparency in transactions, reduced costs and access to financial information are some of the benefits attached to online financial services, which empower an individual (Zavolokina et al., 2016). But, the proliferation of digital finance has its own consequences (Arner et al., 2020; McGee, 2020). According to Kim et al. (2008), perceived benefit is the user's belief about the extent to which the technology will be better than the conventional counterpart. Similarly digital financial adoption reduces the consumers transaction cost which they bear in traditional methods of transaction.

Few recent studies clarified that retailers have to bear several costs before and after the adoption of a technology in the business process; these costs are related to specific software installation, arrangements of a wireless system, NFC setup, and other training and development cost of employees to learn about new technology (Huynh et al., 2021; Willis et al., 2021).

Furthermore, Mobarek (2007) in his study indicated that delivery channels are not meeting the customer demands due to lack of awareness of e-banking and technology. So, awareness of digital financial adoption means individuals understand the technology and utilize it which impact on their personal and professional lives. However, the results state that risk factors do not significantly influence the adoption of Fintech services (Suzianti et al., 2021). According to Kim and Koo (2016), the trust factor acts as a mediating factor between risk and intention to adopt. Trust reduces the user's level of risk and positively influences user intention to adopt the new technology or service (Kim et al., 2008).

So, it becomes the basis of this research by considering risk factors, benefits and trust to see the relationship to user intentions in adopting Fintech services (Suzianti et al., 2021). Nowadays, merchants have become smarter and more sensible with the use of digital payment services. They are inclined to high-quality products and services and focus on the perceived experience (Chou et al., 2015; Mishra et al., 2022). User experience has a direct association with his preference and influences his decision to adopt technology for payments and other transactions (Shina & Singh, 2022). Overall, this research aims to look into the factors affecting the digital financial adoption. Secondly, from a practical perspective this study will provide helpful guidance for digital financial managers how to promote their services and decision makers to make strategic decisions for customer security and adoption of digital finance.

Theory Formulation

The conceptual model of this study synthesised the theory of reasoned action (TRA) and planned behavior, UTAUT (Unified Theory of Acceptance and Use of Technology) and extended technology acceptance model. All of these theories contribute to a better understanding of the factors affecting the digital financial adoption.

Critical Literature Review

A consumer is faced with uncertainties and is generally uninformed while making a decision (Kimet al., 2008). Hence, the involvement of risk perception comes into play (Jain & Raman, 2022). Wilkie and Pessemier (1973) highlighted the role of perceived benefits. The researcher elucidated that a user will perceive both positive and negative attributes of technology before adopting it. Therefore, a net valence framework was given by (Peter & Tarpey, 1975), which assumed that users would comprehend a product or service with certain benefits and risks and then make a decision based on net valence, i.e., most desirable or beneficial.

The present study synthesised the theory of reasoned action (TRA) for better understanding. The TRA postulated that behaviour functions as an accurate indicator for analysing the individual's intention to adopt or use any technology (Ajzen & Fishbein, 1977; Benlian & Hess, 2011). The theory also proclaimed that individuals could regulate their behaviour if given some causes or incentives (Staats, 2004). Inferring from the theory, user perception is important in determining an individual's intention to adopt or use digital financial services (Jain & Raman, 2022).

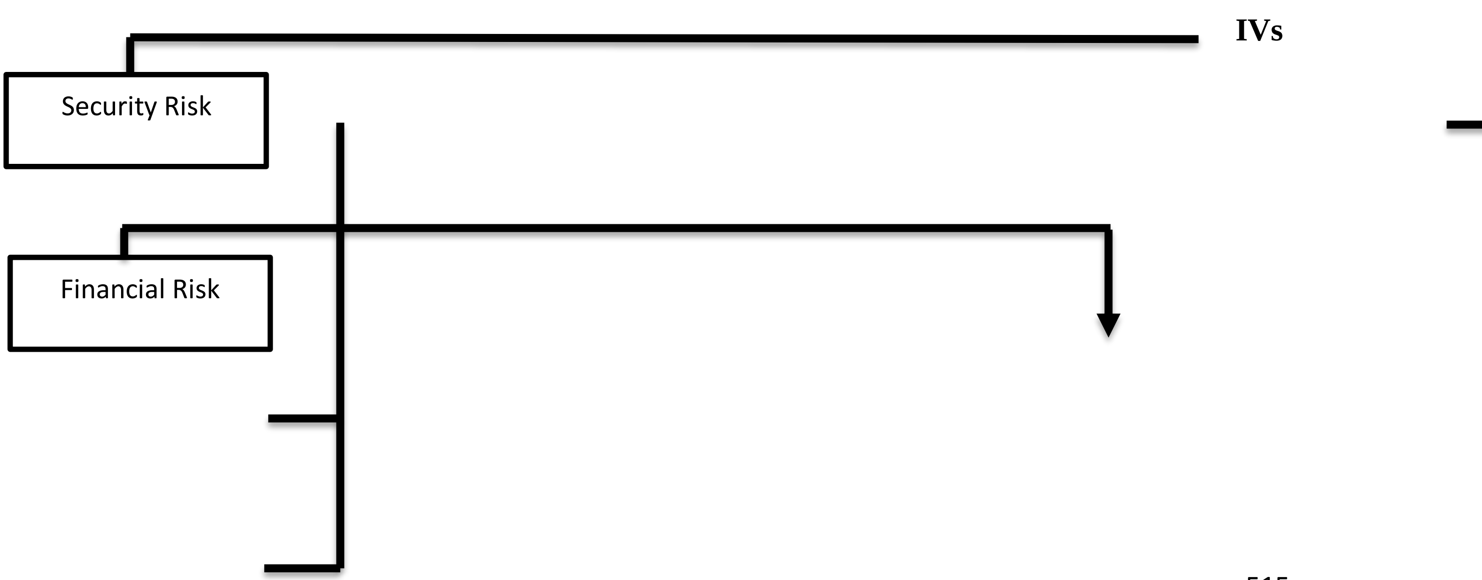
Another study synthesised the UTAUT (Unified Theory of Acceptance and Use of Technology) model with perceived risks and benefits to understand the consumer's intention to adopt FinTech and use digital finance solutions (Gerlach & Lutz, 2019). Ambiguity and negative outlook have always been associated with a new product, service and (or) technology (Desivilya et al., 2015; Featherman & Pavlou, 2003). Bauer (1967) and Ryu (2018) elucidated perceived risk as a blend of uncertainty and undesirable outcome. Cunningham (1967) had bifurcated perceived risk into six categories – financial risk, social risk, safety risk, psychological risk, time risk and performance risk. The present study has incorporated two types of risks – security risk and financial risk based on the review of literature in context to digital finance.

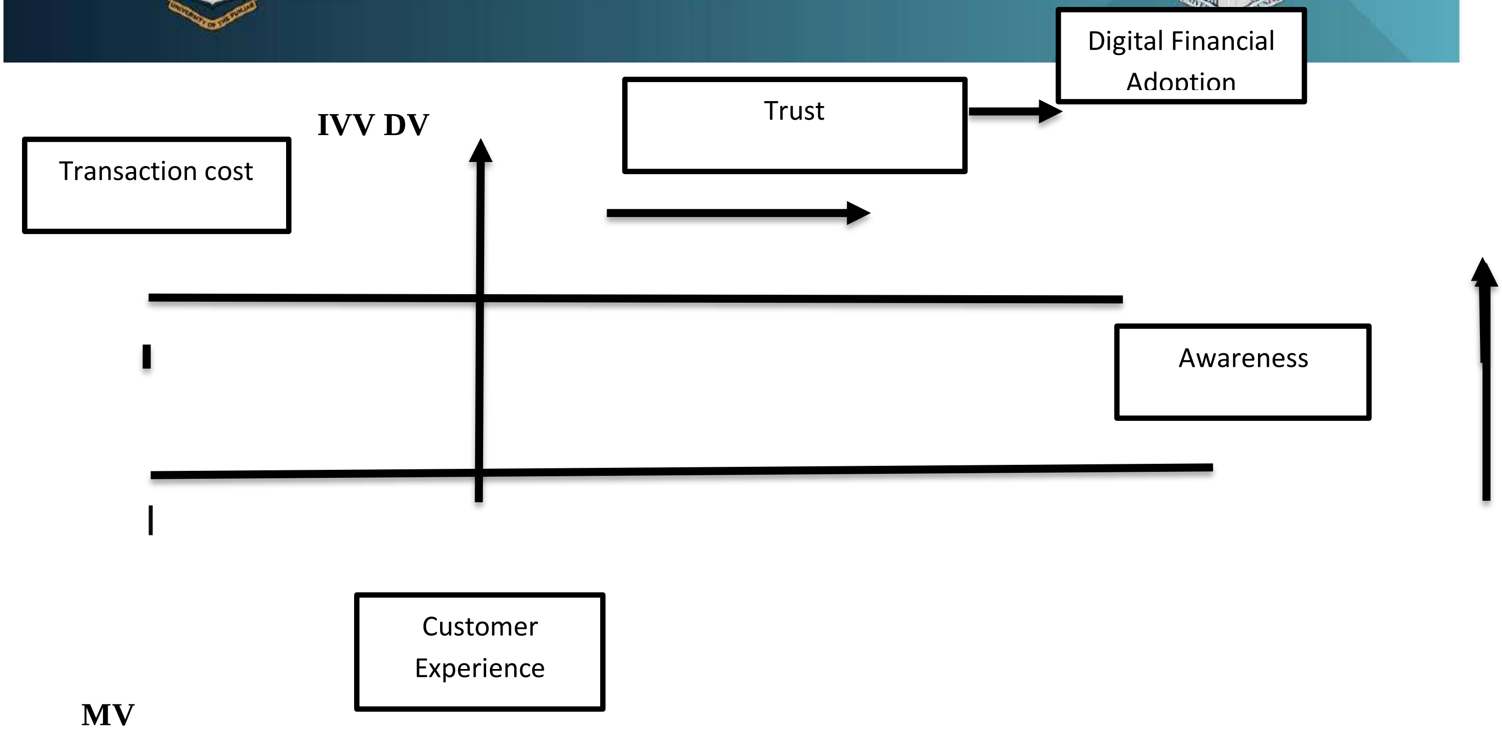
TAM (Technology Acceptance Model) is a framework that is frequently applied to explain the acceptance and usage of new technology (Suzianti et al., 2021). Davis (1989) was the first to propose TAM, which is based on TRA and TPB and is a model to predict and explain user acceptance of information technology. Further, merchant's requirements are different from end-users and possess complicated relationships with various determinants (Singh & Sinha, 2020). Hayashi (2012) reviewed various macro- and micro variables affecting the adoption of a mobile payment service; they stated that contingency factors are external factors, which are related to policies changes, infrastructural issues, legal issues, regulatory barriers, social influence, and are outside the control of users and firms. On the other hand, Hayashi (2012) reviewed inner factors are competitive factors namely: perceived experience, trust, usefulness, compatibility, and affect the behavioral intention of a user such as a consumer and a merchant. These factors can be influenced by the effectiveness and quality of technology and increase the user's acceptance (Sinha & Singh, 2022).

The present study emphasis on inner factors trust and perceived experience, awareness and transaction cost for digital financial adoption. However, it is common to treat trust and risk as different concepts (Blau, 1964; Coleman, 1990; Kee & Knox, 1970; Williamson, 1993). Trust can work in two ways to reduce the effects of risk on adoption decisions (Sinha & Singh, 2022). Firstly, trust is relevant in situations where a person must take a risk but does not have control over the outcome (Kim et al., 2008). Therefore, with increasing trust, users tend to perceive less risk; then, the risk effect can be mediated by trust in the user's intention to adopt. Secondly, several studies have shown a direct relationship between trust and intention to adopt a product or service (Bhatnagar et al., 2000; Gefen, 2002; McKnight et al., 1998).

Further, Perceived experience shows a crucial role in assessing the performance and popularity of a technology (Talwar et al., 2021). User experience has a direct association with his preference and influences his decision to adopt technology for payments and other transactions (Sinha & Singh, 2022). Many consumers have shifted from traditional banking to electronic banking because of the ability of the consumers to conduct round the clock at a lower cost (Anada et al., 2020). Likewise, awareness can also affect the customers intention towards the digital financial adoption.

Conceptual Model





Statement of the problem

The security risk, financial risk, transaction cost and awareness will enhance the digital financial adoption through customer's experience as it will increase the trust.

Research Objectives

1. To identify the effect of security risk on digital financial adoption.
2. To identify the effect of financial risk on digital financial adoption.
3. To identify the effect of transaction cost on digital financial adoption.
4. To identify the effect of awareness on digital financial adoption.

The Hypotheses of the study

Ho: There is no effect of security risk on digital financial adoption.

Ha: There is an effect of security risk on digital financial adoption.

Ho: There is no effect of financial risk on digital financial adoption.

Ha: There is an effect of financial risk on digital financial adoption.

Ho: There is no effect of transaction cost on digital financial adoption.

Ha: There is an effect of transaction cost on digital financial adoption.

Ho: There is no effect of awareness on digital financial adoption.

Ha: There is an effect of awareness on digital financial adoption.

Ho: Customer experience does not moderate the relationship between security risk and digital financial adoption.

Ha: Customer experience moderates the relationship between security risk and digital financial adoption.

Ho: Customer experience does not moderate the relationship between financial risk and digital financial adoption.

Ha: Customer experience moderates the relationship between financial risk and digital financial adoption.

Ho: Customer experience does not moderate the relationship between transaction cost and digital financial adoption.

Ha: Customer experience moderates the relationship between transaction cost and digital financial adoption.

Ho: Customer experience does not moderate the relationship between awareness and digital financial adoption.

Ha: Customer experience moderates the relationship between awareness and digital financial adoption.

Ho: Trust does not mediate the relationship between security risk and digital financial adoption.

Ha: Trust mediates the relationship between security risk and digital financial adoption.

Ho: Trust does not mediate the relationship between financial risk and digital financial adoption.

Ha: Trust mediates the relationship between financial risk and digital financial adoption.

Ho: Trust does not mediate the relationship between transaction cost and digital financial adoption.

Ha: Trust mediates the relationship between transaction cost digital financial adoption.

Ho: Trust does not mediate the relationship between awareness and digital financial adoption.

Ha: Trust mediates the relationship between awareness and digital financial adoption.

Variables in the study

In my research, I intend to use the seven variables. Independent variables are security risk (SR), financial risk (FR), transaction cost (TC) and awareness (Aw). Digital financial adoption (DF) as a dependent variable. The mediating and moderating variables are trust (T) and customer experience (EXP) respectively.

Methodology

Psychological paradigm

In this study, I will use the post-positivism worldview because it holds the quantitative research method.

Research technique

In this study, I will adopt the quantitative research method and collect the data through a questionnaire.

Research method

My study based on primary data, and I will collect data from the digital financial users.

Population and samples

Currently, there are many users engaged in digital financial services. So, the population is unknown users. My sample size is 384. I calculated this sample through an online sample size calculator by keeping population unknown, confidence interval 5, and confidence level 95%.

Instrument

I will use a questionnaire to collect relevant data.

Significance of the study

This research is needed to determine whether factors such as security risk, financial risks, transaction cost and awareness affect the digital financial adoption. If these factors positively affect the digital financial adoption, it can be highly beneficial for all digital financial users and decision makers. This study investigates how digital financial adoption leads to faster and low-cost transaction and improve the customer experience.

It is essential to research this topic because the financial risk and security risk are most significant risk for any customer. But the digital financial adoption reduced the risks of loss, theft and other financial risks which are associated with cash-based transactions or traditional transaction methods

Digital financial managers should gain a greater understanding of factors affecting the digital financial adoption, which can improve their decision-making capability and dramatically minimize the financial risk and security risk which occur during online transactions.

Delimitations

Data will be obtained only from the customers who are familiar with digital financial services. Participation in this study restricted to customers who use digital payment system, smart phone apps and other digital financial channels for regular transactions.

Limitations of the study

The sample size in the analysis is limited. This analysis only includes the digital financial customers and excludes the non-digital financial customers. Thus, the findings cannot be generalized to all types of financial customers. This study also considering only the internal factors of digital financial adoption not external factors which are related to legal issues and regulatory barriers etc.

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Appendix

Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Security risk: SR1: I worry about the abuse of my financial information when I use digital finance. SR2: My financial information is not secure when I use digital finance. SR3: I worry that someone can access my financial information when I use digital finance. **Financial risk:** FR1: Financial losses are likely when I use digital finance. FR2: Financial fraud or payment frauds are likely when I use digital finance. FR3: Financial losses due to the lack of the interoperability with other services are likely when I use digital finance. **Transaction cost:** TC1: Relatively cheaper transaction cost					

TC2: Provision of discounts on online booking/buying TC3: Provision of value-added benefits **Awareness:** Aw1: Availability of latest and accurate information Aw2: Awareness of the possible risk Aw3: Comfortability in performing transactions Aw4: Confidence in using digital banking devices **Trust:** T1: I believe that a Fintech registered with a state institution can be relied upon for protecting its customers. T2: I believe that a Fintech that is registered with a state institution can be relied upon T3: I believe that a Fintech registered with a state institution provides a safe way so that information cannot be exchanged with third parties **Perceived experience:** EXP1: Digital financial service improves my business experience. EXP2: Digital finance app enhances the effectiveness of my business by using the app. EXP3: The more I use the app the more I become experienced with it.					

EXP4: Digital financial services allow me to receive all relevant information related to my business. **Digital finance:** DF1: I would positively consider digital finance in my choice. DF2: I intend to continue to use digital finance. DF3: I will use digital finance in the future. T4: In the application Fintech which is registered with a state within the provider's a Trust le. safe to transact 1. This catalog retailer website is safe for online transactions 2. This catalog retailer website will protect consumer personal data 3. This catalog retailer website give guarantee against misuses of personal data for commercial purpose Trust 1. This catalog retailer website is safe for online transactions 2. This catalog retailer website will protect consumer personal data 3. This catalog retailer website give guarantee against misuses of personal data for commercial purpose T5: I believe that a Fintech registered with state institution stores personal information of users in a competent manner Trust 1. This catalog retailer website is safe for online transactions 2. This catalog retailer website will protect consumer personal data 3. This catalog retailer website give guarantee against misuses of personal data for commercial purp					

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The Impact of Branding On Consumer Buying Behavior with The Moderating Role of Strategic Management

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Abstract:

Branding serves as strategic tool which functions as a base upon which business organizations and their offerings thrive. This study delves into the intricate relationship between branding components (brand name, awareness, and image), strategic management strategies, and their collective impact on customer purchasing behavior. The theoretical foundation underscores the significant influence of brand-related factors on consumer choices, emphasizing the roles of brand name, image, and awareness in shaping consumer perceptions. Strategic management interventions, encompassing brand strategy development and resource allocation, are posited to moderate this impact on consumer behavior.

Findings indicate a positive correlation between strong branding efforts and customer buying behavior. Effective strategic management practices are anticipated to enhance consumer perceptions and purchasing decisions, especially when aligning branding strategies with consumer preferences. This research provides valuable insights for businesses aiming to refine their brand strategies and managerial approaches to drive consumer engagement and purchase decisions.

Key words: Branding, Strategic Management, Customer Relationships, Consumer Behavior, Brand Perception, Brand Strategy, Customer Relationship Management (CRM)

Introduction:

In contemporary marketing, branding stands out as the primary catalyst shaping consumers' overall perceptions of a product. The profound influence of brand image significantly dictates consumer purchasing decisions. Consequently, the central objective of marketing activities is to deliberately shape customer perceptions, attitudes, and behaviors towards a specific brand. (Haro, A et al., 2020).

In the midst of intense competition within the business landscape, branding has emerged as a critical focal point for virtually all organizations. The branding of a company, its products, and services is recognized as a fundamental element influencing the success of the organization. A well-established brand, whether associated with the company itself or its offerings, is acknowledged to instill trust and confidence in customers, encouraging them to choose and engage with such brands. Consequently, thriving businesses are adopting a more flexible approach to branding, emphasizing the creation of a robust brand identity and its consistent representation to build credibility. (Egan, 2014). Branding, within the realm of marketing, is a practice wherein organizations establish a distinctive identity through a name, whether a word, phrase, symbol, or design. This identity aids in customer recognition of the organization's services and products. The underlying belief is that branding leaves a lasting impression on customers, providing clarity on their expectations. In the business context, branding serves as a vital means of setting a company apart from its competitors, offering a clear understanding of what makes it an optimal choice. A company's brand serves as a genuine reflection of its identity and communicates how it wishes to be perceived by customers and competitors alike. (Elizabeth, 2015).

Customers' purchasing behavior and consumption decisions are primarily shaped by the attributes and features associated with a brand. These aspects are intricately tied to the emotions and perceptions surrounding the deeper sense of the brand image. (Silitonga, 2020). According to Ashraf et al., (2017) The purchasing behavior of a customer is intricately linked to the brand offered by an organization, influencing not only their buying patterns but also fostering a sustained demand for the products or services provided. Customer buying behavior encompasses the thoughtful analysis and decision-making process a consumer employs to plan, purchase, and consume a product or service. According to the findings of the same study, this buying behavior unfolds through a comprehensive seven-step process. It commences with the recognition of a brand, product, or service, followed by the search for detailed information, pre-purchase evaluation, and the subsequent selection from a list of alternatives. The process then continues through the stages of purchase, consumption, post-consumption evaluation, and feedback generation.

Retail marketers have the potential to boost sales, optimize market share, and enhance brand equity by crafting a robust brand image that resonates with customers, thereby influencing their actual purchasing behavior. (Mbete & Tanamal, 2020). In the face of evolving marketing dynamics and rapid shifts in consumer preferences, it is imperative for companies aiming to survive to consistently distinguish their products from competitors. Factors such as brand name, awareness, and image play crucial roles in reshaping consumer purchasing patterns and fostering loyalty among customers for the organization. by (Heding et al., 2020).

Despite numerous studies examining the impact of branding elements on consumer behavior, there exists a noticeable research gap regarding the strategic use of management strategies to improve customer relationships. While branding plays a pivotal role in shaping consumer decisions, there is limited research on how strategic management practices, including brand strategy development, resource allocation, and customer relationship management (CRM), can positively affect customer relationships and, consequently, influence consumer purchasing behavior. Recognizing the synergy between strategic management initiatives and customer relationships is vital for companies aiming to enhance brand perception, establish consumer trust, and ultimately stimulate purchasing behavior.

Strategic brand management, as highlighted by Elliott et al. (2015), has been a longstanding and crucial factor in building brand equity. In the realm of branding, strategic management plays a pivotal role, providing a systematic approach to formulate, execute, and oversee strategies geared towards enhancing the brand's positioning, perception, and relationships with consumers. It ensures uniformity across all brand touchpoints, maintaining cohesion in branding elements such as visual identity, communication tone, and customer experience, aligned with the brand's overarching strategy to foster recognition and trust among consumers.

This study aims to address the existing research gap by exploring the role of strategic management in augmenting customer relationships and its subsequent impact on consumer buying behavior. By scrutinizing the interplay between effective management strategies, brand perception, and consumer behavior, this research seeks to provide insights into how businesses can strategically manage their brands to cultivate stronger customer relationships, ultimately positively influencing purchasing decisions. The study endeavors to unravel the influence of strategic management on customer relationships and its implications for consumer behavior, offering actionable insights for businesses to optimize their management strategies for enhanced brand-consumer relationships.

Furthermore, this research is crucial for academia, contributing to addressing the research gap and offering valuable insights into the effective utilization of management strategies to enhance customer relationships and, in turn, influence consumer buying behavior.

Moreover, the conceptual framework is available to comprehend these relations. This framework serves as a valuable tool, providing insights into the dynamics between branding, consumer buying behavior, and strategic management. Following this model, businesses can critically understand the significant influence of effective management strategies on consumer purchase behavior.

Literature Review:

Branding

The brand is an essential strategic tool that provides the foundation for a company's success. This is a process by which companies distinguish themselves and their products and services from those of their competitors. In branding, companies emphasize the advantages and benefits their customers will receive compared to their competitors. An organization establishes a recognizable identity through a name, whether it's a word, phrase, sign, symbol, or design. With this identity, customers can easily recognize and remember the product and service associated with the company. Creating a lasting impression in customers' minds is the essence of branding, which facilitates understanding and meeting their needs. (Evelyn Amakyewaa et al.,2020)

As the name is much of the time the first touchpoint between the brand and its public, a few authors contend that this is the main marketing choice an organization can make (Kohli et al., 2005). In any case, when managers or identity consultants need to pursue this imperative choice, they for the most part depend on their imaginative instinct as opposed to on a hearty theory about the ideal identity qualities of brand names (Pathak et al., 2020; Pogacar et al., 2015).

People see brands contrastingly founded on their inclinations, frequently affected by previous encounters, and their choices are straightforwardly or in a roundabout way formed by these points of view. Brand knowledge arises as a significant component, where uplifted customer awareness and thorough comprehension of perspectives like cost and quality increment the brand's charm. This knowledge envelops both brand awareness and brand image. (Sarwar, F ,et al.,2014).

The process through which organizations develop and make acknowledgment for their company, products and services is what we term brand awareness. Brand awareness could be embraced through informing, designs, advertisements, social media and many more (Vranicar, 2020). With the assistance of various brand awareness programs, clients become mindful about the products or services that urge them to buy by impacting their way of behaving (Yadav and Pathak, 2017).

Brand image is the set of impressions, beliefs and ideas that customers hold about a product or service. (Chang, 2020). Brand image has become significant for each business as it assists with satisfying the business intentions. Brand image is the vital of brand performance as great image brings great benefits (Shabbir, Khan & Khan, 2017).

Consumer behavior

Consumer behavior refers to the series of activities individuals and groups undertake to select, buy, use, and dispose of products or services to fulfill their needs and desires. Changes in consumer behavior can transpire due to various factors, such as personal circumstances, psychological influences, and societal influences (Di Crosta et al., 2021).

Consumer behavior shows the mental and emotional processes, as well as the recognizable activities, that people go through while looking for, buying, and post consumption of product or service. This field of study digs into the complexities of why individuals make buys, what impacts their decisions, when they decide, and the fundamental inspirations driving their purchasing behavior. Drawing from disciplines like psychology, sociology, socio-psychology, anthropology, and economics, consumer behavior investigation additionally looks at the effect of outside factors like family, companions, reference gatherings, and cultural impacts. (Ahuja, N.,2015)

The development of uplifting outlooks toward brands supports an upper hand as well as adds to the by and large monetary prosperity of an organization. Marking arises as an urgent consider encouraging ideal discernments, especially in circumstances with lower levels of consumer contribution in the product or service.

People see brands in different ways impacted by their inclinations, frequently formed by previous encounters. Their choices are unpredictably connected, either straightforwardly or by implication, to these one of a kind viewpoint. It is broadly recognized that consumer behavior towards marked products or services is impacted by variables like age, orientation, and character attributes. Furthermore, individuals will quite often adjust socially founded on their unmistakable character qualities. Research has clarified that people show changed behaviors towards a similar brand in view of their orientation, featuring orientation as a central determinant of consumer behavior. (Haralayya, B.,2021).

Consumer behaviors are those activities and processes in which individuals select and utilize services, ideas, products and experiences. (Tsao, Y. C et al., 2019).

Consumer behavior is a wide field of study. The consumer as a rule pursues everyday buy choices for purchasing a product and a significant number of the consumers don't have the foggiest idea about the elements that driving them to go with these choices on a particular product or services or brand. Consumer behavior comprises of variables which influences on consumers purchasing behavior. These elements have particular attributes that can be isolated into four classifications: individual, mental, social and monetary. The comprehension about the component influencing consumer purchasing behavior is extremely fascinating, what a people or consumer meant for by the elements which impacted that person for buying a particular service and product. (Qazzafi, S, 2020).

The concept of utility maximization suggests that consumers aim to obtain the maximum benefit or satisfaction from the goods or services they purchase. In this context, price and quality are two essential variables in product differentiation as they can directly influence consumer decision-making and preferences. While price reflects the economic utility of a product, quality reflects the ability of a product to meet consumer needs and expectations. Consumers consider both price and quality simultaneously while making a purchase decision. For example, a consumer may choose a product with a lower price if it offers adequate quality, but may be willing to pay more for a higher quality product. (Della Lena, S., & Timming, A. R.,2023).

However, it is important to note that price and quality are not the only factors that influence consumer preferences. Sociological factors such as peer recommendations, cultural influences, and marketing messaging can also serve as utilities. For instance, a consumer may choose a product based on the recommendations of friends or family members, or choose a brand that reflects their personality traits. There are multiple sociological factors that can also impact consumer preferences. These inputs may have differing levels of influence on consumer decision-making, but they all play a role in determining consumer choices and preferences.

Consumers may exhibit brand loyalty and refrain from shifting to alternative options as a means of avoiding potential mistakes and controlling their purchasing behavior. Additionally, reference groups play a role in encouraging the selection of certain products associated with status and conspicuous consumption, which involves the display of wealth and high social standing. (Keller, K. L. 2013)

Creating distinctive, memorable experiences that strengthen the consumer's connection to a brand is instrumental in fostering brand loyalty and cultivating a deep emotional attachment. Initially, the hypothesis suggested that brand loyalty results from brand love and that brand love outperforms traditional attitude models in predicting measures of brand loyalty. However, a recent perspective proposes that brand love serves as a precursor to brand loyalty and serves as a powerful predictor of brand equity. (Robertson, J et al., 2022).

Understanding customer behavior is essential for companies to differentiate, retain customers, design marketing programs, predict market trends, innovate new products, and improve customer service. (Jain, Khan & Mishra, 2017)

Strategic Management:

Research has shown that negative experiences have a stronger impact on consumers than positive ones, and consumers are more likely to share negative experiences with others. (Hegner et al., 2017). This highlights the importance for brand managers to pay close attention to negative consumer emotions.

In today's digital age, negative experiences can quickly spread through online reviews and social networks, potentially damaging a brand's reputation. As a result, it is critical for brand managers to understand and effectively manage negative emotions.

The research has examined strategies such as effective complaint handling, timely and appropriate responses to negative reviews, and proactive measures to prevent negative experiences in the first place. (Haase, J et al., 2022)

By understanding the factors that contribute to negative emotions, brand managers can develop effective strategies to address them and build stronger consumer relationships.

The traditional approach to understanding consumer behavior often involves viewing it as a sequential process, where consumers progress through various stages before making a purchase decision. This process typically involves gathering information, evaluating competing offerings, and eventually making a decision and taking action.

Strategic brand management, as described in the work of Elliott et al. (2015), plays a crucial role in creating brand equity. Brand equity refers to the value and strength of a brand that goes beyond the product or service itself. It encompasses the perceptions, associations, and loyalty that consumers have towards a brand. Effective strategic brand management involves developing and implementing strategies to enhance brand equity and create a strong and positive brand image in the minds of consumers. (Elliott et al., 2015)

Managers should adopt a holistic approach to brand building and monitoring by not solely concentrating on customer brand associations but also taking into account all relevant stakeholders. (Koll, O et al.,2023). Once the key stakeholders have been identified, it is essential to assess their actual associations with the brand, which can be done through a stakeholder brand survey, for example. Gaining insights into both desired and undesired brand associations, as revealed by various stakeholder groups through a free association task, equips management with an early warning system to evaluate the success of brand management efforts and detect any potential shifts in brand perception that may be undesirable.

Theoretical background and Hypothesis Development:

There are different models that explain the consumer buying behavior. The Nicosia model and Howard-Sheth model are commonly used to understand how consumer purchase behavior changes during purchasing products from similar industries.

The Nicosia model focuses on different brand building factors to influence consumer purchase behavior. It focuses on marketing communication and social media marketing techniques to develop good relationships between potential target customers and businesses (Prasad & Jha, 2019), but some commentators have criticized it due to a lack of empirically tested and undefined factors.

The Howard-Sheth model is an interactive model that incorporates various aspects of customer purchase behavior and relates together with different brand building dimensions. It is useful as it shows the relationship between different stimuli inputs and constructs variables to understand actual consumer purchase behavior, but some scholars criticized it for not testing realistically (Aktaş & Şimşek, 2020). The Howard-Sheth model explains that various important factors influence consumer behavior when purchasing a particular brand product. The model comprises three levels, with the first level involving the process of problem-solving and providing information about the product to the target customers. In the second level, marketers provide information about the product and understand customers' expectations, while the third level is linked to the response of consumers' purchasing behavior after obtaining more knowledge about the product (Panwar, Anand, Ali & Singal, 2019).

Brand image is an effective marketing technique as it influences consumer purchase behaviors. Brand building initiatives such as brand awareness programs, quality assurance, brand loyalty, celebrity endorsement programs, and public relations improve customer knowledge about the brand and encourage them to purchase it.

The relationship among branding (brand name, brand image, brand awareness) and customer buying behavior

When consumers make purchasing decisions, they often consider the brand they are buying. They tend to prefer brands with higher prices because they believe that high prices indicate better quality and authenticity (Khasawneh & Hasouneh, 2010). Branding plays a crucial role in influencing consumer choices by effectively communicating the value of the product or brand (Nepalia., 2011). Consumers evaluate the value they would receive before engaging with a brand (Del Rio et al., 2001). Branding elements like the brand name and image also impact consumer decisions to purchase a particular brand (Doostar et al., 2012). Brand awareness, which is achieved through organizations investing in promoting their brands to customers, can also significantly influence customers' decision to purchase a brand (Pahwa, 2019). Brand awareness provides customers with information and value associated with a brand, allowing them to evaluate this information before making a purchasing decision (Decker, 2019).

Based on the information stated above, the study proposes the following hypotheses:

H1a: The brand name has a positive impact on customer buying behavior.

H1b: Brand awareness has a positive impact on customer buying behavior.

H1c: Brand image has a positive impact on customer buying behavior.

The moderating role of strategic management

The impact of branding on consumer behavior can be moderated by management through various strategies. One of these is brand strategy development, where management creates branding strategies that align with consumer preferences, market trends, and company objectives. The way a brand is positioned, its values, messaging, and identity are all crafted by management and effective strategies can greatly influence consumer perceptions and behavior. Resource allocation is another way in which management can shape brand perception. Decisions regarding budget allocation, resource distribution, and investment in branding efforts all play a role in how the brand is perceived and received by consumers. Adequate resources directed toward branding activities such as advertising, promotions, and customer engagement initiatives can have a positive impact on consumer perceptions. Finally, management has a role in overseeing CRM strategies, which focus on building and maintaining relationships with consumers. Practicing personalization, engagement, and addressing consumer needs are crucial aspects managed by the organization that can impact consumer perceptions and subsequent buying behaviors.

Based on above information we can purpose the following hypothesis:

H2: Strategic management is positively related with customer buying behavior.

Management plays a key role in influencing both branding strategies and consumer buying behavior. They are responsible for formulating branding strategies that align with consumer preferences, market trends, and company objectives.

MODEL

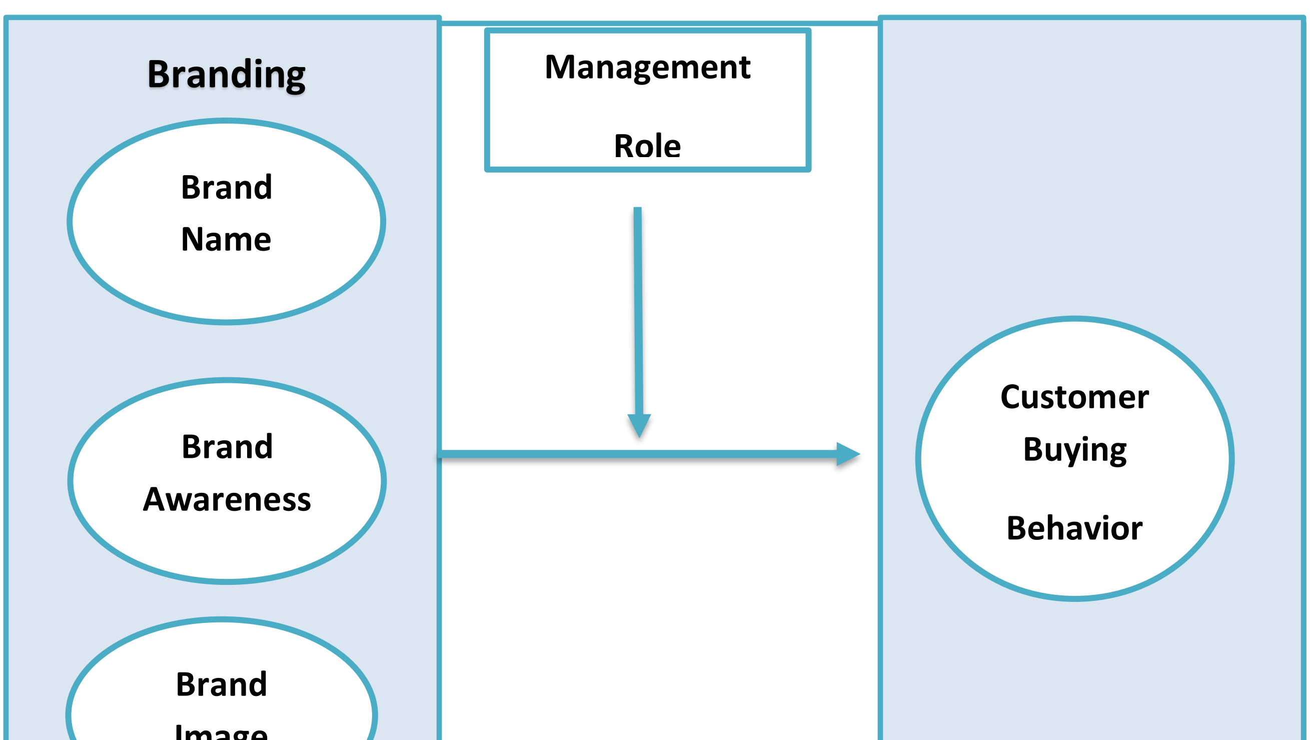

Fig.1 Conceptual framework

Methodology

This study will employ a mixed-methods approach, combining qualitative and quantitative methodologies to comprehensively explore the research topic. The qualitative aspect will involve a thorough review of existing journals, scholarly books, and articles to extract relevant data. In parallel, the quantitative methodology will rely on primary data collection through a survey questionnaire targeted at general customers. The collected data will be analyzed using graphs and charts, transforming raw data into meaningful insights and shedding light on the intricate relationships between variables.

The study's target audience comprises general customers, and an online survey will be conducted to gather information from participants. The quantitative data will undergo rigorous analysis using appropriate statistical methods to derive conclusive results. The survey questions will predominantly utilize the Likert scale, providing a structured framework for participants to express their opinions and preferences. This comprehensive approach aims to yield a holistic understanding of the interplay between branding elements, strategic management, and consumer behavior.

Results

The proposed hypotheses suggest a relationship between branding, strategic management, and customer buying behavior. Based on this information, the expected results might be as follows:

To begin with a positive correlation between branding efforts and customer buying behavior. Stronger branding efforts are likely to result in increased customer interest, trust, and purchasing of the brand's products or services. Consumers are more likely to trust and purchase products associated with well-established brand names.

Increased brand awareness leads to a higher probability of consumer buying behavior. Brands with higher visibility and positive associations are likely to attract more customers.

A positive perception of the brand, including its values, reputation, and identity, is likely to influence consumers positively towards purchasing products or services associated with that brand.

Secondly, the hypothesis suggests that effective strategic management practices influence customer buying behavior. Therefore, the expected result would be a positive correlation between strategic management initiatives (such as brand strategy development, resource allocation for branding activities, and effective CRM strategies) and customer buying behavior. When management aligns branding strategies with consumer preferences and optimizes resource allocation for branding activities, it is expected to positively impact consumer perceptions and subsequent buying behavior.

Overall, the expected findings indicate that companies implementing strong branding strategies aligned with consumer preferences and effectively managed by strategic management are likely to experience increased positive consumer perceptions, leading to higher purchasing behavior among consumers.

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Relationship between Employee Empowerment, Job satisfaction, Employee engagement, Green Human Resource Management and Organizational Performance

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Abstract:

This study investigates how the employee empowerment, job satisfaction, employee engagement and Green Human Resource Management affect the organizational performance. The study employs a structural equation modelling technique to investigate the correlation between different variables within a designated software enterprise. The data was collected from 50 employees who are employed at Digi Squad solutions located in Lahore, Pakistan. The results showed that employees with higher levels of empowerment, satisfaction, engagement and through the development of Green Human resource management used to show outstanding organizational performance, lower turnover intentions, and higher productivity. The findings also demonstrated that employee empowerment, satisfaction, engagement and green human resource management have a positive association with organizational efficiency. The investigation suggests that for enhancing employee empowerment, satisfaction, engagement and green human resource management the organization should implement various measures and enhance specific aspects of the working environment.

Keywords: *Employee Empowerment, Job satisfaction, Employee engagement, Green Human Resource Management and Organizational Performance*

1. Introduction

Human resource management is one of the most important aspects of business management, which can improve the economy, technology, social and business environment through innovative methods. The demands of the economy, globalization, and differences in technology have motivated companies to make different changes in the field of human resource management (Čech et al., 2016). In addition to the requirements of the economy, globalization, diversity and technology, other requirements in the form of laws and environmental awareness has promoted the development of management and HRM fields. The laws and aware nesses related to the environmental sustainability raises the concept of green human resource management (GHRM) in companies (Qureshia et al., 2020).

Employee empowerment provide the organization with a valuable way to develop human resources that can improve environmental performance and the development of the company. Empowerment refers to the HR aspect of environmental management and is defined as the HR function which has a positive effect on the environment.

GHRM practices can be divided into three main functions, namely green employee empowerment development, green employee motivation and opportunities for green employees (Roscoe et al., 2019). The practice of organizational environmental culture will be able to shape GHRM practices and organizational job satisfaction; therefore, it will ultimately improve employee performance (Shafaei et al., 2020). By increasing the user's green performance, the company includes the implementation of good environmental concepts through the use of HR functions such as recruitment, selection, training, development and leadership (Pellegrini et al., 2018).

Job Satisfaction in companies can be achieved through organizational environmental culture. Belief is defined as the person's way of understanding something like good or bad. Morality is the actual work that people do based on their values and beliefs. The integration of values, beliefs and behavior constitute a philosophy or organizational concept that can be used as a guide to deal with different things situation in the organization. Thus, user behavior effectively reflects organizational thinking and, over time, behavior turns into behavior and creates organizational culture (Shafaei et al., 2020). Employee engagement can be important which is beneficial for the organization since it increases the capacity for change and boundaries between the organization and its environment. The organization must develop a suitable culture for the environmental behavior of its employees. This culture will be controlled openly all actions and behaviors of the organization (Zulkarnaen et al., 2020). In addition to organizational culture, the workplace must be this organization must also be taken into account. Jayaweera (2015) found that workplace can predict job satisfaction. Someone who is satisfied with their work will show high motivation, commitment to the company and strong work ability, which ultimately increase its efficiency. If job satisfaction is not supported, it can lead to lack of commitment to the employees towards the company (Hardiyono et al., 2017). Job satisfaction shows the positive attitude of employees towards the workplace and everything related to the work environment. The strengths of the employees are reflected in their performance. Good employee performance can lead to better performance, and it is the capital for the company to achieve its goals, so it becomes concern for leaders. The quality of HR in the organization is closely related to their performance. A word that works associated with performance, performance and regular performance. High performance is often associated with work ethic productivity (Paramita et al., 2020).

1.3 RESEARCH OBJECTIVE

- Examine the impact of 1 Employee empowerment and Organizational performance.
- Examine the impact of job satisfaction and organizational performance.
- Examine the impact of employee engagement and organizational performance
- Examine the impact of Green HRM and organizational performance

1.4 RESEARCH QUESTIONS

- To what extent employee empowerment influences organizational performance.
- How job satisfaction influences the organizational performance
- How employee engagement influences the organizational performance
- How GHRM affects the organizational performance

1.5 SIGNIFICANCE OF STUDY

This research is conducted to evaluate the performance of employees of Digi Squad Solutions and its effects on organizations' performance. In the past, Research have been conducted on this concept on large scale, but this study will access the effects of employee empowerment on organizational performance on small scale. This study will also help organizations understand the importance of employee empowerment job satisfaction, employee engagement, green human resource management, organizational performance, policies and strategies for implementation of this concept. Factual based result of this research will also help the organizations to design strategies that will help them attain competitive edge in the business world.

LITERATURE REVIEW

2.1.EMPLOYEE EMPOWERMENT AND ORGANIZATIONAL PERFORMANCE

Empowering employees involves encouraging employees to be the best they can be in finding and applying solutions to problems in a positive way, including identifying problems and making decisions by empowering them to give money (Ahmed et al. , 2021). To obtain full commitment from all employees, they must be involved during the manufacturing process (Graham et al., 2014; Basana et al., 2022). Empowering employees will give freedom to take responsibility for ideas, decisions and results to replace the old, rigid and bureaucratic system (Rafique et al., 2022). The failure of empowering employees is often due to the inability of training in the workplace to build teams and insufficient commitment from top management, thus reducing employee confidence (Ahmed et al, 2021).

Empowerment enable employees to contribute more, especially in response to the achievements of individuals, groups and societies (Donate et al., 2020). Employees should be rewarded through sharing and acquiring knowledge between them will increase the quality of knowledge about company employees and customers through the development of external relations (Donate et al., 2020; Perin et al., 2016). A dysfunctional economy requires meaningful restructuring and development and economic competitive solutions (Hobfoll et al., 2018). Therefore, employee empowerment is necessary to solve problems and generate new and dynamic ideas (Jeong & Shin, 2019). This study describes different factors for measuring employee empowerment dynamics and the role of employees in achieving the company's vision and mission, the fulfillment of tasks and tasks according to KPI, the right opinion of employees about financial benefits, readiness of the staff to make improvements for disposal (Ahmed et al., 2020).

H1: There is a positive relationship between employee empowerment and organizational performance.

2.4. JOB SATISFACTION AND ORGANIZATIONAL PERFORMANCE

Job satisfaction is expressed by the emotional or general state of mind of the representatives in relation to their work and aspects of the work, for example, the workplace, working conditions, unreasonable prices and documents information and partners (Anwar et al., 2017). Many models or theories of job satisfaction have been developed. According to Robbins and Judge (2009), job satisfaction describes a positive feeling about a job, which results from an analysis of its characteristics. Job satisfaction is conceptualized as a general attitude toward a job (Abdullah et al., 2021). A person with high job satisfaction experiences positive emotions about their work, while a person who is not satisfied feels bad. Job satisfaction is a state of well-being and happiness resulting from one's work and professional experience (Anwar et al., 2021). Job satisfaction is the positive attitude of employees, including feelings and behavior towards their work, through job evaluation as a feeling of respect in completing the job. One of the important principles of work (Afandi, 2022). Job satisfaction is an individual's involvement in work, to the extent that people are aware of their feelings and emotions in their work and consider the level of performance that is considered important for dignity personally to achieve the goals set by the company (Robbins and Judge, 2018). Job satisfaction is an emotional or emotional response to an aspect or part of a person's job, so job satisfaction is not a single concept. A person can be satisfied with one aspect of his job and dissatisfied with one or more aspects (Muah et al., 2022).

Employees' attitudes towards their jobs are shaped by their emotions, beliefs and behavior (Akehurst et al.,2014; Robbins ,2015).Employees who find their work satisfying and rewarding are more likely to be satisfied with their work and they will be able to contribute in the enhancement of organizational performance(Spector, 2015). In (Dilig et al., 2018) view of job satisfaction, with their work in a firm is a measure of how satisfied they are with their work in the firm. Job satisfaction refers to the level of satisfaction an employee has with their job, including but not limited to: (1) pay; (2) benefits; (3) promotion; (4) work conditions; (5) supervision; (6) organizational practices; (7) relationships with a co-worker; (8) and (9) intrinsic vs. extrinsic elements of the job (Puni et al., 2018)

H2 : There is a positive relationship between job satisfaction and organizational performance

2.5.EMPLOYEES ENGAGEMENT AND ORGANIZATIONAL PERFORMANCE

Commitment is a personal motivation that allows a person to pursue and achieve organizational goals (Jan et al., 2021). The relationship between engagement and performance has not been explored in research areas (Kim et al., 2019). A few studies that identified the relationship between commitment and organizational performance have found a link between them (Dajani, 2015; Molettane et al., 2019). These studies show that the relationship between commitment and performance varies depending on the individual's abilities in the organization (Shrestha, 2019). Moletsan et al. (2019) suggest that organizations can improve productivity through engagement by encouraging human capital management strategies that encourage effective communication and good team spirit. At the individual level, engagement improves customer satisfaction and leads to higher productivity and performance at the organizational level (Horváthova et al.,2019), even if the commitment promises to be influential and strong over the years further (Osborne & Hammoud, 2017). Al-dalahmeh et al. (2018) investigated how the engagement of employees influenced the performance of the human resources department in the Jordanian banking sector. The authors used job satisfaction as the mediating role for IT employees. After using quantitative analysis, they found that employee engagement significantly influenced the organization in terms of dedication, absorption, and vigor. It also obtained that employee engagement positively affecting organizational performance. The organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee.

H3: There is a positive relationship between employee engagement and organizational performance

2.1. Green HRM and Organizational Performance

Organizations should introduce such metrics which helps to monitor the company's useful resources, usage and waste of valuable assets and most importantly organizations should set an appropriate environmental managerial system for devising a proper healthy working environment. (Arulrajah et al. 2016). According to the study conducted by (Mousa and Othman 2019) involvement of top managers in environmental sustainable practices have a positive impact on the successful operations of organizations. (Cheema et al. 2017) found that many firms have constituted such departments which are exclusively designed for the promotion of sustainable environmental activities with majorly focus on how to reduce the environmental pollutions factors and environmental preservation activities.

Competencies, Motivational level and commitment level of employees can also be enhanced by the implementation of greening work place environment which can be called as the practices of Human Resource Management(Taamneh et al.2019). Due to increase in the financial and economic growth activities there is a big increase in the emissions of harmful gases and then Green Human resource activities are used to play their important role in making free of pollution workplace environment. (Alkhateeb 2018). According to (Emel et al. 2019) GHRM is positively associated with environmental sustainability through the introduction of green employee "ability" that involves attraction, selection, and training of employees working in the organization. Furthermore it also includes enhancement of motivational level of employees working in the organization through the implementation of green initiatives and creating valuable opportunities for the employees so that they can actively involved in the green initiatives decided by an organization itself. Green Human resource practices are essential for accelerating and improving the competencies of workforce so that they may be able to perform their tasks in the most effective way. (Subramanian et al., 2022).

H4: Green Human resource positively impacts the organizational performance.

METHODOLOGY

Methodology presents research design, data collection, and data analysis techniques.

3.1.RESEARCH DESIGN

The primary aim of research design is to develop a framework or a system for gathering, evaluating, and interpreting information (Saunders, Lewis & Thornhill, 2009). This investigation employed a survey research design to demonstrate the impact of employee empowerment on the performance of DIGI SQUAD SOLUTIONS. The study collected data by using appropriate instruments, specifically surveys. The survey was considered suitable since it gathered original data that was crucial in examining the associations between different factors.

3.2.TARGETED POPULATION AND SAMPLE

The study focused on a group of 50 workers who were hired by DIGI SQUAD SOLUTIONS. These employees were selected as the sampling frame from the workforce available at the Digi squad solutions office. The workers held different job titles, such as Manager, Assistant Manager, and other subordinate roles.

3.3.DATA COLLECTION

3.3.1 DATA SOURCES

The data for this study was collected directly from primary sources, which included the perspectives, attitudes, and thoughts of participants regarding how employee attitudes impact the effectiveness of government organizations. The information was gathered through surveys completed by a total of 50 employees, both managerial and non-managerial, from various departments including Support, Consulting, and Administration.

3.3.2 DATA COLLECTION INSTRUMENT

The current investigation collected primary data by distributing survey forms to participants. The forms consisted of both open and closed inquiries. They were preferred because they provided a structured way for respondents to give information. Questionnaires are the favored tool for gathering data as they allow for the most comprehensive and accurate information to be collected in an organized manner (Myers, 2013). Additionally, questionnaires are cost-effective and can gather a large amount of data from many participants in a short time. The inquiries focused on employee empowerment as areas of interest.

The inquiries were about the variable of interest, which captured various aspects of Digi squad solutions' organizational performance. The questions were presented in Likert scales.

3.3.3 DATA COLLECTION PROCEDURE

For this investigation, data was gathered from individuals who are employed at Digi squad solutions located in Lahore, where the workforce comprises of 60 individuals. Due to the small size of the population, a census method was deemed appropriate. A census method involves gathering data from the entire population and is typically used when the sampling frame consists of small populations (less than 200). The advantages of employing a census technique include reduced sampling errors and the ability to utilize data from all participants or subjects in the population. The entire population was sampled to achieve the desired level of accuracy.

The data collection tools were only administered to the target participants after receiving approval from the top management of Digi squad solutions before conducting the data collection exercise. The questionnaires were handed out to participants during their working hours at Digi squad solutions Lahore. To ensure a smooth process, the CEO was also involved in this entire procedure. Participants were requested to complete the questionnaires at their convenience, and with the help of research assistants, the completed questionnaires were collected. The data collection process lasted for one month.

3.3.4 UNIT OF ANALYSIS

The unit of analysis refers to the specific entity that is the focus of investigation in a given research endeavor. The present research endeavor is centered on scrutinizing the correlation between two variables within a software enterprise. Thus, the focal point of analysis for this study would be a software development company. The study aims to investigate the correlation between two distinct variables within a designated software organization. The findings derived from this study would be utilized to make inferences regarding the correlation between the two variables within the confines of a software firm and may not be universally relevant to other sectors or establishments. The results of the study would pertain exclusively to software firms and would facilitate the identification of the determinants that enhance employee empowerment and organizational performance in this sector.

3.4 DATA ANALYSIS TECHNIQUES

The procedure of analyzing data involves a sequence of stages, including data screening, data cleansing, multivariate normality assessment, and descriptive statistics of both demographics and underlying constructs. The process also encompasses the assessment of the reliability and validity of the gathered data, alongside the scrutiny of the structural model. The subsequent phase entails assessing the prognostic efficacy of the unobservable constructs and the adequacy of the model's fit. The present investigation will employ SmartPLS software to perform data analysis through the structural equation modelling technique.

3.4.1 VALIDITY

Validity is a fundamental concept in research methodology that refers to the degree to which a latent variable accurately measures the construct it is intended to measure. This concept is operationalized through a variety of approaches and techniques. There are 3 methods of assessing validity used in this study, validity, content validity, and construct validity.

3.4.1.1 Content Validity

The content of a survey questionnaire is closely associated with its ability to effectively measure all relevant constructs through appropriate items, thereby determining its accuracy. In academic research, specialists in the relevant field are involved in verifying the content validity to ensure the appropriate measurement of the relevant construct.

3.4.1.2 Criterion Validity

The evaluation of criterion validity involves the utilization of predictive and concurrent validity. Concurrent validity entails the simultaneous assessment of both the measurement and the outcomes of the items employed in measuring the underlying construct. Predictive validity, on the other hand, involves the evaluation of the outcomes of the relevant construct using the measurement of the items employed in the assessment. To conduct criterion validity of a survey questionnaire, factor analysis is utilized to determine the significance of each item used in measuring the relevant construct.

3.4.2 RELIABILITY

Reliability is defined as "the degree or probability of producing the outcomes with diverse assumptions to gauge the underlying concept simultaneously by repeating the elements" (Mohajan, 2017). Two approaches are employed to assess reliability: internal consistency and stability test. The stability test assumes that if the researchers gather data from the same participants using the same elements to measure the same latent constructs over different time intervals, the outcomes will remain unchanged.

Internal consistency presumes that the results or consequences are based on the same latent constructs. We can infer the existence of internal consistency if all the elements used measure the same construct. To assess the reliability of elements and latent constructs, Cronbach alpha, composite reliability, and average variance extracted are employed (Sojic, & Popovac, 2012). The current study will evaluate reliability using Cronbach alpha, composite reliability, and average variance extracted, based on their respective threshold values.

3.5 Structural Equation Modeling

The statistical models known as structural equation modelling aim to explain the relationships among multiple variables.This technique is advanced and can address errors regarding the measurement of latent constructs (Baron et al., 1986). Furthermore, it facilitates the observation of latent variables (Hair & Sarstedt, 2011).

3.6 Measurement Model

The constructs possess the potential to be either reflective or formative in their inherent nature.

To evaluate the measurement model, it is necessary to undertake two distinct steps. According to (Halkos et al., 2021), the initial stage involves assessing the internal consistency reliability by means of composite reliability (CR). Cronbach's alpha is a conventional method for evaluating internal consistency reliability; however, it has the potential to underestimate both the reliability and sensitivity levels. Thus, the utilisation of composite reliability is deemed as the most suitable approach in assessing the internal consistency reliability as it circumvents the possibility of underestimation. Composite reliability measures the consistency of items that evaluate the same latent variable (Advani et al.,2015).

The second step in assessing the reflective model is based on validity. Convergent validity and discriminant validity are two types of validity that can be assessed in the reflective model. Convergent validity refers to the degree to which multiple items are used to measure the same concept (Advani et al., 2015). In PLS-SEM, the outer loading of indicators and average variance extracted (AVE) are used to check composite reliability. Items with values less than 0.50 need to be removed if the AVE and composite reliability do not meet the minimum threshold of 0.70 and 0.50, respectively. In the measurement model, items with loadings below 0.40 need to be eliminated (Advani et al., 2015).

Thus, the average variance extracted explains the variance of items in their latent variable. If the average variance value exceeds 0.50, it means that more than half of the items on average of the latent variable are accounted for (Advani et al., 2015). If the average variance value is less than 0.50, there is an error in the items as they exhibit less variance. However, the threshold values for convergent validity are above 0.50 or higher than 0.50 for each construct's average variance extracted (Hair, et al., 2014). This is also known as convergent validity.

The method of cross-loading evaluates the level of indicators by ensuring that each item's outer loadings are higher than other constructs' cross-loading (Advani et al., 2015). Discriminant validity occurs if the cross-loading value of another construct is greater than its indicator. The Fornell-Larcker criterion is another method that checks construct validity by ensuring that each item's variance is higher than other constructs. To confirm this validity, the AVE of the latent variable should be higher than the square root of correlation between one construct to another construct (Sarstedt, Wilczynski, & Melewar, 2013).

		Loadings	CA	CR	AVE
Employee Empowerment	**EE1**	0.915	0.912	0.945	0.852
	EE2	0.955			
	EE3	0.898			
Employee engagement	**EEG1**	0.914	0.966	0.972	0.832
	EEG2	0.936			
	EEG3	0.903			
	EEG4	0.902			
	EEG5	0.923			

	EEG6	0.916			
	EEG7	0.891			
Employee Satisfaction	**ES1**	0.834	0.955	0.961	0.711
	ES2	0.858			
	ES3	0.820			
	ES4	0.809			
	ES5	0.832			
	ES6	0.858			
	ES7	0.876			
	ES8	0.867			
	ES9	0.837			
	ES10	0.838			
Green HRM Practices	**GHRM1**	0.857	0.949	0.957	0.689
	GHRM2	0.894			
	GHRM3	0.887			
	GHRM4	0.838			
	GHRM5	0.785			
	GHRM6	0.923			
	GHRM7	0.830			
	GHRM8	0.739			
	GHRM9	0.829			
	GHRM10	0.691			
Organizational Performance	**OP1**	0.678	0.844	0.884	0.530

	OP2	0.641			
	OP3	0.787			
	OP4	0.810			
	OP5	0.858			
	OP6	0.803			
	OP7	0.427			

The third method, introduced recently for assessing discriminant validity in PLS-SEM, is the Heterotrait-Monotrait Ratio of Correlations (HTMT), according to Voorhees, Brady, and Calantone (2016). It calculates the ratio of HTMT, which is the average HTMT correlations relative to the average HTMT correlations. Monotrait-Heteromethod correlations assess the correlations between indicators evaluating the same construct, while HTMT correlations explain correlations between indicators from different perspectives. Kline (2011) and Gold (2001) defined two schools of thought for this method, where the threshold values are 0.85 and 0.90. If the HTMT indicator values are between 0.85 and 0.90, it means discriminant validity exists between two different constructs.

		1	**2**	**3**	**4**	**5**
1	Employee Empowerment					
2	Employee Satisfaction	0.505				
3	Employee engagement	0.472	0.748			
4	Green HRM Practices	0.716	0.563	0.560		
5	Organizational Performance	0.642	0.679	0.743	0.545	

(Advani et al.,2015) described the formative measurement model assessment using three steps: 1 Using the test of outer weight to explain the significance level, 2. Using collinearity through variance inflation factor (VIF), and 3. Checking the total contributions between the correlations of items/indicators with their latent variable. The first step calculates the significant level of path coefficients by using bootstrapping to measure the significance of weight. The combination of the coefficient is called the outer weight in PLS-SEM (Henseler, 2017). The VIF value is used to find out the collinearity value through SPSS and check the total contributions between the correlations of items/indicators with their latent variable (do Valle et al., 2016).

3 SUMMARY OF THE FINDINGS

The investigation aimed to establish a correlation between the two variables. The results revealed a favorable connection between the two variables ($r = 0.445^{**}$, $p < 0.017$). Empowered employees are more likely to have a voice in decision-making processes, enjoy independence and accountability, and have opportunities for professional growth and development. These factors were crucial in fostering their loyalty and commitment to their job. The study noted that employees with higher levels of empowerment displayed greater job satisfaction, lower turnover intentions, and higher productivity. It is recommended that the senior management empower employees, as this would enable them to better serve customers, enhance service delivery speed, and decrease the frequency of grievances. This study has demonstrated that a robust positive relationship exists between these variables. As employees become more empowered, the organization's results also improve. The study affirms that Digi Squad Solutions, as an entity, intends to boost their performance by empowering their employees and elevating their level of participation and independence in their work.

TESTING OF HYPOTHESIS

	Coeff.	**SD**	**T-Values**	**P-Values**
Employee Empowerment -> Organizational Performance	0.290	0.048	5.975	**0.000**
Employee Satisfaction -> Organizational Performance	0.180	0.055	3.248	**0.001**

Employee engagement -> Organizational Performance	0.432	0.059	7.388	**0.000**
Green HRM Practices -> Employee Empowerment	0.670	0.033	20.311	**0.000**
Green HRM Practices -> Employee Satisfaction	0.555	0.045	12.309	**0.000**
Green HRM Practices -> Employee engagement	0.543	0.046	11.861	**0.000**

4 CONCLUSION

The research findings demonstrated a positive association between employee empowerment and organizational efficiency. Employees who are empowered exhibit exceptional efficiency and perform their duties with utmost excellence. The acknowledgment of employee empowerment suggests that the staff at Digi Squad Solutions function in a vibrant and productive environment. They tend to feel empowered and carry out their responsibilities with greater enthusiasm and dedication. Empowering employees is indicative of their superior job performance at Digi Squad Solutions. It is anticipated that employees feel empowered and motivated when they are given autonomy, decision-making authority, and opportunities for professional growth and development by the work setting and management at Digi Squad Solutions. In such circumstances, only a few employees may feel disempowered as the factors that contribute to empowerment, as proposed in various empowerment theories, are accurate. This implies that the employees at the service center were empowered and content with their job performance. Green Human resource practices are essential for accelerating and improving the competencies of workforce so that they may be able to perform their tasks in the most effective way. (Subramanian et al., 2022).

The findings of the research revealed a positive correlation between the satisfaction levels of the staff with their organizational performance. The employees who experience satisfaction exhibit remarkable efficiency and execute their duties with utmost excellence. The affirmation of job satisfaction suggests that the personnel at IT companies operate in a dynamic and productive milieu. They tend to be content and carry out their responsibilities with greater zeal. The engagement of the employees is indicative of their superior job performance in companies

It is expected that the employees feel satisfied or even exceedingly engaged when their needs are taken care of by the work atmosphere and management of the companies.

5 LIMITATION AND FUTURE DIRECTIONS

This investigation suggests that future scholars should conduct further research and verification regarding the effect of employee empowerment on the performance of organizations. The study focused on employee empowerment in their work, as it has a significant impact on the crucial outcomes, goals, and aspirations of organizations.

To strengthen the reliability of the research or to assess the effectiveness of Digi Squad Solutions, a comparative evaluation should be carried out on two or three additional departments. This comparative study will enable the findings to be generalized or will facilitate an independent evaluation of Digi Squad Solutions by the relevant government body.

This research proposes future researchers for further investigation and substantiation pertaining to the impact of attitude of employees on organizational performance. The research entailed employees' level of satisfaction, level of commitment of employees towards, and level of engagement of employees towards their work. These domains were scrutinized due to their influence on vital organizational outcomes, objectives, and aspirations.

To enhance the validity of the study or to evaluate the performance of companies a comparative analysis should be conducted on two or three other departments. This comparative analysis will allow for the generalization of the study or for an individual assessment of IT companies by the pertinent government agency.

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QUESTIONNAIRE

Appendix 1: Research Questionnaire

SECTION A: GENERAL INFORMATION

1. What is your gender?

   Male ( )

   Female ( )

2. How many years have you been working in your current position?

   1-3 years ( )

   4-6 years ( )

   7-9 years ( )

   10 years and above ( )

3. What is your education background?

Primary level ( )

Secondary level ( )

College level ( )

University level ( ) Others, specify

What is your age bracket?

18 - 25 years (

26 - 33 years (

34 - 41 years (

42 - 49 years (

50 years or above

SECTION B: EMPLOYEE EMPOWERMENT PRACTICES

State the extent to which you agree or disagree with the statements in the table. Use the key provided below.

5. Strongly agree

4. Agree to some extent

3. Neither agree nor disagree

2. Disagree to some extent

1. Strongly disagree

#	**Statement**	**1**	**2**	**3**	**4**	**5**
1	In my organization there is a clear system for handling employee discontent					
2	My supervisor encourages team work.					

3	**I** am always informed of what is going on in the organization					
4	My supervisor delegates authority to me					
5	There is enough flexibility and independence allowed in the organization					
6	My work gives one the ability to contribute to the success of my organization					
7	**I** have mastered the skills necessary for my job					
8	**I** have significant autonomy in determining how **I** do my job					
9	**I** have considerable opportunity for independence and freedom in how **I** do my job					
10	My impact in what happens in my dept is large					

11	The work I do is meaningful tome me					
l3	I normally get sufficient resource to do my job					
14	I am encouraged to develop creative and innovative ideas					
15	I have control over those aspects of my job for which I am accountable					
16	My position allows for career growth and development					
17	I always get support and feedback from my superiors and co-workers					

Reporting of Corporate Sustainability with Linkage of Corporate Transparency and Performance Determinants

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Abstract:

The study investigated sustainability disclosure of 63 Pakistani firms on the Karachi Stock Exchange with the time span from 2015 to 2021. Using CSR reports and websites, researchers found partial disclosure of ESG information, varying in degree. A moderate link between disclosure and performance indicators was noted. The Corporate Sustainability Disclosure Guidelines Determination (CSDF) showed a mediate association with firm size and water consumption while strong positive relationship with environmental conservation and GHG emission. The study stressed adherence to reporting guidelines, accurate information, and the role of reporting in stakeholder communication. Policymakers can use findings to develop guidelines for consistent and accurate sustainability reporting by firms.

Key Words: Corporate Social Responsibility (CSR), Sustainability, Performance Indicators and Corporate Disclosure.

1. Introduction:

Due to the widespread consciousness of the catastrophic effects of climate change, businesses and non-profits alike today recognise the value of sustainability as a socially conscious undertaking that advances sustainable development. Transparency on sustainability performance is what a company's sustainability reporting is all about, and it helps determine how mature the company is.

Corporate sustainability is a critical concept that integrates environmental, social, and economic considerations into a business's operations and decision-making processes. This approach has gained significant importance globally, driven by the urgent need to protect the environment. Implementing sustainable practices enables businesses to reduce waste, conserve natural resources, and minimize pollution, thereby mitigating their negative impact on the environment and ensuring a healthier and sustainable planet for future generations. The growing significance of corporate sustainability is apparent in light of recent rules and laws designed to reduce the negative impact that businesses have on the environment and society. Businesses that disregard sustainability risk fines, legal repercussions, or reputational harm. It is anticipated that these projects will continue to expand as more companies come to understand the advantages of sustainable practises, paving the way for a more sustainable future for everybody.

The factors highlighted underscore the critical need to integrate corporate sustainable transparency of data and sustainable business performance appraisal for determining Corporate Social Responsibility (CSR). Disclosure analysis, the examination of statements, reports, and notes that organizations disclose, is essential to identify potential challenges affecting firms' performance. This analysis assesses the transparency of disclosed information, detecting whether facts and figures are overstated or understated.

In this study, disclosure analysis is essential for assessing the performance and transparency of corporate sustainability metrics as well as how well the firms are doing in respect to market CSR trends. It is more crucial to emphasise the veracity of reported information on sustainable (ESG) elements than it is to simply follow the rules. Disagreements over reporting requirements, conflicting concepts, and varying standards make monitoring sustainability performance difficult. Providing information regarding an organization's success in sustainable development is a serious matter, given its changing importance in the corporate sphere. Encouraging responsibility in corporate sustainability reporting is a significant problem, especially in Asia.

Brouwers, Schoubben, Van Hulle, and Van Uytbergen (2014) emphasizes the formidable challenges faced by certain Asian countries in adopting sustainable practices, attributed to factors such as poverty, weak governance, limited technology access, and the impact of climate change. Sustainability in these areas is severely hampered by problems including pollution, deforestation, degraded soil, and water scarcity. Despite these challenges, concerted efforts are underway to promote sustainable practices, with the implementation of policies aimed at curbing their adverse environmental effects. In contrast to the developed market economies of the US and Europe, the research on the effectiveness of environmental restrictions on the performance of Asian enterprises remains relatively limited. It is imperative to acknowledge and address the environmental concerns and obligations in the Asian region, particularly those involving its industrialized nations. Pakistan, as a prominent Asian region, is specifically highlighted as necessitating discussions on sustainable development and the impact of environmental regulations on firms' performance.

Reporting on corporate sustainability is crucial for businesses, demonstrating transparency and accountability to stakeholders. While financial accountability is traditional, the disclosure of sustainability practices, including environmental advancements and social responsibility, is gaining importance. Non-financial reporting is recognized as a key corporate communication procedure by stakeholders. In the modern era, economic progress is no longer solely tied to profitability; instead, corporate environmental performance (CEP) is acknowledged as a vital global assets information source. Social responsibility reporting serves to provide valuable environmental data for assessing organizational practices. The increasing significance of CEP efforts poses a constraint for organizational management, emphasizing the need to prioritize corporate citizenship. Consequently, corporate information may evolve in response to equity holder opinions and stakeholder demands (Breitbarth, Harris, & Insch, 2010; Wang, 2016).

This research delves into the evaluation of Pakistani companies' reporting on sustainable development goals, aiming to assess their commitment to sustainability reporting policies and corporate sustainability performance indicators. The study conducts two investigations based on integrated sustainable reporting rules and performance metrics. The first investigation focuses on determining corporations' adherence to precise reporting requirements for economic, social, and environmental measurements, measured by the percentage of sustainability disclosure standards (CSDF Rate). The second investigation explores the empirical relationship between sustainability performance metrics and the CSDF Rate. The central research question asks whether sustainability performance indicators reflect a corporate commitment to adhering to sustainability reporting guidelines.

The main contribution of this study emphasises how crucial it is to establish sustainability guidelines for Pakistani companies and look into the relationship between sustainable productivity and corporate social responsibility, especially when it comes to recognising data that complies with guidelines for corporate sustainability reporting. In Pakistan's economic environment, corporate sustainability reporting is a rapidly growing trend that regulators are gradually realising is important for guaranteeing strategic investments and raising governance standards in companies. (Balkhi, 2010). While there is no mandatory regulation for sustainability reporting implementation, some voluntary practices have emerged, subtly emphasized by regulatory regimes such as Voluntary Guidelines of CSR (2013), Corporate Governance Codes (2012), the National Climate Change Policy (2012), and). Deloitte (2012) indicates that 50 corporations on the Pakistan Stock Exchange issued independent sustainability reports in 2011 and 2012. Despite this, only a small percentage of Pakistani businesses mention sustainability in their consolidated reports. The research recognises the obstacles arising from Pakistan's socio-political structure, feeble governmental establishments, dependence on foreign assistance, restricted resources for law enforcement, and insufficient education, all of which contribute to the deficiency in knowledge and application of sustainability reporting within the nation. Therefore, the study's objectives are to ascertain the scope of sustainable non-financial reporting and evaluate its influence on Pakistani firms' performance.

A corporation can manifest its commitment to Corporate Social Responsibility (CSR) through various means, with the prevalent mode being advances in sustainable reporting like "CSR Reports" or "Sustainability Reports." Notably, there is a growing emphasis on disclosing Environmental, Social, and Governance (ESG) elements within CSR reporting, reflecting increased concern in recent years (Baron, 2014). Companies employ various terms, such as "sustainability," "environment," "corporate citizenship," or "CSR," when detailing their CSR activities in reports containing non-financial data. Financial figures are typically disclosed in annual or integrated reports. The use of diverse nomenclature indicates a strategic approach that extends beyond mere philanthropy (Baron, 2014). This study's main goal is to assess the relationship between company performance and sustainability disclosure parameters. The study's later sections review the literature on organisational performance measures, sustainability assessment frameworks, and environmental criteria. Afterwards, details the research methodology and materials, followed to presents the analysis and findings. The last section concludes the study by summarizing the relationship between the information provided and corporate sustainable performance, as extracted from the research findings.

2. Theoretical Perspective:

Corporate business processes operate within the societal and environmental framework. In a dynamic global context, these organizational functions extend from small-scale businesses to large global dimensions. Corporate ventures are influenced by various market concerns, and while some prioritize profit, others seek opportunities for broader societal impact. Industries bear a disproportionate responsibility for global crises, compelling organizations to address environmental issues and the sustainability of their business activities. Consequently, there is a growing shift in the business calculus towards sustainable and eco-friendly models, driven by environmental changes and the depletion of energy resources. Given that organizations rely on the environment for the resources essential to sustain their operations, collaboration with the environment becomes imperative for obtaining these resources.

According to Brouwers et al. (2014), there are two primary categories of studies regarding the relationship between the corporate performance and workplace pollution: mandatory and optional. Companies can disclose to the public their economic performance, environmental, and social, through voluntary methods such corporate social and as well as environmental reporting, also referred to as consolidated or also annual reporting published. According to Welbeck et al. (2017), social validation or social legitimacy is frequently linked to the goal of environmental and social reporting. In order to understand why businesses willingly reveal information about their social and environmental responsibilities, this study makes use of a number of theoretical perspectives.

Several research have demonstrated that the voluntary disclosure of social and environmental data in annual reports is often explained by the legitimacy hypothesis (Deegan & Gordon, et al., 1996). It is generally acknowledged that this theory provides a useful framework for understanding corporate; social, and the environmental reporting. The legitimacy hypothesis holds that an organization's perceived legitimacy stems from how well its social and environmental responsibilities match societal norms; financial performance and corporate reputation have a role in shaping these norms. According to the notion, organisations cannot ignore their social compact because it depends on pursuing goals that society deems desirable. Although businesses aim to function in accordance with societal principles, they are compelled to conform to changing social norms that cover legal, ethical, and economic boundaries in order to avoid public condemnation (Dowling & Pfeffer, 1975). Consequently, organizational legitimacy is consistently at risk. According to Mousa and Hassan (2015), organisations can enhance their credibility by exhibiting commercial practises that comply with legislation, societal standards, environmental audits, conservation initiatives, and environmental advocacy. As a result, companies are increasingly being held responsible for both their financial and social responsibilities. Scholars keen on the financial performance versus socially responsible debate argue that companies neglecting social responsibility may face less severe losses than those prioritizing it. However, an opposing perspective suggests that social responsibility may not provide direct financial benefits and may instead incur additional costs (McGuire, Sundgren, & Schneeweis, 1988).

Companies are under pressure to concentrate on their social duties because corporate environmental behaviour is so diverse (Christmann, 2004). According to empirical study, companies that are committed to information disclosure practises may be able to both partially satisfy and lessen stakeholder assumptions that differ (O'Donovan, 2002). Building on this, Milne and Patten (2002) contend that an organization's authenticity cannot be preserved or protected unless directors cooperate in a legitimation cycle. Consequently, organizations may seek to appear legitimate through communication to strengthen their presence and claim a positive reputation. Corporate disclosure information not only enhances reputation but also enables organizations to garner additional benefits. Sustainability/corporate social responsibility (CSR) reporting is widely regarded by scholars studying environmental management and sustainability as the main source of information and communication. Pakistan has been implementing the National Climate Change Policy (NCCP) since 2012, with a focus on adaptation to the changing climate due to its susceptibility to it. The Pakistani government urges customers to take this information into account when making investment or purchase decisions because these policies are revised on a regular basis. This study therefore predicts that stakeholder activism in Pakistan would put a great deal of pressure on regional businesses. In order to prove the validity of their corporate structure, Pakistani companies are therefore expected to provide accurate information regarding environmental and sustainability issues and to abide by strict rules.

Literature Review:

The concept of Corporate Social Responsibility (CSR), increasingly popular, holds significance for societal and sustainable development. Prime among its objectives is the reduction of extreme poverty. CSR is a pivotal business concept designed to emphasize economic development while concurrently enhancing individual and societal well-being. It has become an integral element of global corporate governance standards. Multinational corporations (MNCs), particularly those based in underdeveloped areas, place a high priority on CSR in order to promote social benefits for their workforce. International organisations, especially UN agencies, have gradually come to support CSR practises as a way to obtain a competitive advantage and achieve sustainable growth. Governments around the world have responded to this worldwide trend by enforcing corporate regulations and developing policies that fit the circumstances at hand. A crucial component of corporate social responsibility (CSR) is sustainable development, which aims to advance economic growth while upholding social, and the environmental norms. The concepts of sustainable development are very essential in case of all commercial domains and industries due to the possible influence that any business activity may have on social and environmental wellbeing. Financial institutions play a role in financing economic activities, contributing to more sustainable development and ensuring the persistence of these activities.

Although CSR reporting was first only practised by a small number of companies, it has since spread around the world. The ability of a business to report on its operations—a critical first step in evaluating its social responsibility programs—is closely linked to that business's ability to prosper in the global economy. Through reporting, a company's social responsibility and accountability are having linkages with global economy. While, according to Kramer and Porter

(2007), there has been a notable advancement in sustainability reporting, as more than 64% of multinational corporations now disclose CSR data in their annual reports or as a separate report. Prior to the introduction of CSR, annual reports were the main means by which businesses revealed their financial and shareholder value. The naming convention for these reports is highly discretionary, often referred to as integrated, environmental, CSR, or sustainability reports (GRI, 2011). Additionally, reports can take various formats, including print or web, standalone, or integrated formats.

Organizations bear social responsibility for their sustainable impact and environmental risks since the entire corporate realm relies on these resources for its operations. According to Welbeck et al. (2017), one objective of corporate sustainability reporting is to obtain social acceptability or legitimacy for organisational actions. A key theoretical foundation for corporate social and environmental reporting is provided by legitimacy theory. Sustainability reporting, with its roots in disclosing shareholder values, has a historical legacy but has recently been integrated into Corporate Environmental Performance (CEP). In the 1970s and 1980s, the initial phase of Corporate Social Responsibility (CSR) reporting primarily focused on the environment, yet it lacked a connection to business performance (Marlin and Marlin, 2003). The first environmental reports were published by companies in the chemical industry in response to severe reputation disruption in the 1980s. The tobacco industry was the earliest to swiftly adopt reporting before other sectors, driven by increasing concerns about behavioural finance during that period. Over the past two decades, sustainable reporting has undergone a significant transformation with the establishment of standards and guidelines. Factors such as stakeholder and shareholder interest, transparency, reputation, social values, and global expansion contribute to the expansion of this reporting trend. However, businesses typically choose sustainability reporting with the aim of enhancing accountability, optimizing internal processes, engaging shareholders, and convincing more investors to engage in long-term profitability. It is important to note that while sustainability reports aim to demonstrate actual outcomes, merely explaining disclosed activities without measuring their impact may fall short of providing a comprehensive assessment.

Stakeholders are pushing for the disclosure of social practises in addition to economic and environmental performance, as Siew (2015) pointed out. The results of empirical studies on CSR reporting and sustainable management are valuable, but they are not necessarily predictable. To comply with annual corporate reporting standards, many firms provide sustainability statistics; however, a more targeted approach is required to fully comprehend the ideals ingrained in sustainability management. The requirement for sustainability disclosure ought to go beyond simple reporting and examine the ways in which sustainability affects the company. A wide range of stakeholders, including academics, professionals, and organisations, are actively involved in the creation of sustainability measuring frameworks and indexes. The purpose of these frameworks and indexes is to evaluate and reveal how managerial choices affect social, economic, and environmental factors. Notably, the previous versions of environmental performance measurement frameworks primarily focused on sustainable development (Mauser & Kolk, 2002). Various theoretical frameworks, ranging from simple to complex, can be employed to measure and report the sustainability performance of a firm, with their effectiveness varying (Hubbard, 2009).

Numerous scholars and practitioners have contributed to the analysis of the complexity and diversity in the management of Environmental Management Systems (EMS) practices by businesses. Numerous focused studies have been conducted since the late 1980s in an effort to determine suitable normative frameworks for directing actions towards a sustainable future (Kolk & Mauser, 2002). While precise rules and government laws may not yet exist, sustainability reporting is a voluntary company practise that is governed by frameworks and standards produced by various organisations (Baron, 2014). There are a number of well recognised frameworks available for reporting on business sustainability, with the Global Reporting Initiative (GRI) being one of the most prominent (GRI, 2011). GRI, established in 1997, aims to be a universal framework and has become the most recognized and referenced set of rules by various standards (Siew, 2015). The GRI framework categorizes specific activities into six areas: human rights, the economy, the environment, society, labor, and products (Bradford, Earp, & Williams, 2014). Recent studies have explored how corporate sustainability reporting influences a company's performance. Businesses reporting on GRI guidelines tend to outperform those that do not voluntarily report on GRI, showing a positive relationship between the financial condition of reporting businesses and stock prices. Researchers emphasize the significance of environmental disclosure, with businesses engaging in environmental reporting outperforming those that do not. Additionally, organizations practicing sustainability reporting at a more rigorous level are believed to have higher stock returns and a competitive advantage over firms that do not engage in sustainability reporting.

2.1.Hypothesis Development

There has been a great deal of research on the connection between sustainability disclosure variables and firm sustainability performance, as the previous literature analysis shows. Consequently, in order to explore the relationship between a company's non-financial and financial performance and the Corporate Sustainability Disclosure Rate (CSDF), the study has developed hypotheses.

2.1.1. Environmental Performance Indicator (EPI):

Previous empirical research examining the relationship between an organization's environmental performance and the level of environmental openness has yielded inconsistent findings. Patten (2002) draws attention to the discrepancies in the body of research that has been done on the relationship between environmental performance and transparency. Subsequent research, however, has found a strong and significant correlation between substantial, quantitative environmental transparency and improved environmental index performance. Additionally, businesses that mandated good environmental performance got less criticism than those that did not. According to Clarkson et al. (2008), insufficient sample selection and unsuitable environmental performance metrics are to blame for the contradictory results. This study's research approach considers a number of variables pertaining to the degree of environmental disclosure as possible reasons for the contradictory results of earlier studies. This study's primary goal is to reassess the connection between environmental performance and the amount of environmental and sustainability disclosure information. As control variables in this study, the two environmental performance indicators that are examined are water consumption (WC), and also the greenhouse gas emissions (GHG) and hypothesizes as,

H1: The CSDF: (corporate sustainability disclosure guideline) criteria, and environmental performance both are determined as significantly correlated.

2.1.2. Environmental conservation effort (EE)

Environmental reporting and efforts are mostly focused by government initiatives in the context of Pakistani businesses. Environmental accounting practises have advanced quickly after the Ministry of Climate Change's, (MoCC) 2012 recorded of environmental accounting guidelines, which marked a turning point in the field. According to MoCC, climate change poses a serious threat to the social, environmental, and economic development of Pakistan, leading to internal and external migration. The country is already experiencing the impacts of global environmental change, including more frequent droughts, floods, unpredictable weather patterns, reduced freshwater supplies, and loss of biodiversity. Proposals for legislation cover a wide range of topics, including water, forestry, agriculture, coastal regions, biodiversity, and other fragile ecosystems. Pakistan actively participates in the fight against climate change as a responsible member of the world community, despite its little contribution to global greenhouse gas (GHG) emissions. It places a strong emphasis on mitigation efforts in sectors including energy, transportation, forestry, and agriculture. Activities related to adaptation and mitigation are thought to be the two main approaches to combating climate change. The country is currently concentrating on becoming ready for climate change adaptation. Saka and Burritt's (2003) study also looked at the connection between environmental accounting advances and environmental management certification. They discovered that companies with certifications have a higher propensity than non-certificated companies to reveal their environmental performance and practises in environmental aspect reports. As a result, a control variable in this study is the environmental conservation efforts (EE) that companies declare in their integrated reports. It hypothesizes as,

H2: The level of corporate sustainability disclosure standards and environmental conservation efforts are significantly correlated.

2.1.3. Financial Performance Index (FPI)

Numerous studies have discovered strong evidence linking firm growth and profitability to sustainability declarations. The primary goal of this study is to explore these two financial indicators as focal points.

2.1.4. Firm size

Numerous empirical studies have explored the relationship among firm size and environmental/sustainability disclosure (Clarkson et al., 2008). The goal of these studies is to establish a relationship between disclosure information and company size by demonstrating that larger organisations are more visible and recognised due to their size and image (Barth, McNichols et al., 2017). Empirical scholars in corporate finance believe that firm size is an important factor since it affects outcome variables (Dang & Li, 2015; Orlitzky, 2001). Research often uses a company's size as a measure of its financial performance, offering important information about the general health and profitability of the business. Every business size indicator has a significant correlation even though their theoretical and empirical bases vary. There are several methods for determining a company's size (Dang & Li, 2015). The most often used proxies for business size in empirical corporate finance research are the market capitalization, the total revenue, and the total assets. The natural logarithm of total assets is employed as a proxy variable in this inquiry. Therefore, it hypothesizes as,

H3: There is a positive correlation between the size of the firm and the scope of CSDF determination.

2.1.5. Profitability

A key financial performance metric, profitability evaluates a business's capacity to make a profit from its activities and shows how well it deploys resources to produce income and profits. Profitability is unquestionably necessary for any organisation to survive, and corporate social responsibility (CSR) is fundamental to sustainable business operations. Mixed findings have come from empirical research looking at the connection between sustainability and environmental disclosure and profitability. Profitability and environmental disclosure were found to positively correlate in certain research (AlTuwaijri et al., 2004). Other research, however, did not find a significant correlation between these two factors, suggesting that there is inconsistent evidence linking financial benefit to environmental reporting. Prior studies have demonstrated that a wide variety of factors, such as return on equity (ROE) and return on net operating assets, impact profitability ratios. Return on equity, or ROE, is regarded as an independent variable in this study that represents the profitability ratio. It hypothesizes as,

H4: There is a positive correlation between profitability and the scope of corporate sustainability disclosure requirements.

3. The data

The Karachi Stock Exchange (KSE100) provided the research sample for this study, which collected data over a seven-year period, from 2015 to 2021. Since these businesses are obligated to reveal their social responsibility components, the data was obtained from 63 non-financial enterprises in Pakistan. The revealed data was gathered from online sources, integrated or non-integrated environmental or sustainability reports, manual financial reports, and yearly reports. The Pakistan Stock Exchange (PSX) and company websites provided these appraisal reports. Getting data on sustainability disclosure information is the main goal in order to create the disclosure framework and assess the disclosure of economic, social, and environmental performance.

3.1. Variable definitions

One dependent variable and five independent variables are used in the analysis of this study. These variables are associated with environmental, social, and financial performance as well as other ESG aspects. The factors and measurements utilised in this investigation are shown in Table 1.

3.1.1. CSDF rate

The dependent variable is the Corporate Sustainability Disclosure Framework (CSDF) rate, which is determined by content analysis. The sustainability reports as well as other yearly and integrated reports provide the data for the CSDF rate. Using the research of Cochran and Wood (1984), Patten (2002), Cho and Patten (2007), Bowen (2009), Zhongfu, Jianhui, and Pinglin (2011), Slapper and Hall (2011), and Habek and Wolniak (2015), a Corporate Sustainability Disclosure Framework (CSDF) was created in order to carry out the content analysis. A total of sixteen indicators including economic performance, social integrity, environmental concern, and quality elements for exemplary reporting advice were used for the Corporate Sustainability Disclosure Framework (CSDF). These indicators are crucial means of interaction in reporting because they give stakeholders insightful information about the organization's financial performance, social responsibility, environmental activities, and reporting standards.

Table 1. Description of variables

Dependent Variable:	
CSDF rate	Corporate Sustainability Disclosure framework percentage
Independent Variables:	

CO2 impact	Total impact greenhouse gas emission (directly and indirectly)
Water consumption	Water usage by the firms
EE	Investments and expenses related to environment
Log of total assets	For measuring the size of firm

Table 2: Corporate Sustainability Disclosure Framework Percentage (CSDF rate)

No.	Description
Essential Information Metrics (EII)	
1.	Statement of CEO
2.	Integral requirement of reporting
3.	Briefing of organizational business
4.	Statement of management and policies related to environment
5.	Policies of greenhouse gas emission (GHG)
6.	Consumption and conservation of water
7.	Information for employment
8.	Occupational health and safety information
Quality Appraisal Indicators (QAV)	
1.	Mission and Vision
2.	Data in comparable format
3.	Future objectives and past strategies
4.	Integrated CSR reporting
5.	Independent Auditor's report
6.	Summary of essential metrics and figures
7.	Surveys and interviews
8.	Stakeholder's engagement

ROE	To measure the profitability of the organizations

Table 3: Measure disclosure of sustainability framework percentage

Years	Essential Information Metrics (EII)								Quality Appraisal Variable (QAV)								Count	Indicators	CSDF %
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**			
2015	**1**	**1**	**1**	**0**	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**0**	**1**	**1**	**1**	**12**	**16**	**75%**
2016	**0**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**13**	**16**	**81%**
2017	**0**	**1**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**14**	**16**	**87%**
2018	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**0**	**15**	**16**	**94%**
2019	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**14**	**16**	**87%**
2020	**0**	**1**	**1**	**0**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**0**	**0**	**1**	**1**	**1**	**11**	**16**	**69%**
2021	**1**	**1**	**1**	**0**	**1**	**1**	**0**	**1**	**1**	**1**	**1**	**0**	**1**	**1**	**1**	**0**	**12**	**16**	**75%**

The CSDF is made up of checklist items and a scoring system that calculates the percentage of corporate sustainability disclosure criteria using sixteen primary indicators (EEI and QAV). (See table 2). A score of one or zero is allocated to each category, signifying the occurrence of that specific component in the annual report for that particular year. Companies receive ratings every year, and the CSDF rate is determined by expressing the results in percentage terms. To calculate the CSDF rate, the process entails assigning a score to each organisation and converting those scores into a percentage. (Refer table 3).

4.1.2. Sustainability Performance indicators

Five independent (explanatory) factors are included in the study in order to assess their effects. These factors include water use, greenhouse gas emissions, and efforts to conserve the environment, firm size, and profitability. (Refer table 1) The first two variables, greenhouse gas emissions and water consumption, are indicative of the environmental performance of organizations and their potential impact on society. Greenhouse gas emissions signify the organization's contribution to CO_2, while water consumption reflects the organization's usage and conservation of water. The Corporate Sustainability Disclosure Guideline Percentage may be impacted by these indicators, which are assessed according to how they are disclosed in annual and integrated reports. The environmental conservation effort variable, which is taken from annual reports, sustainability reports, and integrated reports, shows the expenditures and investments made by organisations in environmental conservation. The financial health of businesses is determined by the two remaining variables: return on equity (ROE) and the logarithm of total assets. Firm size is measured by the log of total assets, and corporate profitability is indicated by ROE. The financial statements of the corresponding companies are where these financial variables are taken from.

4.2. Methodology

The methodology employed in this study adopts a mixed-method approach, integrating both quantitative and qualitative aspects. Using a qualitative approach, the assessment's first phase addresses the requirements for openness by compiling non-numerical data from annual reports, sustainability reports, and other integrated reports that shed light on the companies' CSR and sustainability initiatives. Using content analysis, the qualitative data is first arranged narratively and literary before being converted into quantitative scales. The approach's second component entails gathering numerical data from financial statements. This study uses a multiple regression model, a statistical technique for analysing the relationship between numerous variables, to evaluate the hypotheses. The multiple regression for quantitative analysis is:

$$YCSDF = \beta_0 + \beta_1 GHG + \beta_2 WC + \beta_3 EE + \beta_4 TA + \beta_5 ROE + e.$$

Where, YCSDF = CSDF rate (DV), β_0 = constant, β_1GHG = Greenhouse gas Emissions, + β_2WC= Water conservation, β_3EE = Environmental conservation effort, β_4TA = Log of total assets, β_5ROE = return on equity, e = error term.

5. Empirical results

The study's findings, which were derived from the variables and data chosen to evaluate Pakistani corporate reporting standards and provide a summary of corporate sustainability and responsibility, are shown in the part that follows. The two primary sections of this part are "Disclosure Analysis" and "Hypothesis Testing." Regression analysis on a hypothesis using dependent and independent variables is known as hypothesis testing. Structured content analysis of the disclosure material is then used in disclosure analysis to show how the corporate sustainability disclosure guidelines are determined using the sustainability disclosure guidelines' percentage (CSDF Rate).

5.1. Disclosure Analysis

This section's main goals were to examine the reports' substance in the context of the CSDF rate structure and to examine the annual trend in non-financial reporting (disclosure guidelines determination). By identifying norms and trends in reporting, this analysis may offer insights into the firms' commitment to corporate social responsibility.

Difference between EII and QAV

The contrast between Quality Assessment Variables (QAV) and Essential Information Indicators (EII) as well as the degree of consistency between them in the assessment of sustainability reporting for the chosen companies are shown in Figure 1. Six of the EII's indicators have disclosure rates higher than 70%; the highest, the "Summary of Organisational Business," has a disclosure rate of 100% for practically all enterprises. 'Status of Environmental Policies' with a 92% rate and 'Fundamental Requirements of Reporting' with a 99% rate are two more noteworthy indicators. But just 76% of enterprises declare their "Total Amount of Greenhouse Gas Emissions," suggesting that some do not sufficiently disclose their direct and indirect emissions. The rate of disclosure is lowest in EII is for the 'CEO's Statement,' and 'Water Consumption' shows a concerning 49% disclosure rate, suggesting a lack of transparency regarding water conservation and consumption in integrated reports. In QAV, almost six indicators have a disclosure rate of over 80%, reflecting a good reporting index in Pakistan. However, 'Interviews and Surveys' and 'Stakeholders Engagement' have lower disclosure rates of 41% and 48%, respectively. This suggests room for improvement in engaging with stakeholders through interviews and surveys, emphasizing an area where Pakistani firms may enhance their reporting practices.

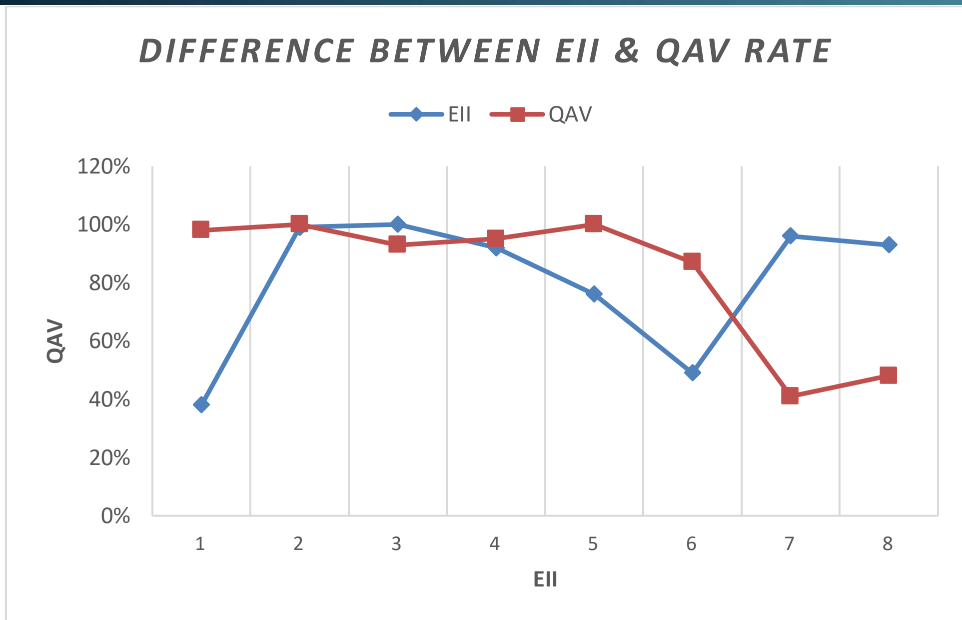

Figure 1. Difference between EII and QAV

4.1.1. Analysis of the CSDF Indicators alongside with comparison w.r.t their covered topics

The graph illustrates the degree of responses by organizations based on 16 indicators designed to determine the Corporate Sustainability Disclosure Framework (CSDF) rate. It provides an overview of how well firms cover each topic, and the results reveal interesting insights. The first indicator, 'CEO's Statement,' has the lowest CSDF rate at 38%, suggesting that organizations in Pakistan may face challenges aligning with standards and guidelines related to this aspect. In Quality Assessment Variables (QAV), the 15th and 16th indicators, 'Surveys and Interviews' and 'Stakeholders Engagement,' have lower rates of 41% and 48%, respectively. This indicates potential areas for improvement in engaging with stakeholders through surveys, interviews, and overall stakeholder engagement practices. The graph provides a visual representation of the coverage and adherence of Pakistani organizations to sustainability reporting indicators, highlighting both strengths and areas for enhancement.

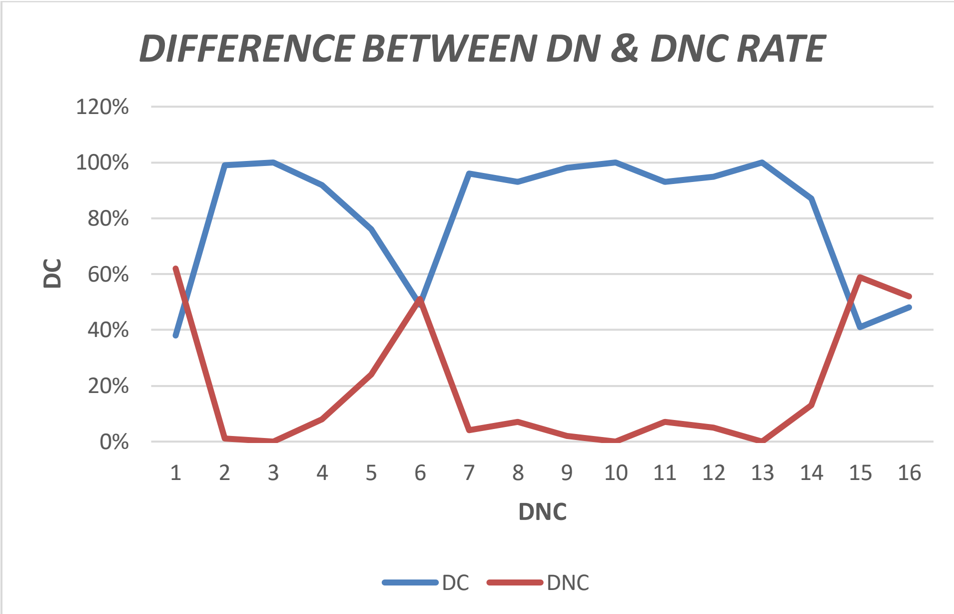

Figure 2. Index of corporate sustainability disclosure framework analysis

As we can see, figure 1 above illustrates the degree of transparency for each indicator individually as well as how it differs between two EII and QAV subcategories in particular. The combined total of data assessed by 16 indicators is displayed in the following figure, which indicates the extent to which topics are covered and uncovered.

5.1.3. Corporate sustainability disclosure outcomes from 2015 to 2021

In addition to the indications, the information that the corporations have disclosed over the years is displayed below. Since the data spans seven years, from 2015 to 2021, we will calculate the CSDF percentage for the companies that operate in these years. The line in the graph that follows, with n=441 and 63 firms with a 7-year disclosure time, represents the information that the companies disclosed between 2015 and 2017.

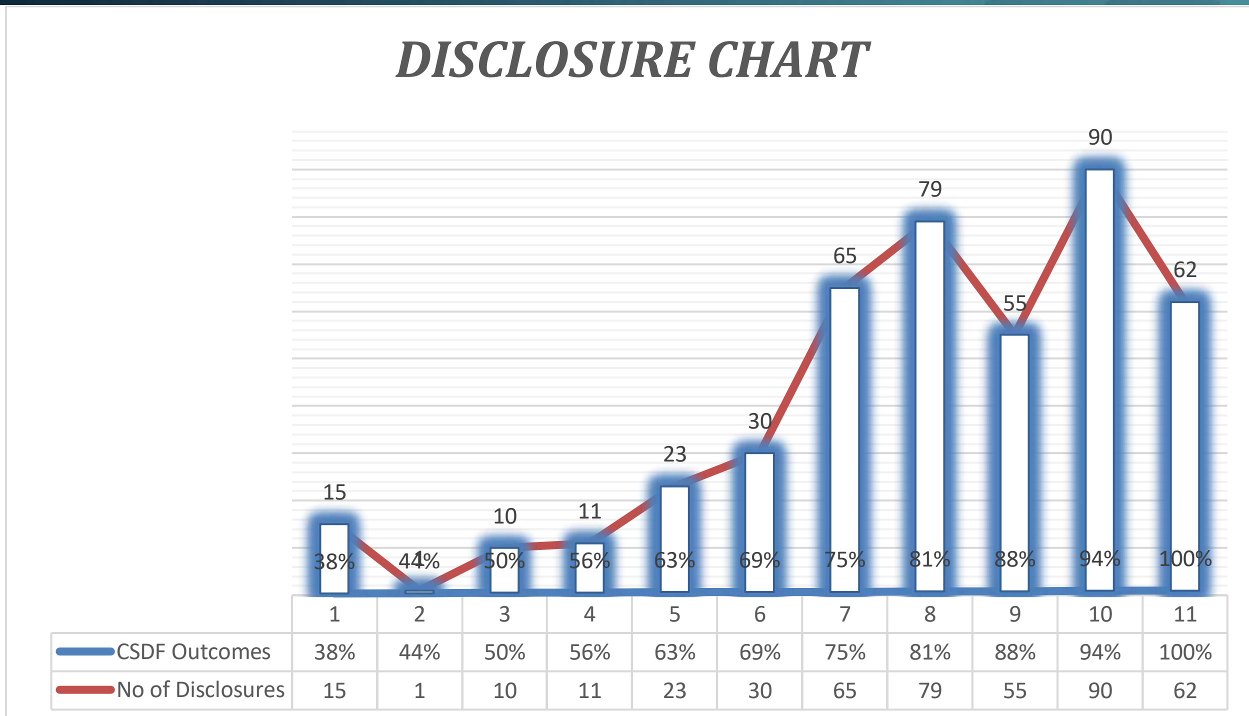

Figure 3. Disclosed data by the firms from 2015 to 2020

5.1.4. Sum up of CSDF rates for each year

The CSDF rates evaluation for each year is displayed in the table below. Three percentage categories have been created to illustrate the variation in information disclosure for each year independently. This table shows that the majority of the companies have greater disclosure rates for the metrics that fall within the 81% to 100% group for the most recent years. Since the overall disclosure rate is rather appropriate, only a small number of businesses fall into the 30–60% range and have a lower disclosure rate. 8% of businesses have a CSDF rate of less than 60%, 27% have a rate between 61 and 80%, and 65% have a rate above 80%. This is a positive indication.

CSDF rates	2015	2016	2017	2018	2019	2020	2021	Total	%
30-60%	8	7	6	6	5	3	2	37	8%
61-80%	21	19	18	16	13	16	15	118	27%
81-100%	34	37	39	41	45	44	46	286	65%
Total	63	63	63	63	63	63	63	441	100%

5.1.5. Total range of CSDF rates from 2015-2021

The preceding table is expanded to demonstrate a wide variation in CSDF rates throughout the span of all these years as the final component of the disclosure analysis. The firms' overall coverage of the CSDF % throughout the span of these seven years is displayed in the table and graph below.

CSDF rates	2015	2016	2017	2018	2019	2020	2021
30-60%	8	7	6	6	5	3	2
61-70%	9	8	6	5	7	9	9
71-80%	12	11	12	11	6	7	6
81-90%	15	18	21	19	21	19	21
91-100%	19	19	18	22	24	25	25
Total	63	63	63	63	63	63	63

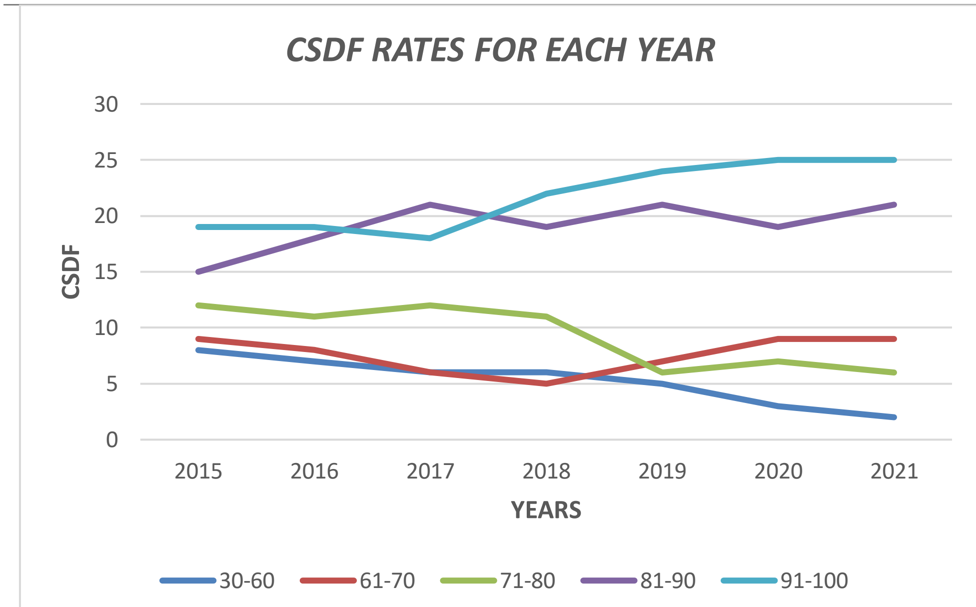

Figure 4. Extensive range of CSDF rates over the selective years

5.2. Hypothesis Testing:

The overview of the results of the correlation and regression analyses are shown in Tables 4, 5, 6, and 7. The data presented in Table 4 outcomes demonstrate the correlation matrix and the correlations between the independent variables (IV) and dependent variables (DV) in order to look at the correlations that currently exist between these variables.

Table 4: Correlation Matrix

Variables		CSDF	GHG	WC	EE	TA	ROE
R-value	CSDF rate	1.0000					
	GHG	0.7464	1.0000				
	WC	0.5250	0.3943	1.0000			
	EE	0.7364	0.9016	0.5076	1.0000		
	TA	0.4731	0.3799	0.1830	0.3454	1.0000	
	ROE	0.0394	0.0593	0.0780	0.0837	0.0129	1.0000
P-value	CSDF rate						
	GHG	0.0000					
	WC	0.0000	0.0000				
	EE	0.0000	0.0000	0.0000			
	TA	0.0000	0.0000	0.0001	0.0000		
	ROE	0.4095	0.2141	0.1021	0.0791	0.7875	

The correlation coefficients, which indicate the degree and direction of the linear relationship between two variables, are shown in the top portion of the table and range from -1 to 1. The lowest portion of the table shows the p-values for each correlation coefficient, which indicate the statistical significance of the link. All p-values, with the exception of roe, are below than 0.05, indicating that every link is statistically significant.

With the exception of return on equity (ROE), the data in the above table shows a positive connection between the independent variables (IV) and dependent variable (DV). The environmental conservation effort (EE) and greenhouse gas emissions (GHG) show the strongest and most positive link. According to Field (2013) and Graves & Waddock (1994), there is a substantial positive connection (R.70-.90) between GHG and EE, with correlation coefficients (R) of 0.7464 and 0.7364, respectively. GHG and EE have substantial and positive relationships with the dependent variable, CSDF, as indicated by their respective p-values of 0.0000. Water consumption and conservation (WC) has a significant and somewhat positive association with the dependent variable CSDF, as indicated by the R value of 0.5250 and the p-value of 0.0000. With a p-value of 0.000 and a correlation of 0.4731 for total assets (TA), there is a significant although marginally positive connection. With a p-value of 0.4095 and a R value of 0.039, the final independent variable, ROE, on the other hand, shows little to no association and little evidence of significance.

Regression analysis

I have performed regression analysis using different models in order to obtain a summary for each model that can be assessed independently. This allows us to compare the outcomes and identify the independent variables that have the strongest correlation with the dependent variable. Table 5 represents the model of summary.

Table 5. Model of summary

Model	R	R^2	Adj. R^2	SEE
1	0.7874	0.6201	0.6184	0.09306
2	0.7893	0.6231	0.6205	0.09279
3	0.8132	0.6614	0.6583	0.08805
4	0.8135	0.6619	0.6580	0.0881

The table above presents a summary of the outcomes from the multiple regression analysis, where multiple independent variables forecast a dependent variable. This summary model evaluates the overall efficacy of the model.

The degree and direction of the linear relationship between the dependent and independent variables are shown by the Pearson correlation coefficient (R). The R values for Models 1, 2, 3, and 4 are 0.7874, 0.7893, 0.8132, and 0.8135, in that order. These numbers show that all models have a significant positive association that ranges from modest to strong.

The percentage of the dependent variable's variance that the independent variables account for is shown by the coefficient of determination (R2). The R2 values of Models 1, 2, 3, and 4 in this model are, respectively, 0.6201, 0.6231, 0.6614, and 0.6619. These results imply that the independent variables interpret 62.01% to 66.19% of the variance in the dependent variable, with Model 4 showing the greatest R2 value.

The standard error of estimate (SEE) portrays the average difference between the actual values and the predicted values of the dependent variable. For models 1, 2, 3, and 4, the respective SEE values are 0.09306, 0.09279, 0.08805, and 0.0881. A lower SEE value signifies a more accurate fit of the model to the dataset.

In short, the fitness of the model is suggested by the higher values of R2 and adjusted R2, coupled with the lower SEE values. Models 3 and 4 exhibit the most robust relationships between the dependent and independent variables, indicating a good fit to the dataset.

Table 6. ANOVA (Analysis of Variance)

Model		SS	Df	MS	F	p-value
1	Regression	6.191	2	3.095	357.51	0.0000
	Residual	3.792	438	0.008		
	Total	9.984	440			
2	Regression	6.221	3	2.07	240.85	0.0000
	Residual	3.762	437	0.008		
	Total	9.984	440			
3	Regression	6.6043	4	1.651	212.95	0.0000
	Residual	3.3804	436	0.0077		
	Total	9.984	440			
4	Regression	6.608	5	1.321	170.28	0.0000
	Residual	3.376	435	0.0077		
	Total	9.984	440			

The ANOVA table above is employed to assess whether the model significantly enhances prediction of the outcome. Divided into four models, the table examines the impact of five independent variables on predicting a dependent variable through F-values and p-values. A high F-value in regression analysis signals the significance of the regression, implying that the independent variables notably influence the CSDF. A statistically significant relationship between the independent and dependent variables is confirmed when the null hypothesis is rejected with a p-value of less than 0.05.

In summary, the ANOVA table highlights that all four regression models exhibit a substantial F-value and very low p-value, indicating that the independent variables distinctly influence the dependent variables. Model 1 stands out with the highest F-value and the lowest p-value, emphasizing its utmost significance. The decrease in the F-value and increase in the p-value as the number of independent variables rises suggest that additional variables contribute less explanatory power compared to the initial variable.

Table 7. Coefficients (parameters of the model)

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Standard Error	β		
Constant	0.3959608	0.0308312	-	12.84	0.000
GHG	0.1549522	0.0232399	0.442835	6.67	0.000
WC	0.0723009	0.0098971	0.240234	7.31	0.000
EE	0.0532739	0.0258641	0.1438572	2.06	0.040
TA	0.0502267	0.0071647	0.2114834	7.01	0.000
ROE	-0.0045909	0.0063152	-0.0203683	-0.73	0.468

The provided coefficient table pertains to the model's parameters. It defines the relationship between each independent variable and the dependent variable (CSDF) using standardised coefficients, sometimes known as beta values. A positive correlation between the predictor and the outcome is shown by a positive beta value, whereas a negative connection is indicated by a negative coefficient.

The coefficient model for this study emphasises that every independent variable has a statistically significant impact on the dependent variable, with the exception of ROE. While ROE has a negative coefficient that indicates a negative correlation with the dependent variable, GHG, WC, EE, and TA all have positive coefficients that indicate a positive link with the dependent variable. GHG is the most significant predictor of the dependent variable, followed by TA, WC, EE, and ROE. The standardised coefficients allow for a relative assessment of the independent variables' relevance.

Based on the findings of the regression analysis and correlation matrix, the following assessment may be obtained to address the hypothesis testing.

Comparing the study's findings to those of Al-Tuwaijri et al. (2004), it is unclear how environmental performance and adherence to CSD recommendations are related. GHG and WC show a positive link with the CSDF rate in the correlation matrix. Water use shows a modest correlation, however greenhouse gas emissions show a strong correlation of 0.7464. A moderate explanatory power for WC and GHG (R2=62%) is indicated by the p-values (0.0000), which confirm the substantial association between the dependent and independent variables (environmental indicators). This lends credence to hypothesis H1, which states that there is a substantial relationship between environmental performance and the CSDF rate.

Hypothesis H2 presents a 73.6% correlation coefficient that indicates a positive relationship between environmental conservation effort (EE) and the decision to comply with sustainability disclosure standards. A p-value of 0.000 indicates that the coefficient estimate for EE supports this result. These results are consistent with the hypothesis H2, as the regression shows a moderate level of explanatory power (R2 = 62.3%) for the environmental conservation effort variable.

The study identifies a strong and positive correlation between TA (Firm's Size) and the CSDF rate. The coefficient estimate for TA supports this positive link, consistent with the correlation matrix (r = 0.4731, p = 0.000). Consequently, hypothesis H3 is accepted, aligning with previous empirical research linking firm size to disclosure levels. However, contrasting empirical findings show no connection between the corporation's size and its reporting of social responsibility.

According to Stanwick & Stanwick (1998), there is a relationship between low emissions and business profitability. However, the correlation matrix and coefficient estimate for the profitability variable (ROE) in this study do not support hypothesis H4, which suggests a relationship between profitability and following corporate sustainability disclosure guidelines. The findings show that there is a statistically negligible negative correlation (r=0.0394, p=0.4095) between these factors. Thus, in keeping with earlier empirical studies (Brammer & Pavelin, 2006; Brine et al., 2006), the study refutes the notion that profitability and the decision to comply with sustainability disclosure rules are related.

6. Conclusion:

The primary aim of this empirical study is to examine the connection between corporate social responsibility (CSR) reporting guidelines and sustainability performance indicators. The research focuses on understanding how firms, based on their economic, environmental, and social impacts, adhere to sustainability values. The study analyses 63 Pakistani companies listed on the Pakistan Stock Exchange from 2015 to 2021. Drawing from empirical studies on carbon emission and corporate values, as well as existing research on the relationship between carbon management disclosure and equity market value, the study explores whether sustainability performance indicators are linked to a firm's commitment to adhering to sustainability reporting guidelines. The results, however, present a mix of positive, neutral, and varied outcomes, highlighting the complexity of this relationship in the context of Pakistani firms.

Using a framework of sixteen indicators with varied disclosure rates, the assessment in the first stage of the analysis concentrated mostly on how well firms adhered to sustainability disclosure guidelines. The findings indicate that, on average, 11 of the 16 indicators demonstrated a disclosure rate for corporate sustainability—which includes environmental, social, and economic aspects—that was higher than 80%. Nonetheless, there has been minimal progress in the disclosure rates, which stayed mostly unchanged until 2021. The feedback from indicators 9 to 16 showed less volatility than the EEI rate and QAV rate, with just two indices having rates below 85%.

The findings highlight a significant worry: not all factors (EE, TA, GHG, and WC) are significantly correlated with CSDF requirements. Experiments show that different predictors in the studies can identify the association between performance indicators and disclosure data. Interestingly, there is just a small positive correlation and comparable predictive power between WC and TA (company size). According to Jennifer Ho and Taylor's (2007) investigation, business size was a significant determinant for all categories of disclosures except economic disclosures, and non-economic disclosures primarily influenced overall disclosures. The financial success metric ROE and the CSDF rate do not appear to be significantly correlated, according to this analysis. Empirical research suggests that business sustainability disclosures have no appreciable impact on financial performance, although having a substantial impact on environmental performance. However, there is a tiny but substantial positive correlation between water use, business size, and corporate sustainability disclosure outcomes. The study indicates that both financial and non-financial factors have some effect on disclosure information outcomes. Despite a less compelling positive explanation for sustainability indicators' predictive capacity, improving overall sustainability disclosure through initiatives like planning, reporting, reviewing, updating, and managing is advantageous for addressing economic and environmental challenges. Providing information on corporate sustainability management for public consumption is crucial, aligning with legitimacy theory. Pakistani companies can enhance economic performance by improving the quality of sustainability disclosure and increasing CSR activities. Although Pakistani companies have disclosed efforts for environmental conservation, GHG emission regulations, and water consumption and conservation, there's room for improvement in sustainability reporting comprehensiveness compared to well-established financial reporting. Following rules and ensuring accurate disclosure information are crucial for aligning with societal views in corporate sustainability reporting.

Corporate sustainability performance measurement and sustainability disclosure are emerging concepts that are gaining traction, according to empirical findings and prior research on CSR principles (Kolk, 1999, 2003, 2005). Although the link is not considerable, the findings show a moderate yet significant correlation between sustainability performance measures and sustainability disclosure information. Furthermore, there hasn't been much of an improvement in the publicly available data representing corporate performance. Finally, the authors suggest that corporate sustainability reporting be seen as possibly "window-dressing," in which companies disclose data only in response to requests from stakeholders. This suggests that increasing corporate openness can be a temporary reaction to outside demands, with the incentive waning when those constraints subside.

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Quantitative research and Reflexivity

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Abstract:

Examining one's own presumptions, convictions, and systems of judgments and considering thoughtfully and critically how these affect the research process is the act of reflexivity. Reflexivity is a process that challenges and examines our identity as researchers and how it informs our work. It is at the center of discussions about subjectivity, objectivity, and the fundamentals of social scientific research and knowledge production. Reflexivity in the research process is one of the most obvious ways that qualitative and quantitative approaches vary from one another. The focus of qualitative research is on the individual and distinctive living experiences of the participants. As a result, training under this paradigm heavily emphasizes the need of qualitative researchers thinking about how their own distinct positionalities impact the research process. Quantitative approaches in social science and however, personality psychology in general has seen to be disconnected from this degree of reflection in general and reflexivity in particular. Three quantitative researchers who have struggled to make reflexivity work in our own research believe in this article that reflexivity has a lot to teach quantitative methodologists. We contend that reflexivity helps with the continual reevaluation of openness and transparency in psychology by forcing researchers to confront and focus their own positionalities and to interact more thoughtfully with each stage of the research process. In this article, we first argue for the integration of reflexivity into all research methodologies and then offer a "beginner's guide" with specific recommendations, practical examples, and reflexive prompts for quantitative researchers who want to interact reflexively with their own work.

1. Introduction

The act of reflecting on our identities as researchers, the ways in which our subjectivities and Biases influence and direct the research process, as well as how our research shapes our worldview and vice versa (Wilkinson, 1988). Reflexivity is concerned with what we do with what we know and think, if positionality is defined as such. awareness. Reflexivity is a type of critical thinking that challenges us to think critically about the "whys" and "hows" of research, as well as the value, ethics, and usefulness of the things, people, and methods that we investigate (Willig, 2013). The reflective process is ultimately predicated on the inquiry, "What is the research process and how am I influencing it?" as Lazard and McAvoy (2020, p. 177) explicate. This inquiry is a component of a continuous process known as "disciplined self-reflection," which (Barrett et al., 2020) forces the researcher to continuously modify and (re)construct their understanding (Wilkinson, 1988). Importantly, although the terms have been conceptualized as being on a continuum, reflexivity and "reflection" are distinct from one another (Shaw, 2010). The deliberate, active recognition of one's own biases, beliefs, and judging systems before to, during, and following the actual research process is known as reflexivity. On the other hand, reflection is usually conducted after the fact and usually yields insights into information that was "missed" during the first study phase. Thus, reflexivity has a higher chance of directing the research process in all research techniques and epistemologies. Because of its critical character, reflexivity has historically been a defining characteristic of qualitative research (Lazard & McAvoy, 2020). It also provides valuable insights into qualitative research, as has been widely documented in the literature. Reflexivity, which may be especially helpful for social and personality psychologists, is a fundamental component of effective and insightful qualitative work because of its thoughtful and introspective character (Olukotun et al., 2021). Wiggington (in Lafrance & Wigginton, 2019, p. 541), for instance, talks about their "light-bulb moment" when they realised how their role as researchers was influencing the questions they asked their subjects, and how this formed and affected their preconceptions. In addition, reflexivity can guide researchers through the ethical issues and emotional labor—or lack thereof—that arise throughout their study (Guillemin & Gillam, 2004; McGowan, 2020).

For many years, the qualitative research tradition has included reflexivity as a crucial component (Lazard & McAvoy, 2020; Olukotun et al., 2021). Nonetheless, a limited although expanding collection of scholarly works has also examined the potential benefits of reflexivity as a tool for quantitative research. Ryan and Golden (2006), for instance, contend that the reflective lens is crucial for any sociological data collecting, pointing out in particular how reflexivity may provide significant insights into the emotional cost of studying delicate subjects. So, reflexivity is especially helpful for social and personality psychologists, who work with delicate, political, or complicated issues like prejudice (Gawronski, 2019), stereotypes (Augoustinos & Walker, 1998), discrimination (Kirkinis et al., 2021; Knights & Richards, 2003), gender (Armstrong et al., 2014), voting behaviour (Oostveen & Van Den Besselaar, 2005), and group aggression (Goldstein, 2003). Additionally, Ryan and Golden (2006) contend that maintaining reflective diaries throughout quantitative research might offer a helpful chance to enhance the interpretation of the data with a deeper level of comprehension. Similarly, Kingdon (2005) emphasised that reflexivity may apply to any research technique in a midwifery setting. Kingdon (2005) concentrated on the ways that reflexivity may be utilised to detect and lessen any researcher biases that could have an effect on clinical treatment. Though Steltenpohl et al., 2021 is a noteworthy exception, the great bulk of quantitative research has remained ostensibly blind to this aspect of the study process despite these early observations. In quantitative research, the inclusion of Conflicts of Interest (CoI) disclosures has recently generated a pertinent issue. In quantitative research, CoIs have traditionally been regarded as mostly financial. However, more lately, there have been talks concerning other potential, less defined CoIs and how to disclose them (Chivers, 2019). This has led to a resurgence of interest in the topic of how reflexivity could help quantitative research (e.g., Steltenpohl, 2020). In this article, we show how reflexivity can and should be included into quantitative research at every level, starting with project conceptualization and continuing through study design and concluding with data-driven conclusions.

Giving up the idea that quantitative data is the "gold standard" of objectivity and more "scientifically sound" than qualitative data is the first significant obstacle in arguing for the inclusion of reflexivity in quantitative research. Perhaps now is the right moment for quantitative scientists, especially in the field of social psychology, to "face up to and confront the limitations and distortions imposed by psychologists clinging to scientific method," as Stainton-Rogers (2019) recommends (p. 5). Recognising the limits, biases, and distortions inherent in the "scientific method" might lead to a more unbiased approach to study. In fact, qualitative research is particularly well-suited for reflexivity because it can handle the study of delicate subjects that may raise participant and researcher concerns about the ethics of care and emotional labour, also known as "emotional work" (see Dickson-Swift et al., 2009). Comparatively, quantitative research focuses more on summarising "patterns," such as actions, answers, and attitudes. Survey approaches, for instance, collect large-scale data sets that reveal patterns and similarities in experience.

Nevertheless, quantitative research is not intrinsically more objective, solid, trustworthy, or scientific than other methodologies because of this epistemological approach. Quantitative approaches, such as statistics, run the danger of becoming permanently "divorced from the context of their construction and thus lose the meanings they had for the people involved," according to Farran (1990) (p. 101). Furthermore, especially in the social sciences, quantitative research frequently addresses thematically anything but objective subjects. As an illustration, studies on gender variations in the brain have been linked to neurosexism (Eliot, 2019), and studies on sex and gender have been used to encourage and legitimise prejudice against transgender individuals (English, 2021; Sun, 2019). We contend that these subjects are decidedly subjective and influenced by the personal, political, and ideological agendas of the researchers. For instance, Moss et al. (2019) point out that there are practical and ethical issues with social psychology fieldwork in conflict contexts, and that these issues are more acute when researchers are "outsiders" to the local context of the study (see also Uluğ et al., 2021). As a result, when handling these subjects, caution should be used as well as deliberate action via reflexive practise. Growing ideological assertions that identity politics are becoming too ingrained in psychology research and stifling scholarship exacerbate this issue (Stevens et al., 2020). Furthermore, the belief that data are objective is a prerequisite for the view that quantitative methods are intrinsically objective. However, as "big data" and machine learning gain traction, it becomes clear that data are anything but objective, which damages minority groups and maintains inequality (Birhane, 2021; Birhane & Grayson, 2018). In the context of study, harm might include violating a participant's physical safety, emotional well-being, or human rights (Sim, 2010). As a result, it is imperative to challenge the presumptions found in the statistics themselves, taking note of how they connect to inequality and power disparities (Birhane, 2021; Jamieson, 2020). Therefore, the issue of researchers' positionality, subjectivities, and biases during the study process is not limited to qualitative approaches.

Furthermore, considering how the "Open Science" movement has affected the social sciences recently, questioning the objectivity of data analysis procedures in quantitative data, this is an opportune moment to expose the façades of objectivity in psychological science (Engzell & Rohrer, 2021). Although the terms "open science" and "open scholarship" have also been used, we have chosen to use the one that is most frequently used in the literature, especially in the early debates around scientific rigour. The "credibility crisis" or "replication crisis" that plagues a lot of experimental and quantitatively based research gave rise to Open Science. It is challenging to speak about the Open Science movement as a whole since so many diverse voices have joined it during the past ten years (Ledgerwood et al., 2022). Throughout this commentary, we demonstrate how reflexivity can, and indeed should, be embedded in all stages of quantitative research, from the early stages of project conceptualisation to research design, to the final point of drawing conclusions from data.

Giving up the idea that quantitative data is the "gold standard" of objectivity and more "scientifically sound" than qualitative data is the first significant obstacle in arguing for the inclusion of reflexivity in quantitative research. According to Stainton-Rogers (2019), perhaps this is the moment for quantitative scientists, especially in to "face up to and confront the limitations and distortions imposed by psychologists clinging to scientific method" in the context of social psychology. Recognising the limits, biases, and distortions inherent in the "scientific method" might lead to a more unbiased approach to study. In fact, qualitative research is particularly well-suited for reflexivity because it can handle the study of delicate subjects that may raise participant and researcher concerns about the ethics of care and emotional labour, also known as "emotional work" (see Dickson-Swift et al., 2009). Comparatively, quantitative research focuses more on summarising "patterns," such as actions, answers, and attitudes. Survey approaches, for instance, collect large-scale data sets that reveal patterns and similarities in experience.

Nevertheless, quantitative research is not intrinsically more objective, solid, trustworthy, or scientific than other methodologies because of this epistemological approach. Quantitative approaches, such as statistics, run the danger of becoming permanently "divorced from the context of their construction and thus lose the meanings they had for the people involved," according to Farran (1990) (p. 101). Furthermore, especially in the social sciences, quantitative research frequently addresses thematically anything but objective subjects. As an illustration, studies on gender variations in the brain have been linked to neurosexism (Eliot, 2019), and studies on sex and gender have been used to encourage and legitimise prejudice against transgender individuals (English, 2021; Sun, 2019). We contend that these subjects are decidedly subjective and influenced by the personal, political, and ideological agendas of the researchers. For instance, Moss et al. (2019) point out that there are practical and ethical issues with social psychology fieldwork in conflict contexts, and that these issues are more acute when researchers are "outsiders" to the local context of the study (see also Uluğ et al., 2021). As a result, when handling these subjects, caution should be used as well as deliberate action via reflexive practise. Growing ideological assertions that identity politics are becoming too ingrained in psychology research and stifling scholarship exacerbate this issue (Stevens et al., 2020). Furthermore, the belief that data are objective is a prerequisite for the view that quantitative methods are intrinsically objective. However, as "big data" and machine learning gain traction, it becomes clear that data are anything but objective, which damages minority groups and maintains inequality (Birhane, 2021; Birhane & Grayson, 2018). In the context of study, harm might include violating a participant's physical safety, emotional well-being, or human rights (Sim, 2010). As a result, it is imperative to challenge the presumptions found in the statistics themselves, taking note of how they connect to inequality and power disparities (Birhane, 2021; Jamieson, 2020). Therefore, the issue of researchers' positionality, subjectivities, and biases during the study process is not limited to qualitative approaches.

Furthermore, considering how the "Open Science" movement has affected the social sciences recently, questioning the objectivity of data analysis procedures in quantitative data, this is an opportune moment to expose the façades of objectivity in psychological science (Engzell & Rohrer, 2021). Although the terms "open science" and "open scholarship" have also been used, we have chosen to use the one that is most frequently used in the literature, especially in the early debates around scientific rigour. The "credibility crisis" or "replication crisis" that plagues a lot of experimental and quantitatively based research gave rise to Open Science. It is challenging to speak about the Open Science movement as a whole since so many diverse voices have joined it during the past ten years (Ledgerwood et al., 2022).

Strangely, despite the fact that the early proponents of the Open Science movement focused heavily on enhancing data transparency and the thoroughness of analysis plans, the understanding of researchers' positionality has not been included in this discussion (though Steltenpohl, Siegel, & Klement, 2021 is an exception). Furthermore, there may even be a false feeling of (performative) objectivity created by the Open Science movement's relatively simple remedies to lessen researchers' biases. It conveys the idea that fully objective research will result from researchers just adhering to the guidelines put forward by the movement's leading proponents of open science. This idea that the only way to get the truth is to remove the subjective biases of researchers did not come from the Open Science movement. It is based mostly on rationalist thought, which has been impacted by ideas such as Newtonianism and Cartesianism (Birhane, 2021). According to Birhane (2021), this tradition provides a rich environment for thinking in binary terms, such as subject and object. But even with quantitative and numerical data, we contend that the methods used to evaluate them and, more importantly, the conclusions drawn from them, will differ according on the identity of the researcher. As such, a really reflective method may be impeded by the false perception of objectivity that the Open Science movement maintains. We contend that quantitative analysis should go beyond the Open Science movement, despite the fact that we actively participate in the community and have a great deal of empathy for its objectives. That is, in order to fully recognise the subjective and biassed nature of any data interpretation in the social sciences, we should endeavour to integrate a transparent approach to analysis with a social research.

We contend that reflexivity can mitigate some dubious research practises, either officially (i.e., in reflexivity or positionality assertions) or informally (i.e., in thinking reflexively throughout the research process). We contend, for instance, that reflexivity may "bring to the surface" biases and untested assumptions, thereby diminishing the use of procedures that may affect the verifiability and credibility of research, such as selective outcome reporting and hypothesising following the publication of results (HARKing; Kerr, 1998) without appropriate statistical correction. In fact, as proponents of open science have emphasised, analysts of quantitative data must make a wide range of choices during the data analysis process, and these choices can all affect the final result (Engzell & Rohrer, 2021). The idea that quantitative data analysis is completely neutral and devoid of researcher bias is partially undermined by acknowledging this "garden of forking paths" (Gelman & Loken, 2013). We, however, go one step farther with this analogy, contending that each stage of the research process presents a new "fork in the path" that researchers must navigate, from formulating a research topic to selecting a sample to gathering data and evaluating it. Thus, encouraging a candid discussion about the positionality, biases, and agendas of researchers has merit.

2. Thurst in reflexivity through research process:

We now offer a "beginner's guide" to using reflexivity in order to illustrate how it may be included into every step of the research process. The majority of these suggestions focus on how scientists might include reflexivity into all types of study, not just social and personality psychology, but any academic field that deals with data and people. It is important to note that in order for these recommendations to be implemented in reality, as with any recommendations based on research, additional stakeholders' participation is frequently necessary. As such, we provide guidance for quantitative researchers, but we qualify this by acknowledging that funding from sponsors, journals, editors, and other stakeholders (e.g., Evans et al., 2022) may help to make our ideas a reality. If the aforementioned makes it impossible to incorporate reflective work, we still heartily advise you to accept and use it for your own use or private practise. Thus, it would be preferable to think of the following advice as a helpful place to start for researchers who want to take a more reflective approach to their work.

2.1 **Reflexivity in research design and questions**

Determining a gap in the current literature and creating a study to fill it is a popular strategy for creating and responding to quantitative research questions. When performing a replication study, for example, there are helpful guiding principles that assist researchers in determining an effective research topic (Isager et al., 2021). Though these are helpful places to start, we contend that this method may gain by including reflexive involvement right from the beginning of the research process. For instance, it might be beneficial to include a clear explanation of why we study a given subject rather than another? Why only one population in particular? Among all potential openings in the Why this particular research question out of all the ones we might have asked given the literature? What makes this intriguing? Most importantly, why are we the greatest people to study and work with this demographic, or not? together, and respond to these queries? According to Magnusson and Marecek (2012, p. 90), knowledge is "interested," meaning that a certain question is interesting for a reason. We contend that bias exists early in the study process, whether or not it is covered up by an appearance of neutrality. Broad inquiries such as "what is the research process?" "how am I influencing it?" and "why am I the one to answer these questions over someone else?" would be included in the integration of reflexivity at this point. This technique for gaining personal insight has been applied in psychology, psychiatry, and other fields. It is distinguished by a continual questioning of assumptions through a personal conversation (Lazard & McAvoy, 2020). the more general social sciences, as well as other fields that may be combined with quantitative research techniques and use qualitative elements to educate critical thinking and self-knowledge (Piro & Anderson, 2015, for example). This would take the shape of internal discussion as well as talks with participants, colleagues, and others, including individuals who could have different viewpoints from those that frame the study, during the conceptualization, design, and formulation of the research questions. According to Jull et al. (2018), this aids in the field's transition away from voyeuristic research that does not further marginalise or Other. Any stage of the research cycle, from developing research questions to assessing data to putting research findings into practise, may benefit from this degree of consideration (Filipe et al., 2017). This degree of careful involvement could also be used in the participant recruitment processes, to make sure that recruitment materials don't reinforce negative stereotypes or use problematic language, like ableist language in disability research or sexist language in gender research (e.g., Lefkowich, 2019).

Furthermore, a crucial aspect of the reflective process need to involve a continuous critical interaction with the perspectives presented in the literature review, since these establish the tone for the theoretical framework and provide inspiration for the research questions. Crucially, a reflective approach to a literature review must take into consideration the researcher's own prejudices and presumptions and be ready to critically assess the source of selected material. That is, which researchers are regarded as reputable and which researchers are being cited? The best way to approach this complicated problem is to carefully consider how to include the literature review citation process into your work. Research indicates, for instance, that White writers are overrepresented in comparison to ethnic minorities (Bertolero et al., 2020) and that men are overrepresented in citations relative to women (Fulvio et al., 2021). Therefore, it is beneficial for researchers to pay attention to this throughout the study process in an effort to diversity the data utilised in psychological research. Of course, researchers must also choose the finest and most pertinent information that is accessible, which may or may not entail mentioning underrepresented academics. Therefore, by making researchers aware of who, what, and how they choose and subsequently reference as supporting evidence, reflexivity may help facilitate a more deliberate understanding of these complicated topics.

2.1.1 How

In practical terms, this may be accomplished by openly and transparently tackling prejudices; a straightforward illustration of this would be the inclusion of a reflective statement in a study pre-registration. By doing this, the practise may encourage researchers to express their positionality at an early stage of the investigation, creating opportunity for an acknowledgment of how this may subsequently inform choices made later on in the study. When working in collaborative teams with different researchers, this might be quite helpful. As "Team Science" gains traction in social and personality science (Moshontz et al., 2018), making reflective remarks at the outset might offer a practical solution to the potential ideological dilemma that arises when several researchers collaborate to solve a single topic. Though they should be the very least when beginning reflective practise, positionality statements help to centralise and challenge the presence of bias in psychological research (e.g., Ledgerwood et al., 2021).

For instance, writers joining the writing team each prepared a positionality statement on the subject at hand and used this to frame the approach to writing in a recent article led by one of the commentary's authors (Pownall et al., 2021). In a similar vein, considering the data showing how researcher demographics—including gender—influence Drawing the reader's attention to the researcher's demographics directly may have a negative effect on impressions of the work itself, which might be a barrier to engaging with the study (Moss-Racusin et al., 2012, for example). using this procedure. In their study of dads' experiences discussing body image with their children, Siegel et al. (2021) provide an example of an excellent positionality statement in qualitative research, explaining how they inhabited both insider and outsider viewpoints. In a research on white racial identity, Moffitt et al. (2021) similarly express their continued reflexivity in the context of interacting with "colour blindness." and publications generated by Recovery in the Bin, an activist group, critical thinker, and lived experience leader (2022).

2.2 Reflexivity in data collection

Del Busso (2007) explains how approaches, particularly in data gathering, become entwined with more general theoretical concerns and power dynamics. They investigated young women's embodied experiences of gender through interviews. During this collection, their introspective journey revealed how those individuals, who identified as "tomboys," According to Del Busso's reflexivity, some experiences had throughout the research process—particularly while gathering data—highlight presumptions regarding subjects, subjects, and methodologies (also see Medico & Santiago-Delefosse, 2014). The study by Rosenberg and Tilley (2021) looks at the phenomena of "insider/outsider" research and what it's like for trans women to study other trans women's lives. The reflexivity that results from this leads to a new model of co-production and interviewing. Although this method is frequently used in reliable and high-quality qualitative data collecting (Lazard & McAvoy, 2020), despite the general consensus that quantitative approaches are the most objective approach that produces "gold standard" outcomes (Walker et al., 2013).

2.2.1 How

By framing the research study to participants (e.g., Harper, 2020), researchers may also take actions that boost the likelihood of "finding" their intended outcome (see our data analysis section for a broader discussion of such confirmation biases). (Lazard & McAvoy, 2020), which can offer a helpful query to direct the gathering of data. There may be changes in the ways that the researchers in our example choose to negotiate data collecting decisions if they seriously and actively interact with this topic (Jamieson, 2020). Furthermore, these researchers may be shielded from charges of biassed sampling if they had preregistered their choices. Preregistration of analytical and methodological choices can be beneficial in two different ways, in fact. They can (a) lessen the likelihood that researchers will make ideologically motivated judgements about their study, and (b) make these points of view prominent so that readers of the research in the future have the proper background information.

2.3 Analysis and interpretation

The false notion that textual data is subjective and numerical data is objective must first be debunked (Jamieson, 2020). In fact, biases affecting the objectivity of numerical data have come to the attention of researchers due to the continuous debate around and implementation of Open Science practises. Regarding data interpretation, for instance, there has been a lot of talk about "confirmation biases," which are defined as the preference for or pursuit of information that supports rather than contradicts one's perspective. Lehner et al. (2008), for instance, demonstrate that we often assign data supporting a favoured theory greater weight and evidence contradicting it less weight. In fact, in order for social psychology to be "self-correcting," researchers must be willing to admit how they personally interpret the issues, objectives, and hypotheses that they are pursuing (see McDiarmid et al., 2021). It's interesting to note, though, that the majority of biases addressed by the Open Science movement are "universal" biases—biases that are thought to be common to all people.

2.3.1 How

In fact, this is just another instance of how the quantitative community may benefit much from our qualitative counterparts. For instance, taking thorough, reflective, and careful field notes is common procedure in qualitative research (see Phillippi & Lauderdale, 2018). As they describe how "qualitative research acknowledges the role of the researcher as an instrument within the research, shaping the results" (p. 386), Phillippi and Lauderdale (2018) provide justification for note-keeping in their discussion of best practises in field notes. Taking notes during the entire research process can be a beneficial practise that can be made easier with digital, computational notebooks. These notebooks can then be transparently shared on websites like ResearchEquals (https://www.researchequals.com/), which assigns a DOI to every uploaded research component. Similar log journals are easily integrated into Open Science platforms like GitHub and Open Science Framework (a repeatable example may be found in Appendix A).

2.4 conclusions and framing

According to Harper (2020), citation practises are influenced by ideological biases. In other words, a more current, higher-powered publication that shows no evidence of gender bias was referenced less frequently than ten times than a study that revealed gender prejudice in academic employment (see Honeycutt & Jussim, 2020). This brings up significant issues for our field of study. In response, we contend that researchers would benefit from recognising this bias and placing it at the centre of the study process rather than addressing it in a fashion that aims to reduce or deny it.

2.4.1 How

The Red Team Challenge, as described in Coles et al. (2020), provided researchers with a financially motivated opportunity to 'lay bare' the research process by having a team go through their materials, data, and code of a manuscript that was ready for submission in an effort to find errors and strengthen the research's robustness. Comparably, the "Critique of Research Ideas Collective" (see @CRICpsych) establishes a multidisciplinary, varied community that evaluates presented research ideas in an effort to instill collegiality into this practise. A more agreeable proposal may be a reflective dialogue in which researchers suggest—or disagree with—that reviewers evaluate their articles before they are submitted to journals.

3. **Reflexive engagement**

The focus of this conversation has been on doable actions that researchers might take to include reflexivity into their work. However, we recognise that there are far more extensive, ontological, and epistemological problems about research frameworks, ethics, and data usage that should also be recognised. A few examples of possible prompts for researchers to use are included in Table 1. We advise researchers to navigate the study process by keeping these reflexivity suggestions in mind. Although these questions do not, of course, represent a comprehensive and full embrace of a reflective approach to research, they do start the process of considering quantitative research from a reflexive perspective. We thus welcome more recognition of the potential benefits and informativeness of using instruments that are considered acceptable solely for qualitative (or even quantitative) research. Writing activities that may be used repeatedly are included in Appendix B, which also offers some tangible guided reflective practise.

Stage of research	**Broader reflexivity prompts**
Research design and question	• What motivates me to look into this group? • How much do I "belong" to the participant group that I'm studying? Do I work as a "outsider" or "insider" researcher, or do I hold both roles? • What gift may I provide this group? Within the study team, who is represented? • Am I taking up someone else's space by researching this organisation, or should I do it myself?
Data collection	• Am I disturbing this gathering? How can I avoid using any coercion at all? • How can I get the general public able to view this research? • Do participants know how their information will be used?

	• Have I considered morality beyond the box? Am I behaving morally? • Could there be an issue with my techniques of collection?
Data interpretation and analysis	• Do I recognise that some persons may not know me and that they have provided me with this data (e.g., survey, health, admin data)? • Who are the persons responsible for the data? • Are there any implicit presumptions in the dataset I'm using, if I'm using one already? • Could current disparities be replicated by my dataset analysis?
Conclusions and framing	• How do my choices on how to utilise evidence represent my own biases as a researcher and the biases of the research team as people with their own needs, interests, and emotions? * What does this research mean for me? What is the benefit for the population I have studied? * Are the two questions above unrelated to one another? If so, go back and review the first few questions in this table.

Due to the variety of experiences that members of a collaboration will bring, it is important to keep in mind that while these prompts can be addressed individually (i.e., by individual researchers), they can also be helpful to work through as a research team and share as much or as little as any member would feel comfortable with. Creating a forum for open, disciplined discussions on positionality within a research team may yield insightful information. While some of the questions below have rather straightforward solutions, others are trickier and more complicated. For instance, there is no clear-cut right or wrong answer when it comes to the subject of identifying as an insider or outsider, and researchers may place themselves along a continuum of "insider/outsider-ness" (Chavez, 2008, p. 476).

4. Positives of reflexivity for social and personality psychology

As was previously said, reflexivity may be a useful technique, particularly in social and personality psychology because the subjects covered are frequently delicate or political. Consider the following scenario: a social psychologist wants to know how long people sleep and how much of an effect it has on their weight. The subjects that social and personality psychologists study are frequently quite significant and of great public interest. Gender, sexuality, discrimination, and political orientation are among the themes of psychological study that can have an influence on people's everyday lives via creating evidence-based solutions and influencing legislation. In the UK government's national COVID-19 response, for instance, social psychologists played a crucial advisory role (e.g., Drury et al., 2020). In light of this, we contend that it is crucial to address researcher bias and consider any potential social (as well as personal) ramifications of a study, particularly for this field.

5. Conclusion

It's also important to highlight that mixed-methods studies are gradually becoming more popular in the field of social and personality psychology, after the historical separation of quantitative and qualitative research (Timans et al., 2019). As a result, there is now more room for flexibility within the field to address issues that cross this conventional methodological boundary (Tashakkori et al., 2012). We believe that the adoption of mixed-methods approaches is beneficial because it enables a more sophisticated discussion about the ways in which qualitative and quantitative procedures might benefit from one another. This offers a productive beginning for the field's engagement with reflexivity in mixed-methods, qualitative, and quantitative research. To summarise, the incorporation of reflexivity into any research can enhance its credibility and rigour (Del Busso & Leonardsen, 2019; Rosenberg & Tilley, 2021). Additionally, it can fundamentally accept the existence of biases and subjectivities in research.

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Analyzing the Accrual Anomaly: Evidence from Pakistan Stock Exchange "KSE 30"

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Abstract:

Anomalies represent the inefficiency of the market. The accrual anomaly is a well-documented phenomenon in developed markets, where stocks with high accruals tend to outperform stocks with low accruals. However, there is limited evidence on the existence and magnitude of the accrual anomaly in emerging markets. Drawing upon the results research on the Capital Markets anomalies to check whether it is exist in Pakistan. This paper examines the accrual anomaly in the context of the Pakistan Stock Exchange (KSE 30) using data from 2015 to 2020. Data has been collected of all the firms that constitute KSE30 index. From KSE30 index we utilize data of 18 firms and skip the firm whose data was not available. My hypotheses provide prove that their no Accrual Anomaly in Pakistan.

Keywords: KSE 30**,** Anomalies

Introduction:

The accrual anomaly is a well-documented phenomenon in developed markets, where stocks with high accruals tend to underperform stocks with low accruals. Accruals are the difference between a company's reported earnings and its cash flows from operations. They represent the non-cash expenses and revenues that a company has recognized in an accounting period.

The accrual anomaly was first documented by Sloan (1996) in a study of US stocks. He found that stocks with high accruals under performed stocks with low accruals by an average of 10% per year over the period from 1968 to 1990. The anomaly has since been replicated in a number of other studies, including studies of stocks in other developed markets and in emerging markets.

The word anomaly we can check in the words of Kuhn (1970). Papers of anomalies frequently predict a central stage toward another worldview. The number of documented anomalies are huge and stays to grow. Therefore, concentration here will be on accrual whose presence has demonstrated most powerful regarding both time and the quantity of securities exchanges in which they have been inspected. Anomalies have a negative relationship with the stock returns and accounting accruals (Barush Lev 2004)

Why does Low Accrual Anomaly Exist?

Sloan (1996) identified the accrual anomaly by documenting a significant size-adjusted returns to a portfolio that takes short (long) positions in firms with relatively high (low) accruals ascended by the average total assets. Sloan (1996) states that:

In the event that speculators glibly focus on profit, at that time they will have a habit of overpricing (under-pricing) shares of such firms in which the accrual of element is comparatively high (low). That happens on the grounds that the lower consistency of earnings performance imputable to accrual element of earnings is not fully predictable. Such kind of misprediction would be revised when the next year’s earnings grasped to be lower (higher) than projected, consequential negative (positive) abnormal stock returns would be earned.

Literature Review:

A large literature has followed investigating the robustness of this anomaly in various research setting while investment firms have started taking active positions using this strategy. Although depending upon the definition of cash flows, earnings, and accruals as well as on the portfolio formation criterion chosen by the researchers the performance of these hedge portfolios varied, there have been two common findings. The yearly return for the accrual strategy, after adjusting for size, has been very good. Secondly, the yearly adjusted return has gone down since Sloan (1996) was published. Alqerm and Obeid (2014) researched in Malaysia to prove that controlling how much money you make can affect how much money you spend. They found that when production costs go down, the returns on investments usually go up. Other studies found that they could make the accrual anomaly better by using different ways to measure accruals (for example, using different formulas). Xie in 2001 and Hribar and Collins in 2002 talked about scaling variables. For example, Hafzalla and others in 2011.

Abbas (2017) studied unusual things that happen in the stock markets in South Asia. He looked at markets in cities like Karachi, Colombo, Dhaka, Maldives, and Bombay. The information goes from January, 2005 to December, 2014. The OLS model was used to study the differences in South Asian stock markets on a daily, weekly, and monthly basis. The GARCH-M method was used to study the effect of different days, months, and years. The results showed that there are irregular patterns in South Asian stock markets on a daily, weekly, and monthly basis.

Sloan (1996) identifies the accrual anomaly by documenting a significant size-adjusted return to the portfolio that takes short (long) positions in firms with relatively high (low) accruals measured by the average total assets. I closely follow Sloan (1996) model to test the performance of accrual anomaly using the co-integration accruals; however, since I measure the expected change in earnings for a given level of accruals, following Hafzalla et al. (2011) I using the absolute values of earnings as the scaling variable rather than the average total assets for the cross-sectional ranking. Likewise, Barth et al. (2001) use the cash flows, earnings, and total-accruals based models of Dechow et al. (1998) and provide evidence current year accrual component can predict next year's cash flows after adjusting for the current year's cash flows. I provide consistent evidence with the authors' findings which imply that current accruals predict future changes in cash flows. Ball and Watts (1972) provide evidence that earnings follow a random walk and conclude that: ...on overall basis, measured yearly accounting incomes for U.S. organizations follow either a sub martingale [random walk is a specific case of a sub martingale] or some very similar process. (p. 663) Lev (1974) provides two possible explanations, the competition and the discretionary changes in accounting techniques such as shifts from one method of reporting certain transactions to another method and the treatment of nonrecurring items, to why earnings follow a random walk behavior. Constant with the findings of Ball and Watts (1972),Moreover I provide evidence that for the median firm cash flows follow a random walk with a drift as well. I establish these by augmented Dickey-Fuller tests following Dickey and Fuller (1979) for each firm. I establish this by enlarge Dickey-Fuller tests following Dickey and Fuller (1979) for each firm. Finally, following Johansen (1988), I first establish that earnings and cash flows are cointegrated and the cointegration error is the accruals for the median firm. I then estimate the parameters of the earnings and cash flows cointegration system using the vector error correction representation of Engle and Granger (1987) and forecast the future earnings reversals for a given level of accruals using these in sample and the out of sample parameter estimates. As far as I know, Martikainen and Puttonen (1993) and Finger (1994) were the first to look at how earnings and cash flows are linked. Martikainen and Puttonen (1993) studied how to predict future returns, while Finger (1994) studied how to predict future cash flows. Uysal (2011) found that earnings and cash flows go up and down unpredictably, while accruals stay the same on average. Earnings and cash flows are connected, and the difference between them is equal to accruals. If a company has a lot of debt, it is less likely to make money in the future and its stock price will be lower. So, it's recommended that even if investors notice the effects of manipulating earnings for next year's profits, they might still be influenced by their past experiences and the potential risks and costs of making investment decisions based on these manipulated earnings. Therefore, a reason for the difference in stock returns can be attributed to the arbitrage opportunities that arise from changes in accruals data. After looking at the things that affect how much money a company will make in the future and how much their stocks will be worth, the study found that the way a company does its accounting can make its income seem lower than it really is. (DANG, H. N., & TRAN, D. M. (2019) However this study is only for the aggregate cash flows earnings, and accruals. So that, I believe this is the first study to measure the earnings reversal for a given level of accruals based on the co-integration relationship between cash flows, earnings implied by the accounting identity that earnings is the sum of the cash flows and the accruals at the firm level. The study finds that the financial asset pricing model is successful in explaining the cash flow and the accrual anomalies.(Allen, E. J., Larson, C. R., & Sloan, R. G. (2013)

Small Stock Companies Have Higher Results, why?

A study at Washington University found that the effect of accruing is mostly seen in companies with a high amount of unique and unpredictable changes. Stocks that go up and down a lot, no matter what the overall market is doing. These stocks have low prices and not many shares being bought and sold, which makes them risky and expensive for investors to try to make money from these unusual movements.

How can we Base Arbitrage Pricing on Accrual Anomaly?

Sloan (1996) found that the stock price doesn't quickly reflect the differences in accruals and cash flows in accounting. "Financiers often rely too much on estimated cash flows for next year's earnings, and are surprised when the actual cash flows are different from their projections. " As a result, companies that have a lot of accruals will lose money next year, while companies with fewer accruals will make money. Researchers found that people who interpret financial information, like auditors and analysts, may not fully understand future earnings. This was shown in studies by Richardson, Bradshaw, Sloan, Barth, Hutton, Teoh, and Wong. These findings raise the question of why arbitrators don't take advantage of pricing differences to make a profit. However, the accrual anomaly happens because investors don't understand how to use accruals to predict next year's earnings. And the experts who could fix this problem don't do it because it's too risky and expensive. Arbitrage is defined in the textbook by Scholes in 1972 as the practice of buying and selling assets to make a profit from the difference in prices. The arbitrageur would buy a cheap stock and sell an expensive stock at the same time. This job doesn't require any money upfront and you can make money right away without taking any risks. You can sell your investments if the stock prices go back to normal. However, the trades needed to use the accrual strategy are not without investment or risk.

It is recommended that even if smart investors understand how manipulating earnings can affect future earnings, they may still be influenced by their past experiences and may not want to spend money to fix the problem. So, when we look at the barriers to arbitrage, we can see that there is a high chance of making money from consecutive stock returns.

Methodology:

We wanted to check the accrual anomaly existence in Pakistan. For this purpose, monthly data of six years from July 2015 to Dec 2020 has been collected. Data has been collected of all the firms that constitute KSE30 index. From KSE30 index we utilize data of 18 firms and skip the firm whose data was not available.

Accrual measurement:

Variables of accrual has been measured through a formula which was used in many previous empirical studies and also used in the paper of Sloan which is being considered as base of accrual anomaly. Formula is:

$$Accruals = (\Delta CA - \Delta Cash) - (\Delta CL - \Delta STD - \Delta TP) - Dep$$

Where CA = change in current assets

Cash = change of cash & cash equivalents

CL = change of current liabilities

STD = change of debt included in current liabilities

TP = change of income taxes payable

Dep = Depreciation and amortization expense

This formula has been used to calculate accruals among many available methods. And for calculating accrual ration we divide accruals by average total assets.

Accrual Component = Accruals/Average Total Assets

These accrual calculations are done by utilizing of the financial statements of individuals firms. So have lost the information of about the companies whose statements were not easy to get during the era of 2015 to 2016. So have to drop these firms. We calculate all the return by logarithm returns and then take average of all month's returns.

For time period 2015 we develop portfolios categorically on the basis of high and low accrual ratios. After developing portfolios, we were interested to check the scenario of return on such high and low accrual ratio portfolios. For the independent investigation of return use calculate abnormal return of low accrual portfolios and have some tentative idea that firms which have low accrual have higher stock returns in KSE 30 index. But these returns are not noteworthy and significant.

Empirical Results:

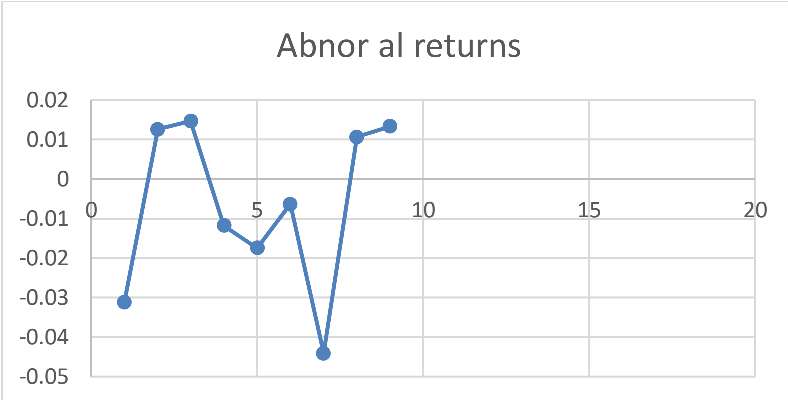
Decision	Avg returns		
L	0.00225485	H	0.03336931
L	0.02069731	H	0.00812938
L	0.01734779	H	0.00270905
L	0.01675426	H	0.02854158
L	-0.0005396	H	0.01692976
L	0.00128909	H	0.00767303
L	0.00727299	H	0.05133786
L	0.01414154	H	0.0035304
L	0.01711785	H	0.0037929

These are average return of portfolios. Here we don't know that is there any premium for investing in low accruals portfolios. For knowing our actual result, we calculate the abnormal returns.

Abnormal returns
-0.031114457
0.012567936
0.014638731
-0.01178732
-0.017469406
-0.00638394
-0.044064876
0.010611138
0.013324948

Here some of portfolios have negative return but some of them have greater return which depicts that for investing in low accrual portfolios we can earn some abnormal profit. Now if there is premium for investing in low accrual companies then is it significantly make earning or can someone beat the market by utilizing accrual information that publically not available? For answering this we checked its significance by using t-statistics.Here the graph of abnormal returns. After this graph we will have our t-statistics results.

Graph:



Significance:

t.state Abnormal returns	Decision
-1.350798724	Insegnificant
0.545622633	Insegnificant
0.635523841	Insegnificant
-0.51173308	Insegnificant
-0.758414374	Insegnificant
-0.277151472	Insegnificant
-1.913026402	Insegnificant
0.460670454	Insegnificant
0.578487449	Insegnificant

Here we check the significance of abnormal returns of low accrual companies, but we found it insignificant. Here none of the low accrual portfolio can earn significant abnormal return among KSE 30 companies.

Findings:

- A positive and statistically significant relationship between accruals and stock returns was found in the KSE 30 index from 2015 to 2020.
- High-accrual stocks outperformed low-accrual stocks by an average of 10.3% per year.

- There are a few possible explanations for the accrual anomaly in Pakistan, such as investors being overoptimistic about the future cash flows of companies with high accruals or investors not fully aware of the accrual component of earnings.

- Investors should be aware of the potential for accrual-based mispricing in the Pakistani market and may be able to generate alpha by investing in high-accrual stocks.

- Financial analysts should use accrual information to identify potentially mispriced stocks and assess the quality of earnings.

Conclusion:

The existence of the accrual anomaly in the Pakistan Stock Exchange (KSE 30) market remains unclear due to limitations in the available data and methodological approaches. While some studies suggest that the accrual anomaly does not exist in the Pakistani market, others propose that the anomaly may be masked by factors such as data incompleteness and market efficiency. Further research utilizing a broader sample of Pakistani firms and employing more sophisticated analytical techniques is necessary to provide definitive conclusions regarding the presence or absence of the accrual anomaly in the Pakistani market.

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The Effect of External Factors on Stock Market Performance: Evidence from the Pakistan Stock Exchange (PSX)

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Abstract:

Stock Market plays significant role in defining an economy of country. The objective of this study examines the effect of external factors on stock market performance in Pakistan, specifically focusing on the Pakistan Stock Exchange (PSX). External factors, including macroeconomic conditions, geopolitical events, and global economic trends, have a importance on stock market performance in Pakistan. Specifically, inflation, interest rates, exchange rates are expected to have a statistically significant relationship with stock market index. The study utilizes a secondary data from 2013 to 2023, covering a period of significant economic factors in Pakistan. The findings of the study showed external factors play a significance role in determining stock market performance in Pakistan. Inflation, interest rates, exchange rates are found to have statistically significant relationships with stock market returns. The study also indicates the importance of considering external factors when going for investment decisions in the PSX. This study only limited to PSX. Furthermore this study will help for researcher to study the effect of other reasons on stock market.

Key Words: PSX, Stock market, Macroeconomic variables, inflation rate, exchange rate, Exchange Rate

1. Introduction

The Pakistan Stock Exchange (PSX) is a major player in the Pakistani financial system and serves as a platform for raising capital for businesses and enabling individuals to participate in the ownership of companies. The PSX, like other stock exchanges around the world, is subject to fluctuations in stock prices, which are influenced by a variety of factors. While internal factors such as company-specific performance and financial health play a significant role in determining stock prices, external factors also have a substantial impact. External factors can be broadly categorized into macroeconomic conditions, geopolitical events, and global economic trends. Several studies have shown that macroeconomic factors, such as GDP growth rate, inflation rate, interest rates, exchange rates, and unemployment rate, can significantly impact stock market stability. A study by (Anokye M. Adam 2008) found that higher inflation rates were associated with increased stock market volatility in emerging economies. The economy of a country is affected by things like laws, taxes, government rules, interest rates, and how much people get paid.(Song & Zhou, 2020)

Assagaf, A. (2019) studied the Effect of Macro Economic Variables on Stock Return of Companies that Listed in Stock Exchange from Indonesia. The study limited only for specific year and only for stock market of Indonesia. There is research gap for study in other market. The objective of this study is to examine the relationship between stock market performance and external factors in Pakistan. Specifically, the study investigates how inflation, interest rates, and exchange rates affect the PSX All Share Index.

Hypotheses

Based on study we assume following hypothesis:

Hypothesis 1: There is a significant relationship between interest rates and stock market performance in Pakistan.

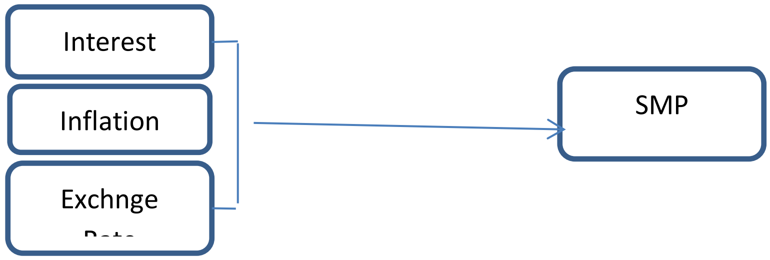
Hypothesis 2: There is a significant relationship between inflation and stock market performance in Pakistan.

Hypothesis 3: The significant relationship between exchange rate and stock market performance in Pakistan.

2. Literature Review

A comprehensive review of the literature on stock market performance and external factors reveals that a number of studies have examined the relationship between these variables. These studies have consistently found that external factors have a significant impact on stock market performance. For instance, studies have shown that inflation, interest rates, exchange rates, and global economic growth are all important determinants of stock market returns. According to Ting, Hiram, et. Hwa Cheah. (2020) Understanding why the stock market is unpredictable is important in finance. People want to know when assets might lose value quickly and cause big problems for their investments. The connection between big economic factors and how well stocks do in Pakistan is tricky. There is evidence that shows that they are sometimes linked in a good way, and sometimes in a bad way. A study by Ho & Lyke (2017) found a positive relationship between the two, while Ali et al. (2009) concluded that there is no significant connection. Zafar et al. (2008) introduced an additional layer of complexity by identifying a strong correlation between interest rates and stock market volatility. Their findings suggest that an increase in interest rates can lead to a shift in investor behavior, with funds moving away from the stock market and towards alternative saving instruments. These conflicting findings highlight the need for further research to fully understand the intricate dynamics at play in the Pakistani stock market. External factors, including macroeconomic conditions, geopolitical events, and global economic trends, have a significant impact on stock market performance in Pakistan. Specifically, inflation, interest rates, exchange rates, and global economic growth are expected to have a statistically significant relationship with stock market returns.

In Pakistan, macroeconomic factors pose a risk to equity markets as empirical evidence supports the validity of the Arbitrage Pricing Theory (APT), as established by Attaullah in 2001. Confirming this validity, Gul and Khan (2013) conducted a study on the Pakistani stock market, using a sample of 37 companies. They assessed the relationship between stock prices and four key macroeconomic factors: money supply, industrial production, interest rates, and exchange rates. The findings from their research imply that these macroeconomic factors play a significant role in influencing stock prices in Pakistan, aligning with the principles of the APT. This underscores the importance of considering broader economic indicators when analyzing and managing risks in the country's equity markets.



Hypothesis 1: There is a significant relationship between interest rates and stock market performance in Pakistan.

The influence of inflation on stock returns has been a subject of extensive research, with varying conclusions regarding the direction of this relationship. Chen et al (2005) asserted that inflation lacks predictive power for stock returns. Tripathi and Kumar (2014) observed a contrasting relationship between inflation and stock returns in BRICS countries, with Russia exhibiting a significant negative association, while India and China demonstrated a significant positive correlation.

Hypothesis 2: There is a significant relationship between inflation and stock market performance in Pakistan

Abedallat and Shabib (2012) looked at how big economic factors affect how well the stock market does. They studied how inflation and the Amman Stock Exchange index were connected from 1990 to 2009. They discovered that when prices go up, the stock market goes up and down, showing that inflation affects the Amman Stock Exchange. Also, they noticed that inflation had a good effect on the Amman Stock Exchange index.

Hypothesis 3: The significant relationship between exchange rate and stock market performance in Pakistan.

The study of Impact of Exchange Rate on Stock Market by Seri Suriani and others conducted. The study shows absence of a significant correlation between exchange rates and stock prices in Pakistan during the period from January 2004 to December 2009 could be attributed to various factors. One potential explanation lies in the dominance of brokers within the Pakistani stock market. Brokers wield significant influence over stock prices, potentially manipulating them to align with their own interests rather than responding solely to external factors such as exchange rates. Ali Kemal and Haider (2005) delved into the short-term dynamics of exchange rates in Pakistan, exploring their interactions with prices, interest rates, foreign reserves, and trade balances. Their analysis uncovered a robust correlation between real and nominal exchange rate movements, while suggesting an absence of a significant relationship between relative prices and nominal exchange rates. Further, Muhammad and Rasheed (2002) utilized co-integration and Granger Causality tests to investigate the causal linkages between stock prices and exchange rates in four Asian countries from 1994 to 2000.

3. Methodology

Research Design: The study adopts a quantitative research design to check the

relation among the independent variables macroeconomic variables and stock market instability.

a) **Source of Data:** The research is on secondary data. This data is taken form reliable sources such as the Pakistan Stock Exchange (PSX) database, State Bank of Pakistan, World Bank, trade organizations, and other relevant financial databases.

b) **Time Frame:** Data from 2014 to 2023 is gathered to have a comprehensive

view of recent trends.

c) **Data Scope:** Closing stock index , and macroeconomic variables like IR, ER and IR.

Data Analysis: Closing stock index values from 2014 to 2023 are taken and compare to interest rates, inflation rate and average exchange rate with their respected years to compile result.

4. Results

i. Data Statistics:

Years	Index	Inflation Rate %	Exchange Rate (US $) Average	Interest Rates %
2013	25,261.14	7.69	101.5080603	9.5

2014	32,131.28	7.19	100.9525373	10
2015	32,816.31	2.53	102.6549159	6.5
2016	47,806.97	3.77	104.6637675	9
2017	40,471.48	4.09	105.3250503	5.75
2018	37,066.67	5.08	121.4385982	8.0
2019	40,735.08	10.58	149.8181446	12.25
2020	43,755.38	9.74	161.6166063	10
2021	44,596.07	9.50	162.6252324	7
2022	40,420.45	19.87	204.5161748	16
2023	58,198.76	31.44	279.0956756	22

ii. Summery Statistics

Variable	***Mean***	***Standard Deviation***	***Minimum***	***Maximum***
Index	39,010.36	7,393.45	25,261.14	58,198.76
Interest Rate	9.57	2.2	5.75	22
Inflation Rate	7.58	3.36	2.53	31.44
Exchange Rate	145.99	39.76	100.95	279.09

iii. Correlation Analysis:

	Interest Rate	*Exchange Rate*	*Inflation Rate*	*Index*
Interest Rate	1			
Exchange Rate	0.56546	1		
Inflation Rate	0.622383	0.655598	1	
Index	0.740487	0.70012	0.721501	1

iv. t-test at significance 95%

Hypothesis	*Correlation Coefficient*	*t-statistic*	*p-value*	*Results*
Hypothesis 1	0.56546	2.51	0.016	Accepted
Hypothesis 2	0.622383	2.75	0.008	Accepted
Hypothesis 3	0.740487	3.25	0.002	Accepted

4.1 Effect of interest rates on stock market:

As, there is a positive correlation between interest rates and stock market performance. This means that when interest rates go up, stock market prices tend to go up as well. This is because higher interest rates make it more attractive for investors to invest in stocks, as they can earn a higher return on their investment.

4.2 Effect of inflation rates on stock market:

There is also a positive correlation between inflation and stock market performance. This means that when inflation goes up, stock market prices tend to go up as well. This is because inflation can erode the purchasing power of money, so investors tend to look for assets that will protect their wealth from inflation. Stocks are one such asset, as they can keep pace with inflation and even outpace it.

4.3 Effect of exchange rates on stock market:

The exchange rate also has an impact on stock market performance. However, the relationship is more complex. A stronger exchange rate can make it more difficult for Pakistani companies to compete internationally, which can hurt their profits. This can lead to lower stock prices. However, a stronger exchange rate can also make it cheaper for Pakistani companies to import raw materials and equipment, which can boost their profits. This can lead to higher stock prices.

Discussion

The findings of the panel data analysis shows that external factors have a significant impact on stock market performance in Pakistan.The performance of the Pakistan Stock Exchange (PSX) appears to be intricately linked to external economic factors, notably the Inflation Rate and Exchange Rate (US $). Over the observed years, the stock market demonstrated sensitivity to these variables, with periods of growth often aligning with stable or moderately increasing inflation and exchange rates. Economic stability during such times seemed to boost investor confidence. Conversely, stock market declines coincided with increased economic uncertainty, as reflected in rising inflation and exchange rates. The notable anomaly in 2022-2023, where the PSX Index surged despite heightened inflation and exchange rates, suggests the influence of other factors like government policies or global economic conditions. While the data indicates correlations, establishing a direct cause-and-effect relationship requires more advanced statistical analyses. Policymakers might find insights for economic stability strategies, and investors should be mindful of the potential impact of external factors when making investment decisions. Overall, the dynamics between the PSX and external factors are complex, necessitating a nuanced understanding for accurate predictions and informed decision-making. Exchange rates are found to have a positive relationship with stock market returns, implying that a depreciating Pakistani rupee can boost export earnings and increase corporate profits, leading to higher stock prices.

Overall, the data suggests that external factors can have a significant impact on stock market performance. Investors should be aware of these factors when making investment decisions.

Here are some additional insights from the data:

- **The stock market reached its highest point in 2017, when interest rates were at 5.75%.**
- **The stock market reached its lowest point in 2022, when interest rates were at 16%.**
- **The stock market has been more volatile in recent years, as inflation and interest rates have been more volatile.**

Limitations

This study limited to specific time which is 2013 to 2023. This study showed result of only PSX. This study does not explain other variables like GDP, Political instability.

Conclusion

The result shows that out 2 hypothesis accepted but 3rd hypothesis which is more complex. Some times it is positive sign and sometime is negative for companies to have higher exchange rate. The findings of this study reinforce the importance of considering external factors when making investment decisions in the Pakistani stock market. Investors should carefully monitor all factors like macroeconomic conditions, geopolitical events, and global economic trends to make informed investment decisions. Additionally, policymakers should implement sound economic policies that foster a stable and conducive environment for stock market growth.

Policy Implications

The results of this study have several policy implications for the Pakistani government and regulatory authorities. The government should focus on maintaining low and stable inflation rates to provide a predictable environment for businesses and investors. The government should also implement policies that promote economic growth and stability, such as infrastructure development and investment in education and healthcare. Additionally, regulatory authorities should ensure that the stock market is transparent and efficient to attract domestic and foreign investors.

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Study on the Variables Influencing the Intention to Continue Using Mobile Payment Services with the Mediating Role of Customer Attitude in Pakistan

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Abstract:

Although the number of people utilizing mobile payment services has skyrocketed and their popularity has increased, many consumers eventually lose interest and stop using them. The long-term goal has gotten relatively less attention than the adoption of mobile payment services, which has been the subject of most research. Establishing a theoretical framework for comprehending the influences (obstacles, facilitators, and behaviors) on mobile payment users' inclination to use these services frequently is the aim of this study. The model was validated using 304 actual users of mobile payment apps across various cities in Pakistan. The data was analyzed using the PLS-SEM method. Price benefits, network externalities, habits, contentment, and self-efficacy all favorably influence users' long-term intent; perceived risk and unfavorable environmental factors negatively impact it, and trust has little bearing on it.

Keywords: Customer Attitude, Mobile payment, Self-efficacy, Perceived risk

Introduction:

On instance of how the public's material well-being has entered a new era of convenience brought about by the widespread use of smartphones and other cutting-edge technology is the provision of mobile payment services. Three components made up the model proposed by the research given here are price benefits, network externalities, and implementer's variables. The sense of threat and the lack of a supportive atmosphere are two barriers. Behavior is influenced by independent variables such as competence, contentment, confidence, and routine. One dependent variable considered is the probability of continuous use. Compared to e-commerce, research on online banking and mobile payment services is more recent (Oliveira et al., 2016). Many m-payment applications have been created in recent years, and many of them have provided cash-back incentives and discounts to entice users (Business Standard News, 2017). Network externalities, as defined by Qasim & Abu-Shanab (2016), are a phrase that evaluates how members of a social circle use technology; as such, it has a tenuous connection to social effect. The benefits to society have been recognized by electronic banking (Polatoglu & Ekin, 2001). Customer trust that a digital financial transaction is susceptible to vulnerability is a recurring theme in mobile banking and is associated with the idea of "perceived risk" (Li et al., 2019). In a similar vein, we look into customer behavior (Thong et al., 2006). The study's authors contend that consistent use of information technology requires creating a routine that increases comfort and familiarity with it (De Guinea & Markus, 2009). Customers' trust in the MPS provider is necessary for the MPS to function (Morawczynski & Miscione, 2008). Risk and trust issues are particularly sensitive in the MPS area because they have a direct impact on the user experience. But customers can be reluctant to use it because of their mistrust of this kind of payment (Dew et al., 2017). Meeting the expectations of customers can result in increased client satisfaction and recurring business (Oliver, 1980). Another factor influencing MPS usage is self-efficacy. Information systems, digital platforms, and web-based information systems all depend on autonomous action (Mun & Hwang, 2003). This concept, which has its roots in social cognitive theory, characterizes how confident a person is in their abilities in specific situations. The persistence of this investigation is to categorize the variables that affect in what way frequently users interact with different payment methods. The main inquiry of this research paper investigates the likelihood that several factors influence the outlook, either positively or negatively. a few of the locations where such studies have been carried out (Al-Sharafi et al., 2017). In Pakistan is seeing an increase in the use of digital payment methods; in 2021, over 165 tons of financial disbursement transactions were recorded in the extra area (Statista report, 2021). Thus, the goal of this study is to investigate the factors that Pakistani consumers consider important when deciding whether or not to continue using mobile payment services. This study aims to close that gap by examining the factors that motivate MPS in Pakistan to continue their current course of action. After adoption has already occurred, an issue occurs. Because of Pakistan's comparatively high acceptance rate for mobile payments, research on post-adoption use has been done using these services. What motivates Pakistani consumers to stick with mobile payment services over time will be examined in this study. The goal of the continuation intent is to continue utilizing the mobile capabilities that were previously utilized. To determine the primary determinants of consumers' intent to stay by means of mobile payment services in Pakistan. Determining the elements that affect consumer intent to use, such as cognitive incentives and barriers, is essential to closing the knowledge gap on mobile payments. The study is significant because it will enable researchers to better understand consumer attitudes toward using mobile devices for online shopping. Businesses can benefit from the study's findings since they will give researchers insight into the opinions of customers regarding mobile payment apps. Furthermore, our research has contributed to a better understanding of mobile payment applications among users.

Literature Review:

1. Independent variables:

After conducting a thorough review of the literature, the researcher was able to identify the relevant variables, which she subsequently divided into three main groups: behavioral, hindrances, and implementers. The Function of Implementer variables that act as barriers (fear of not succeeding and unfavorable conditions) and individual variations in strategy and implementation (custom, satisfaction, self-efficacy, and trust).

1.1: Facilitators:

The factors listed above will support customers' post-adoption technology usage, as they are positively correlated with customers' intention to continue using mobile payments.

1.1.1: Price Benefits:

The cost necessary to purchase and utilize an item or service is referred to as the "price" (Ly et al., 2022; Xu et al., 2015). Conversely, value is a nebulous concept whose meaning can change based on the context (Chiu et al., 2005). When given the option to select between a paid version and a free alternative, the majority of customers will select the free option, according to Porter (1980). Because they fall into the low-income category, customers are financially sensitive, but they still want to continue using MPS (Nargis et al., 2014). Thus, the researcher hypothesizes that H1: There is a constructive and significant association between price benefits and the intention to continue using a product.

1.1.2: Network Externalities:

"Network externalities" are a term used to define how people's high-tech behaviors affect others in their community system, providing an indirect link to social impact (Qasim & Abu-Shanab, 2016). The impact of society is now included in models for the diffusion of information technology (Venkatesh et al., 2012). The importance of social factors has been confirmed by numerous electronic payment methods (Cao et al., 2018; Pal et al., 2019). In the literature, network effects have generally been classified into two different types. Scientists concluded as follows: H2: Network externalities and the intention to continue using a network have a positive and significant relationship.

Blocks of mobile payment apps:

To take full advantage of the new offerings, consumers need to adjust to innovations by picking up new behaviors and changing long-standing habits (Ram & Sheth 1989). The next obstacle concerns the innovation's value to the consumer market. Ram and Sheth (1989) emphasized the necessity of proving an invention's superior "performance-to price value" (Ram & Sheth 1989, p. 8) over current options when talking about its financial benefits.

2.1: Perceived risk:

Customers who transact financial business online might experience anxiety (Lu et al., 2011). The concept of "perception of danger," which has remained in the discipline of digital the banking industry, is looked at as well, as are the fears of consumers that e-commerce platforms are hazardous (Li et al., 2019; Shao et al., 2019). In the event that consumers' purchasing goals are not met, they will suffer negative outcomes. Given this, the study's author makes the following hypothesis (H3): The intention to keep using the product is strongly and negatively impacted by perceived risk.

2.2: Inaccessibility of facilitating situations:

Studies on this group has shown that people from lower-income households are more likely to be aware of novel products and offerings (Raleting & Nel, 2011). The technical description of the facilitation condition (FC) is "the total amount of money and assistance available to customers may use to engage in endeavors". Research indicates that FC has a major impact on what users want to use (Vongjaturapat and Fianu, 2018). The researcher therefore postulates that the lack of favorable conditions will have a significant effect in less developed countries. H4: The intention to continue using is significantly and negatively impacted by the lack of enabling conditions.

Behavioral factors:

According to earlier research, customers' propensity to use digital payment methods is significantly influenced by their behavioral characteristics (Jaruwachirathanakul & Fink, 2005). It's important to talk about these issues because a number of factors affect users' long-term interest to use mobile money transactions.

3.1: Habit:

De Guinea and Markus (2009) claim that habit determines a user's intention to continue using IT in a way that goes beyond rational considerations like functionality or utility. MPS electronic devices are an innovative system that is still in its early stages of development, in contrast, habit describes how often people perform certain behaviors (like using IS) as a result (Sharma et al., 2018). Therefore, the researcher thinks that forming habits will be crucial in figuring out whether or not users plan to stick with MPS. H5: There is a significant and beneficial connection between a routine and a desire to stick with it.

3.2: Trust:

Previous studies have looked at how data transfer and the growth of interpersonal connections are affected by trust in digital payment channels (Chen & Dhillon, 2003). Three essential components must be present in a trustworthy person. Therefore, how long customers stick with the website depends on their level of trust in it. As a result, the study's author suggests hypothesis H6: Trust significantly and favorably influences one's desire to continue using a product.

3.3: Satisfaction:

Client satisfaction with mobile banking overall increases the likelihood that they will use it once more (Bhattacherjee, 2001). Using them will make you happier, which will lead to greater buying and usage (Kim et al., 2018). Academics who study consumer behavior and advertisement know that allowing individuals to go regarding their everyday activities with versatility is essential to improving the happiness of clients (Bhattacherjee, 2001; IV Oliver, 1980). H7: There is a substantial and favorable connection between satisfaction and a desire to keep using something.

3.4: Self-efficacy:

This concept, which characterizes a person's confidence in their ability to perform an appropriate task, is based on social cognitive theory. According to Bandura, self-efficacy may have its roots in "performance successes, vicarious experience, verbal persuasion, and physiological emotions" (pp. 191-215, 1977). The conviction that one can complete a task successfully is known as self-efficacy. H8: The intention to continue using a substance has a positive and significant relationship with self-efficacy.

2. Customer Attitude:

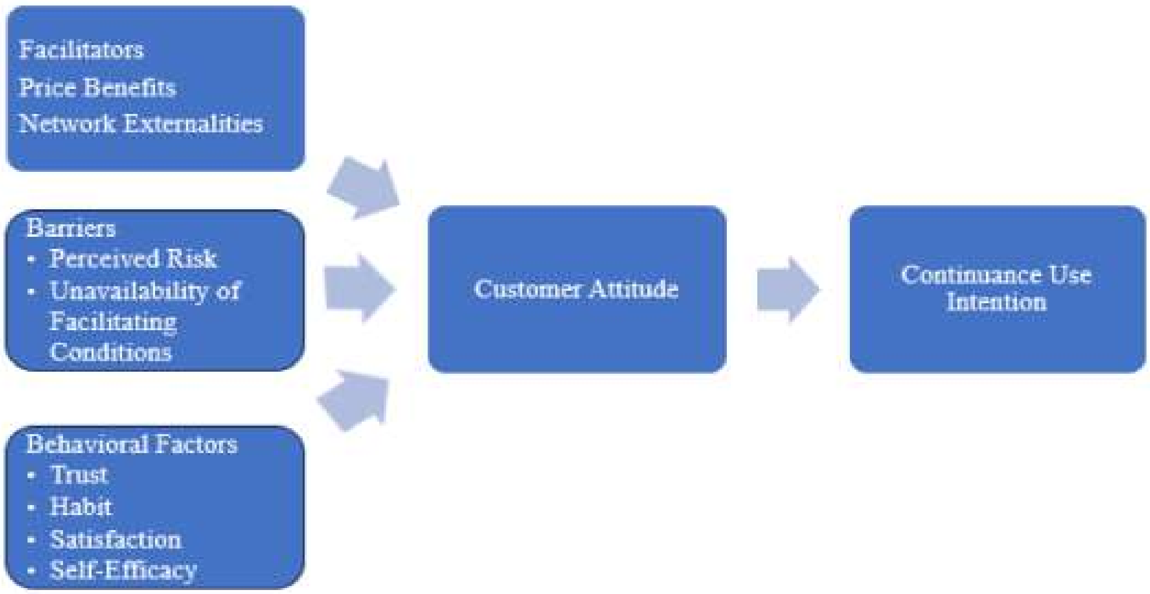
The potential buffering effect of one's outlook between two variables. TAM states that perceived utility (PU) and perceived ease of use (EoU) have an impact on consumers' behavioral intentions via how they feel (Davis et al., 1989). Additionally, prior research (Chawla and Joshi, 2019; Foroughi et al., 2019) has demonstrated a significant and positive association between the desire to use smartphones for banking and attitude. We put forth the following theory, accounting for all of these connections: H9: The intention to continue using a product is positively and significantly impacted by the customer's attitude.

Dependent variable:

1. Intent to Use:

Are scientists utilizing "the intention to use" as a factor that depends in their investigations into the effects of ongoing IT use (Limayem et al., 2007)? This variable affects the consumer's choice to use MPS as a form of payment or not, as well as whether to stick with it or switch to more traditional payment methods comparable currency or debit/credit cards (Zhou, 2013). This aids in the IV researcher's analysis of MPS systems' long-term viability following adoption and their capacity to generate favorable social and economic change through increased participation.

Conceptual Model:



RESEARCH METHODOLGY:

Study plan:

A well-designed expedition depends on a number of factors, including the type of data to be collected, the method of data collection, the sample size, the investigation's goal, and the available funding (Lukas et al., 2003). It helps modify one's preparation plan in response to the problems that arise during an investigation (Churchill & Iacobucci, 2004). Thus, the researchers in this case decided to take a quantitative approach. Third, advantages that a qualitative approach cannot match have been demonstrated by a quantitative technique. Considering this, this study employed quantitative research methods.

Time Horizons:

Surveys that are cross-sectional or longitudinal can be used to measure the rate of adoption of new technologies. This study's main focus was on customer satisfaction long-term plans for using mobile payment usages. In the field of IS/IT assessment, a number of investigators have used longitudinal survey techniques (Venkatesh & Morris, 2000). 42 users of the real-world app took part in a cross-sectional survey for this study.

Population of the study:

Sample refers to the selected portion of a population, in contrast, a population describes "the whole population of individuals, major incidents, or elements that the investigator wishes to investigate." (Sekaran & Bougie, 2016). Finding out which aspects of using mobile payment apps have had the biggest impact on users' intentions to use them in the future is the study's quantifiable goal.

Sample and sampling strategy:

Two types of sampling that are frequently used in studies in the social sciences are probability sampling and random sampling. The probability sampling method is less complicated and less expensive because anyone with access to the data can perform a non-probability sample (Doherty, 1994). In this study, the sampling technique employed was non-probability sampling.

The sample size of the study:

According to Lukas et al. (2003), statistical analysis requires a model magnitude of at least 200. (Comrey & Lee, 1992) concluded that a sample size of fifty was insufficient, one hundred was appropriate, two hundred was good, three hundred was excellent, five hundred was remarkable, and a thousand was remarkable. 304 persons will therefore constitute the study's sample size.

Data collection method:

In accordance with the findings of the investigation, Saunders et al. (2015) state that the research process uses a variety of data collection methods, such as surveys, observations and interviews, and statistical and non-statistical analysis. Due to the fact that most of the 50 study participants reside in Pakistan, which is a remote nation from the research site, and because it would be impractical to stay for a long time. Because of the aforementioned advantages, this study chooses to collect data via an online questionnaire.

Data analysis:

Statistical software was used to assess the data because it was quantitative research. The analysis of demographics was used to report on the groups of participants, including marital status, sex, financial status, schooling, and use of mobile payment apps. Furthermore, the Both reliability and validity were evaluated using the Fornell-Lacker Criterion and the HTMT (Heterotrait - Monotrait Ratio); convergence was measured using the outer VIF. A correlation matrix, path coefficients, R Square, and a model fit summary were also used to test the research hypothesis.

Measure Used:

The questionnaire's items were scored using a five-point Likert scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree." The Likert scale may be helpful in certain situations when other methods wouldn't be appropriate. Because Likert scales are the most widely used, user-friendly, and practical scales available, researchers frequently use them (Viswanathan et al., 2004).

Results:

Preliminary Analysis:

Out of the 92 responses, 74% were deemed reliable. All participants made sure to carefully fill out the survey's questions. Every single survey item had a Cronbach's Alpha value of larger than 0.7, representing a high level of consistency.

Model Fit Summary:

The degree to which a model forecasts a construct is described in the model fit summary. A model is deemed fit when the NFI value is near to 1 and the SRMR value is between 0 and 1, per Henseler et al. (2016)'s definition of SRMR. The model is appropriate for additional investigation because the SRMR value in this study is 0.10 and the NFI value is (0.63). This is in line with the standard. The model fit is summarized in Table 3.

Table 3: MFS

	Saturated Model	Estimated Model
SRMR	**0.10**	**0.10**
d ULS	4.93	4.93
d G	4.23	4.23
Chi-Square	8221.63	8221.63
NFI	**0.63**	**0.63**

Table 4: **LVC**

	CUI	NEX	PR	PB	SAT	SE	TR	UFC	HAB	CA
I.C. U	1.00									
N. E	0.37	1.00								
P. R	0.67**	0.51**	1.00							
P. B	0.64**	0.59**	0.72**	1.00						
SAT	0.64**	0.48	0.57**	0.57**	1.00					
S. E	0.70**	0.40	0.59**	0.49	0.67**	1.00				
TR	0.62**	0.42	0.63**	0.68**	0.56**	0.62**	1.00			
U.F.C	0.73**	0.56**	0.73**	0.68**	0.65**	0.65**	0.62**	1.00		
H.A. B	0.68**	0.51**	0.85**	0.84**	0.65**	0.63**	0.78**	0.74**	1.00	
C.A	0.70	0.73**	0.62**	0.90**	0.85**	0.70**	0.64**	0.79**	0.75**	1.00

Correlation Analysis:

Inner VIF:

The collinearity of variables is demonstrated by the value of VIF. According to Lukas et al. (2003), the criterion's recommended value for VIF is 5.00.

Table 5: In. VIF

	CUI
P. B	4.06
N. E	1.73
P. R	4.01
U.F.C	3.01
H.A. B	4.15
T. R	2.87
S.A. T	2.32
S. E	2.42
C.A	2.50

Outer Loadings:

After establishing the indicator's reliability, it is crucial to assess its validity. This study evaluates both discriminant and convergent validities. In order to assess the instrument's reliability as well as its convergent validity, Outer Loadings and AVE were utilized. **Table 6: Outer Loadings:**

	Continuance Use Intention	Network Externalities	Price benefits	Perceived Risk	Unavailability of facilitating conditions	Habit	Trust	Satisfaction	Self-efficacy	Consumer attitude
CUI1	0.91									
CUI2	0.93									
CUI3	0.86									
NEX1		0.48								
NEX2		0.51								
NEX3		0.52								
PB1			0.65							
PB2			0.66							
PB3			0.53							
PR1				0.59						
PR2				0.65						
PR3				0.64						
PR4				0.67						
UFC1					0.55					
UFC2					0.60					
UFC3					0.61					
H1						0.63				
H2						0.58				
H3						0.69				
H4						0.60				
TR1							0.55			
TR2							0.57			
TR3							0.52			
TR4							0.51			
SAT1								0.59		
SAT2								0.62		
SAT3								0.65		
SAT4								0.42		
SE1									0.59	
SE2									0.59	
SE3									0.62	
CT1										0.61
CT2										0.55
CT3										0.61
CT4										0.59
CT5										0.62

Reliability & Validity:

Straub et al. (2004) state that the values of Cronbach's Alpha, Average Variance Extracted, and Composite Reliability must be above 0.70, 0.5, and 0.7, respectively. Hair et al. (2010); Lukas et al. (2003). Furthermore, the average variation that was retrieved is used to assess the validity of the questionnaire. Every data point in the analysis of this study falls within the acceptable range.

Table 7: reliability and validity

Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Continuance Use Intention	0.86	0.72	0.81
Network Externalities	0.86	0.76	0.83
Perceived Risk	0.78	0.85	0.80
Price benefits	0.86	0.82	0.83
Satisfaction	0.85	0.76	0.79
Self-efficacy	0.74	0.83	0.78
Trust	0.75	0.84	0.80
Unavailability of facilitating conditions	0.86	0.80	0.83
Habit	0.75	0.82	0.79
Customer attitude	0.75	0.85	0.80

Hypothesis testing:

The validity of the hypothesis testing discussed in this section will be assessed in the context of the data analysis. The t statistics and p values were used to test these hypotheses. This section examined whether the proposed hypotheses satisfy the necessary conditions for validation. For a hypothesis to be accepted, the T statistics value needs to be greater than 1.96 (Lukas et al., 2003). In this study, nine hypotheses are being examined, and the data are shown as they are collected. H1 and H2 both are accepted or supported. With a significant p-value of 5.09 and a negative correlation, H3 is supported but not positively correlated. The value of 8.555 T-Stat is significantly and negatively correlated with H4. The age factor, which indicates that younger customers are more willing to take risks than older ones, is the reason why the T Stat value of 1.953, which is less than 1.96 and not significant, does not support H5. In a similar vein, 0.002 P-value < 0.05. H6, which has a T Stat value of 3.109, which is greater than 1.96, supports the hypothesis. The T Stat and the P-value, which is 0.05, both provide strong support for the hypothesis H7. H8, with a P-value of 0.000, or 0.05, and a T Stat value of 7.582, or > 1.96, provides strong support for the hypothesis. The T-stat 7.85, which is greater than 1.96, and the P-value of 0.000 both strongly support H9.

Table 8: **Level of Significance**

Hypothesis	Relationships	Path Coefficients	T Statistics	P Values	Decision
H1	Price Benefit -> Continuance Use Intention	0.33	5.251	0.000	Supported
H2	Network Externalities -> Continuance Use Intention	0.20	4.917	0.000	Supported
H3	Perceived risk -> Continuance Use Intention	-0.20	5.09	0.000	Supported
H4	Unavailability of facilitating conditions -> Continuance Use Intention	-0.31	8.555	0.000	Supported
H5	Trust -> Continuance Use Intention	0.09	1.953	0.051	Not Supported
H6	Habit -> Continuance Use Intention	0.26	3.109	0.002	Supported
H7	Satisfaction -> Continuance Use Intention	0.15	3.924	0.000	Supported
H8	Self-efficacy -> Continuance Use Intention	0.31	7.582	0.000	Supported
H9	Consumer attitude -> Continuance Use Intention	0.41	7.85	0.000	Supported

R Square and Adjusted R Square:

R Square is often favored because it typically provides a better explanation of the model if it is nearer 1. However, R Square values for studies that attempt to predict human behavior are usually less than 0.50. The independent construct in this study, continuous use intention, is found to account for 69% of the variability in the contingent model, as indicated by the R Square value of 0.69, which is greater than 0.50. The given value is best for a research project because R square values that are greater or lesser could cause issues.

Table 9:

	R Square	R Square Adjusted
Continuance Use Intention	0.69	0.68

Discussion of Results:

The outcomes of the research show that an intent to frequently use mobile payments is positively and scientifically significantly correlated with the facilitator traits. Price benefit and network externalities are two facilitator distinctive assumptions that were examined and are predicted to be associated with frequent usage. Cashback and other incentives provided by mobile payment apps influence users. Research on network externalities has provided evidence that friends can have an impact on an individual. If a business offers the service, it must comply with customers' requests to make payments via mobile apps. Gains in price correspond with (Pal et al., 2020). The perceived danger and the absence of enabling conditions hypotheses that related to the second research issue were discussed. Pal et al. (2020) found that while there was a high perceived danger, there were not enough favorable conditions. However, given the nature of the research, both of them are significant here. This suggests that customers are influenced by their fear of losing money in an online transaction and the chance that it could be pilfered. H4 contends that consumers are discouraged from using the digital payment system because of the high cost of cellphones and the challenges associated with obtaining internet access. Conformity with studies conducted by Pal et al. (2020) regarding perceived risk and by Pal IV et al. (2020) regarding the absence of favorable conditions (Khalil et al., 2017). The third part, which focuses on behavioral aspects, discusses four theories: those related to routine, happiness, trust, and confidence. As it happens, the fourth idea is not worth exploring further, while three are. Although habit, contentment, and self-efficacy all positively influence the intention to use continuously, trust does not significantly correlate with this intention. The gender difference noted in the literature is supported by this research, where 141 male respondents and 160 female respondents overall were found.

Limitations of the Study:

First off, because the study is conducted inside Pakistan, a developing country, the findings apply to other locations with comparable histories and cultures. The results of the study might not, however, apply to individuals from other cultures. It's possible that researchers abroad will discover conflicting data. The cross-sessional nature of this study allowed for the simultaneous collection of all IV data regarding the respondents' future intentions to use mobile payment apps.

Future Directions:

Future studies will probably take into account the mediating or moderating effect of the variable trust in order to gain a deeper understanding of the connections between the enablers, barriers, and users' long-term intentions of mobile payment systems. It is also interesting to comprehend the function that self-efficacy, habits, and satisfaction play in mediating or moderating interactions that result in outcomes. Since the habit has now established itself as a routine, the influence of both positive and negative elements on the user's constant intent may be lessened.

Conclusion of the Study:

This research created a novel model in light of the possibility of mobile payment app persistence. Routine, trust, satisfaction, and self-efficacy are behavioral components; perceived risk and the absence of favorable conditions are barriers; and positive network externalities and reasonably priced goods are instructors. The results demonstrate that network externalities and price benefits have a positive impact on users' continuous intentions, whereas perceived risk and a lack of favorable conditions have a negative impact. It's interesting to note that this study found no connection between willingness to use the service consistently and trust.

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Impact of Mobile Banking Retention on Performance of Banking Sector: Evidence from Pakistan

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Abstract:

Purpose: This paper aims to explore important antecedents which help explaining customer retention of mobile banking & impact of MBR on Bank performance in Pakistan.
Design/Methodology/Approach: An adapted Questionnaire used to assess customer's response and annual reports & web sites used to measure performance of 5 Pakistani banks. The impact of MBR measured in two time periods: pre saturation & post saturation. The SPSS used for data analysis.
Findings: Findings indicate that all predictors of MBR (IT Control rating, Transaction cost, Usage without data and Card less transactions) are significant except specialized team. All predictors of Bank performance (No. of ATM increased, Increase in Current accounts and Increase in transactions) are significant.
Limitations: More banks and increase in sample size can increase reliability of the study.
Practical implication: By providing different types of comparative facilities, banks are encouraging their customers for mobile banking adoption & their retention which contributes to customer satisfaction as well as business growth of banks.
Originality/Value: This paper is extension to mobile banking adoption intention & interestingly measures business growth through customer retention about mobile banking creating a significant impact.

Keywords: Information Technology (IT), Mobile Banking Retention (MBR), Automated Teller Machine (ATM), Customer Satisfaction, Banking Performance.

Introduction:

Information Technology is compulsion for human exertion regarding business transactions, commercial advancement and essence of delivery (Shams et al., 2020). IT is about delivery of information through a data, video or voice using hardware, software and other supporting infrastructure including services (Safeena & Date, 2010). Like other Business fields banking sector is also using IT for innovation, development, customer attraction and ultimate growth. Mobile banking can be called as a modern form of electronic banking services via smart phone (Chawla & Joshi, 2017). At initial stage, mobile app allowed customers to inquire their account balance via SMS (Ali et al., 2023). Today one can use mobile application to pay his/her utility bill, to transfer funds within & outside to bank, credit card bill payments, credit card bill inquiry and to change password along with session based financial pin generation (Zhao, 2018). Even this application allows one to locate nearest ATM. Often Internet banking and mobile banking as a whole make the sense of electronic banking(Suoranta, 2004). But both of these are considered two interchange banking channels to distribute services for clients (Scornavacca, 2007). At start MB was considered just a trend to use but now customers are aware of its usage and benefits in both financial and non-financial terms, which is available to all customers without having geographical boundaries (Picto & Pinto, 2021). In developing countries trend of mobile banking is still at initial stage which is due to some factors like perceived risk, in availability of internet services in all over the world and lack of expertise due to lack of knowledge (Ghobakhloo & Azhar, 2018). Talking specifically about Pakistan, Pakistan had around 139 Million exclusive mobile subscribers (pakistan, 2016) By the end of 2020 this figure expected to rise by 17 Million new users (Assosiation, 2017) but number of registered mobile users is comparatively very low. However, a good step taken by PTA (Pakistan Telecommunication Authority) to block non-registered mobile phones, improved this ratio significantly. In general, most of us adopt different things, products or services having multiple reasons, few of them are as follow: positive words of mouth, loyalty to business, perceived trust, attractive web site, availability of information, up to date information, easy to access and attractive functionality. (Al-Otaibi et al., 2018) Mobile baking adoption intention may also be influenced by these reasons. But what are the reasons which contribute to customer retention and its ultimate benefit to banks as well as customers? Existing literature lacks studies to explore this issue and its reasons in Pakistan. Therefore, to the best of the researchers' knowledge this study is first to thoroughly scrutinize this relationship with reference to Pakistani banking sector.

Literature Review

In the era of high level of competition, customer retention can be gained through increased benefits and lower charges to customers which ultimately will lead towards lower cost, increase in market share and profitability of any firm (Reichheld & Sasser, 1990). To measure retention three approaches are observed; 1st one is behavioral measures, 2nd one is attitudinal and 3rd is composite measures (Bowen & Chen, 2001). In services sector customer retention is seemed as pragmatic behavior (Liljander & Strandvik, 1994). But by using this measure, customer retention was assessed through customer repurchasing of that product or reutilization of that particular service. Behavioral measure criticized due to incomplete information to assess customer retention because it does not consider loyal customers (Baabdullah et al., 2019). If we consider retention just to repurchase of product, it would not give full picture of the case (Bloemer & Kasper, 1995). Then in a study attitudinal measures were used to assess customer retention on the basis of psychological and emotional attachment (Rahman et al., 2020). Attitudinal construct also used to explain customer retention (Hallowell, 1996). In third approach all three measures were used at a time. They explained that, a customer uses his cognitive skills to evaluate product/service price (composite measure) by keeping in mind its importance to him (attitudinal measure) and makes repurchase decision (behavioral measure)(farah, 2017). By adapting third approach we may modify it as per our convenience. Constructs to measure customer retention are; Transaction cost, usage without data, I.T control rating, specialized team and card less withdrawal. Age and gender would be treated as control variables and to measure performance of banks we will analyze number of account opened, no. of transactions performed and no. of ATMs installed. (Ghobakhloo et al., 2019)

Developing the hypothesis

Due to passionate competition many organizations are increasing their efforts to provide services and to gain their retention (Al-hawari, 2006).

1. IT control rating

All banks allowing customers to use mobile banking facility are allotted an I.T control rating by SBP (State Bank of Pakistan) on the basis of DES (3DES) encryption (allows information to travel securely from bank servers to mobile device) which remains available at websites of concerned banks and may be viewed by customers while making decision to either retain the app or to quit the service.

H1. I.T control rating will have significant positive impact on MB retention.

2. Usage without data

Some mobile companies are also seemed engaged with banks to provide their apps without data usage. Ufone company is one of them which allots its subscribers a code *808# to avail this facility free of cost.

H2. Usage without data will have significant positive impact on MB retention.

3. Transaction cost

Inter branch fund transfer totally free through MB and with comparison to ATM saves RS.50 per transaction. Charges while interbank transfer create difference of 15% and provide cheaper and secured transactions by making customer free from money handling in cash.

H3. Transaction cost will have significant negative impact on MB retention.

4. Card less Transactions

This initiative was taken by Bank Islami in 2009 and followed by many banks in Pakistan. By selecting this service on MB app one can withdraw specific amount of cash (Max.100000) through 16-digits Financial pin generation & 4-digits OTC (One-time transaction code) on his/her mobile phone through SMS. Procedure to perform other transactions is more convenient than withdrawal because here generation of financial pin & OTC is also not required.

H4. Card less Transactions will have significant positive impact on MB retention.

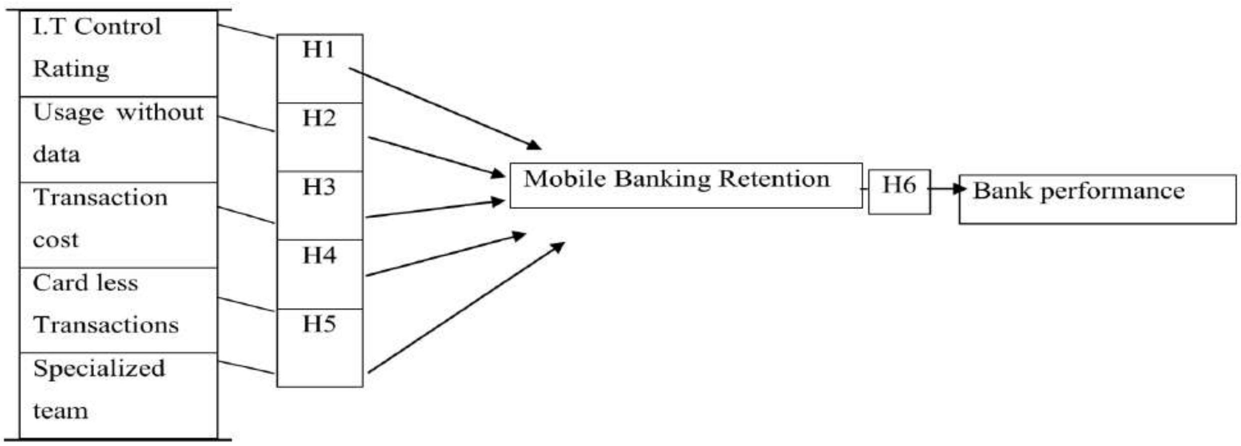
5. Specialized team

Presence of specialized team to provide guidance to customers regarding registration, accessibility, amendment and usability, is necessary to make this service efficient and productivity. If all customers would be referred towards help line it would create negative impact on customer retention.

H5. Specialized team will have a significant positive impact on MB retention.

H6. Mobile Banking Retention will have a significant positive impact on banks performance.

Conceptual Framework



Methodology

The bank performance will be measured by No. of ATMs installed, Ratio of Account opening, Dormant Activation Ratio and Expense ratio. Impact of Mobile Banking retention will be assessed on two specified time periods: pre saturation (i.e., Before MB retention) and post saturation (i.e., After MB retention). For pre saturation period, we will cover period of 2013 to 2015 when most of the customers failed to retain this service having different reasons. Post saturation period covers years of 2016 to 2018 when retention rate became increased to competitive advantages and additional facilities.

1. *Research design*

A quantitative research was adopted to understand how above discussed behavioral factors effect mobile retention & subsequently growth of banks in Pakistan. To gather data from respondents a structured questionnaire was designed, which take 10-15 minutes to fill.1st section of questionnaire contains demographic information of respondents including age, gender and duration of their relationship with that bank. 2nd section has multi-item scales for questions regarding every factor (Transaction cost, usage without data, I.T control rating, specialized team and card less withdrawal) to know about their interrelationship. We did a pilot testing with a sample of 30 people to check reliability of items and Cronbach alpha showed a value of .896.

2. *Instrument*

This study used a quantitative questionnaire having multi-item scales to measure relationship of every factor & its subsequent impact on growth. Preferring content validity all validated scales were used and to make these better fit for this study wording of scales was adapted accordingly (Straub & M & Gefen, 2004).

First Question was about IT control rating of banks and calculated by three-item scale (Venkatesh, Morris, & Davis, 2003) on a five point likert scale from 1=strongly disagree to 5=strongly agree. Questions regarding this factor determine effect of IT rating issued by State Bank of Pakistan on MBR of customers.

The next scale measures Transaction cost at four-item scale at five point likert scale (with 1=strongly disagree & 5=strongly agree) presented by (Sirdeshmukh, Singh, & Sabol, 2002), which was adapted as per our needs. This scale reflects impact of transaction cost on MBR and customer behavior in case of increased or decreased cost.

Following scale shows impact of specialized team available in banks for guidance of customers regarding application, its technicalities and problems during use. Three-item scale was adapted from (farah, 2017)at five point likert scale having 1=strongly disagree & 5=strongly agree.

Impact of usage without data on MBR was measured through three-item scale which shows customer behavior with reference to connection with App at any place & time with ease. This scale was presented by (venkatesh et al., 2003)and adapted according to need of this study.

Feature of card less transaction was measured through three-point scale by facilitating customers without card and freeing him from limit of presence of registered person at place of transaction(hallowell, 1996). Likert scale was used to assess this at 1=strongly disagree & 5=strongly agree.

All above factors effect MBR and MBR have impact on bank growth. To know this impact, we examined financial reports of banks which refer to secondary source of data.

3. Sample

Population of this study is all Pakistani banks' customers. Time and resource constraints became reason of cross sectional study and non-probability sampling. Adapted questionnaires were circulated among customers at five banks "Askari Bank Limited (AKBL), Muslim Commercial Bank (MCB), Bank Alfalah, Allied Bank Ltd.(ABL) and United Bank Ltd". (UBL)on the basis of their size and popularity in Pakistan-in a big city of Pakistan Gujranwala. Before data collection approval from all branch managers got to proceed. Data was obtained for 5 years from 2014 to 2018 which includes the period before retention of MB and after its retention.250 questionnaires were distributed among the customers of all banks which required their 15 minutes to fill. Demographics of respondents are available in Table 1.

Table 1 show that 162 male and 88 female respondents participated in the questionnaire filling resulting 250 in sum. Most of respondents have ages of 51-60 years and few of them say 16 respondents fall in category of 18-30 years.36.4% has a degree of post-graduation and 7.2% have higher education degree.47.6% have 4-5 years and 14% have 1-2 years working relationship with the bank. Respondent's percentages from all banks (AKBL, ABL, UBL, ALFALAH AND MCB) are 34,10,20,17 & 18 respectively.

Results and Discussion

In this study SPSS was used to conduct reliability and Regression tests (Luo, Li, & Zhang, 2010). Reason to choose Linear regression was its ability to assess things powerfully, to provide strong proof of model fit & to test latent variables.

Measurement Model and Testing of Hypothesis

Following Table shows correlations of all constructs and dependent variable "Mobile Banking Retention. IT Control Rating is significant with.011, Transaction cost with .000, specialized team with .260, Card less transaction and Usage without data both have value of .000. R-squared has value of .307 which shows reliability of the model as it has well explaining power and Durbin Watson is .353. ANOVA is representing F value 21.659. By moving forward this study contains different models to show authenticity and reliability of results. At page 11 Partial regression plots are given by plotting independent variables at X-axis and dependent variable at Y-axis, which showed effect of all directional constructs on retention of Mobile banking.

Table I: Respondents' demographic characteristics

Standardized path coefficient	Frequency	Valid Percent	Cumulative Percent
Gender			
Male	162	64.8	64.8
Female	88	35.2	100
Total	250	100	
Age			
18-30	16	6.4	6.4
31-40	57	22.8	29.2
41-50	67	26.8	56
51-60	82	32.8	88.8
61-above	28	11.2	100
Total	250	100	
Education level			
Intermediate	58	23.2	23.2
Graduation	83	33.2	56.4
Post-graduation	91	36.4	92.8
Higher education	18	7.2	100
Total	**250**	**100**	
Relationship			
1-2 Years	35	14	14
2-3 Years	59	23.6	37.6
3-4 Years	37	14.8	52.4
4-5 Years	119	47.6	100

Total	**250**	**100**	
Banks			
AKBL	85	34.0	34.0
MCB	45	18.0	52.0
ALFALAH	43	17.2	69.2
ABL	25	10.0	79.2
UBL	52	20.8	100.0
Total	**250**	**100.0**	

Next part of the paper reflects effect of Mobile banking retention of performance of 5 selected banks of Gujranwala, Pakistan. 3 constructs, including increase in ATM in city, increase in transactions held in that specified bank and increase in current accounts of the bank. Reliability test showed Cronbach alpha .896 which is more than .7 & less than .9. So, it would be considered good to use. R-squared for Bank performance and MBR is .821 which shows the explaining power of MBR with reference to bank's performance in Pakistan.

TABLE II

Correlations

		Mobile Banking Retention	IT Control Rating	Transaction Cost	Specialized Team	Usage Without Data	Card less Transactions
Pearson Correlation	Mobile Banking Retention	1.000					
	IT Control Rating	.146	1.000				
	Transaction Cost	.354	.739	1.000			
	Specialized Team	-.041	.841	.548	1.000		
	Usage Without Data	.315	.790	.686	.506	1.000	

	Card less Transactions	.227	.934	.708	.833	.758	1.000
Sig. (1-tailed)	Mobile Banking Retention						
	IT Control Rating	.011					
	Transaction Cost	.000	.000				
	Specialized Team	.260	.000	.000			
	Usage Without Data	.000	.000	.000	.000		
	Card less Transactions	.000	.000	.000	.000	.000	

TABLE III, IV & V

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R^2 Change	F Change	df1	df2	Sig. F Change	
1	.554[a]	.307	.293	1.04044	.307	21.659	5	244	.000	.535

a. Predictors: (Constant), Card less Transactions, Transaction Cost, Usage Without Data, Specialized Team, IT Control Rating

b. Dependent Variable: Mobile Banking Retention

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117.230	5	23.446	21.659	.000[b]
	Residual	264.134	244	1.083		
	Total	381.364	249			

a. Dependent Variable: Mobile Banking Retention

b. Predictors: (Constant), Card less Transactions, Transaction Cost, Usage Without Data, Specialized Team, IT Control Rating

Collinearity Diagnostics

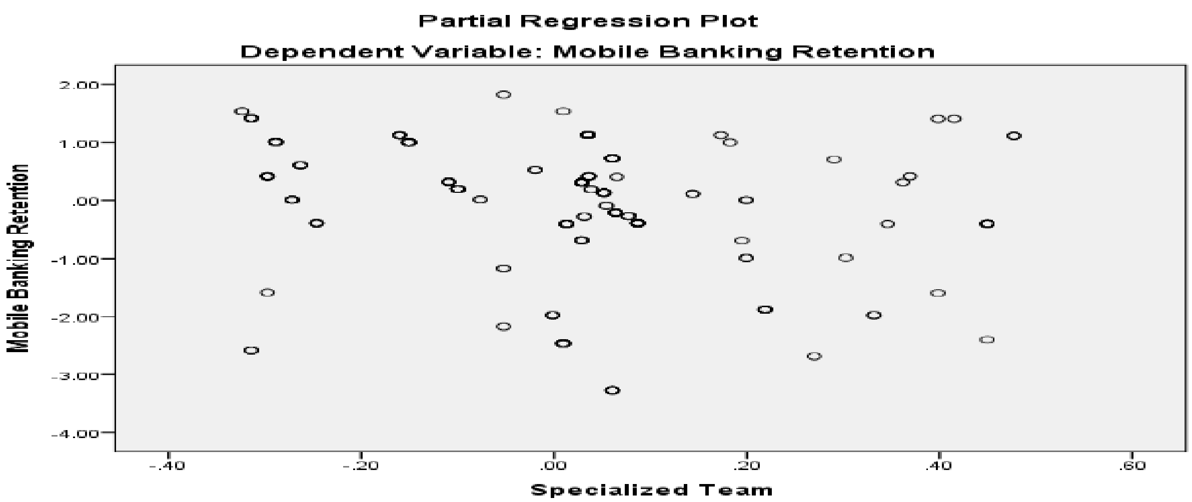
Model		Eigen value	Condition Index	Variance Proportions					
				(Constant)	IT Control Rating	Transaction Cost	Specialized Team	Usage Without Data	Card less Transactions
1	1	5.981	1.000	.00	.00	.00	.00	.00	.00
	2	.009	26.203	.38	.00	.07	.02	.14	.00
	3	.005	34.733	.45	.02	.18	.09	.03	.02
	4	.004	36.905	.07	.00	.68	.01	.35	.00
	5	.001	83.974	.03	.03	.03	.71	.34	.58
	6	.001	105.460	.07	.96	.03	.17	.13	.40

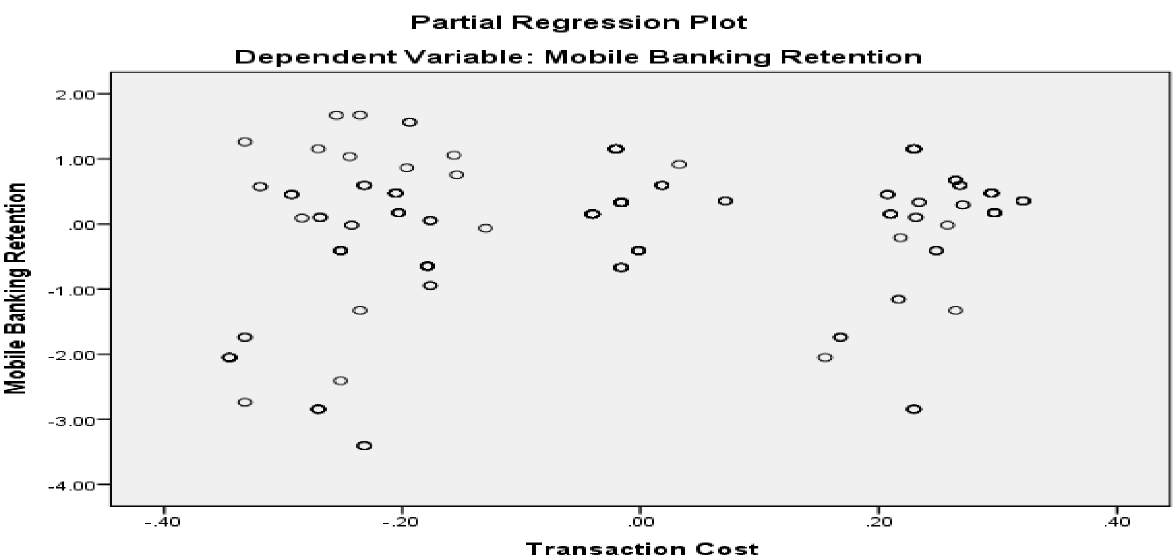
a. Dependent Variable: Mobile Banking Retention

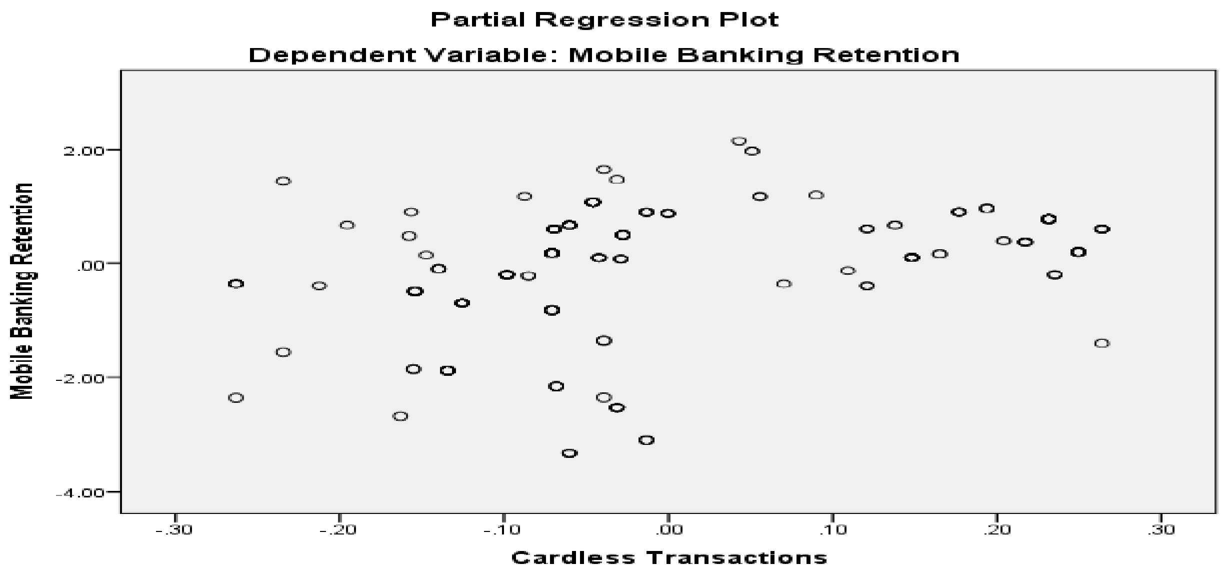
Residuals Statistics

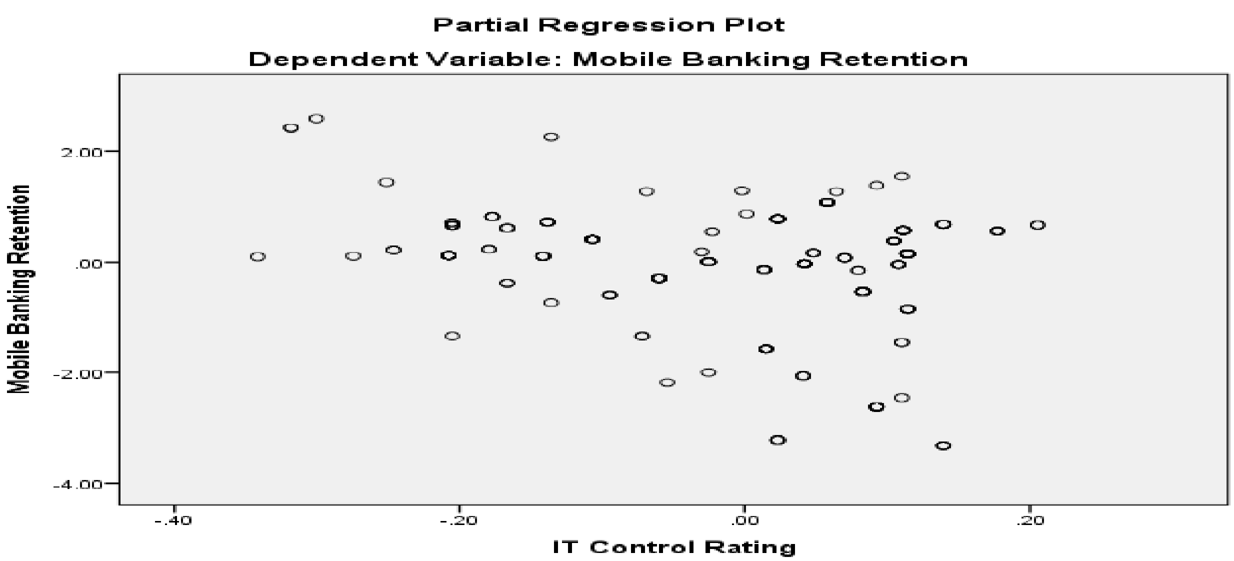
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.8748	5.2350	3.6120	.68615	250
Residual	-3.17993	2.04235	.00000	1.02994	250
Std. Predicted Value	-2.532	2.365	.000	1.000	250
Std. Residual	-3.056	1.963	.000	.990	250

a. Dependent Variable: Mobile Banking Retention






Partial Regression Plot
Dependent Variable: Mobile Banking Retention
Mobile Banking Retention
2.00
.00
-2.00
-4.00
-.30
-.20
-.10
.00
.10
.20
.30
Cardless Transactions


Partial Regression Plot
Dependent Variable: Mobile Banking Retention
Mobile Banking Retention
2.00
.00
-2.00
-4.00
-.40
-.20
.00
.20
IT Control Rating

Correlations

		Bank Performance	RMB
Pearson Correlation	Bank Performance	1.000	.906
	RMB	.906	1.000
Sig. (1-tailed)	Bank Performance	.	.000
	RMB	.000	.
N	Bank Performance	250	250
	RMB	250	250

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.896	.906	16

Model Summary

					Change Statistics					
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**	**Durbin-Watson**
1	.906[a]	.821	.820	.26875	.821	1137.963	1	248	.000	.235

a. Predictors: (Constant), RMB

b. Dependent Variable: Bank Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	82.188	1	82.188	1137.963	.000[b]
	Residual	17.912	248	.072		
	Total	100.100	249			

a. Dependent Variable: Bank Performance

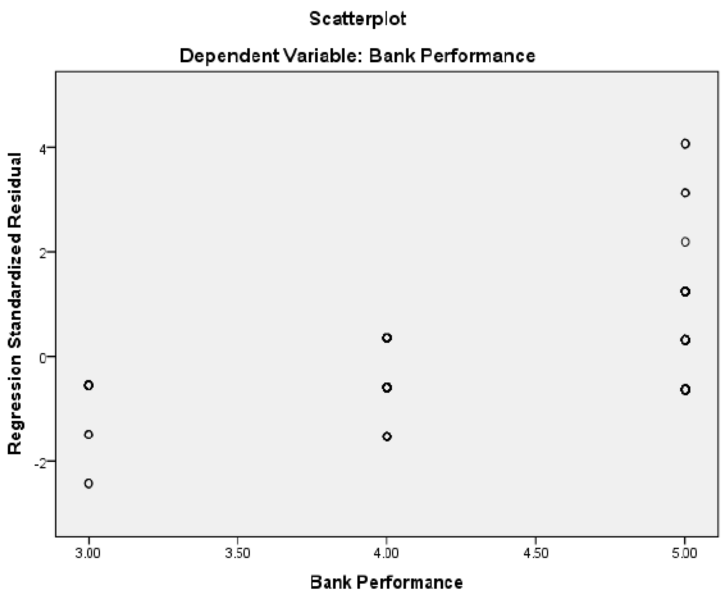
b. Predictors: (Constant), RMB

Collinearity Diagnostics

Model	Dimension	Eigen value	Condition Index	Variance Proportions	
				(Constant)	RMB
1	1	1.991	1.000	.00	.00
	2	.009	15.210	1.00	1.00

a. Dependent Variable: Bank Performance

TABLE VI - IX



Conclusion

The study explores the percussion of MB Retention on the recital in the context of Pakistani banks. Majority of studies suggested I.T a good tool to enhance efficiency of work in all fields including banking sector. To gain global reach and to provide executive services banks are available to everyone at every place tagging as 24/7 service just because of I.T. Banks are providing all services through their Mobile applications even at low rates, which lead towards customer attraction, benefit and loyalty which as a whole ultimately provides profits to banks in the form of increased favorable numbers and market share. This study aimed to explore factors affecting Customer retention on Mobile banking and effect of retention on bank performance; it will fill the existing gap in literature. To achieve research objective data was gathered through questionnaire as well as relying on financial statements of 5 banks in Pakistan. All constructs of MBR are significant as Transaction cost with .000, Card less transaction and Usage without data both have value of .000. 0.000, IT Control rating is at 0.011. But specialized team proved to be insignificant with.260. Later on MBR proved significant while explaining banks performance with 0.000. This study covers the effect of Mobile banking retention on Pakistani banks performance only. Hence, generalization of the research should be made with caution.

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The Impact of Process Innovation On Performance of Smes Considering the Mediating Role of Financial Resources

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Abstract:

SMEs face challenges in dynamic business environments, including technological advancements, globalization, and COVID-19, requiring process innovation, but limited financial resources hinder, emphasizing tailored knowledge management referring SMEs performance. The study explores the impact of process innovation on SMEs' performance and the role of financial resources, analyzing data from a sample of SMEs across various industries and examining moderating factors. Researchers will gather quantitative data from SMEs on process innovation, financial resources, and performance metrics using surveys, interviews, focus groups, and secondary data. Regression analysis would assess statistical relationships. The research will suggest a positive relationship between process innovation and SME performance, with greater financial resources leading to better performance. It will also suggest that financial resources mediate the relationship, with full, partial, or no mediation. These findings would provide valuable insights into the dynamics between innovation, financial resources, and SME performance.

Key-words: Innovation, Process innovation, financial in resources, SMEs, Performance.

Introduction:

The challenge faced by SMEs is the dynamic and rapidly changing business environment characterized by technological advancements, globalization, and evolving customer preferences. SMEs operate in highly competitive markets where larger enterprises often have resource advantages. The worldwide economy has been severely impacted by the COVID-19 pandemic, especially SMEs. In times of crisis, these companies find it difficult to continue operating because of their low financial resources (Charoensukmongkol, 2022; Kurniawan & Iskandar, 2023).

By leveraging operational procedures and readily available specialist resources that can be customized for certain clients' demands and markets, SMEs can gain an advantage over larger businesses (Zahoor et al., 2023). SMEs must thus make significant investments in the development of dynamic capacities because innovation is a key component that ensures their competitiveness (Ferreira et al., 2020; J. S. Wang, 2017; Cheng & Chen, 2013). Because of their tiny, adaptable, and flexible social and organizational structures, SMEs differ from large companies in that regard, and the dynamics of leadership may operate differently for innovation in such businesses (Matzler, Schwarz, Deutinger, & Harms, 2008).

Other studies have concentrated on all types of innovation (Heredia Perez et al., 2019) or product innovation only (Feldens et al., 2012; Ramadani et al., 2019). Our research focuses exclusively on process innovation in emerging countries, and thus makes a significant contribution to research while taking into account different skills and approaches, and the factors that influence the performance of SMEs considering financial resources a vital part of it.

Given the rapid changes in client expectations, technologies, and sales channels, process innovation is an essential challenge for firms. It necessitates constant adaptation, which occasionally results in significant alterations (Piening and Salge, 2015; Naveh, 2005). Organizations must adjust to new opportunities presented by emerging technologies as well as impending client expectations in order to deliver goods and services successfully and efficiently. In contrast to product innovation, which concentrates on bringing new products, process innovation refers to the introduction of a significantly different way of carrying out operations. Creating, modifying, and implementing brand-new or drastically altered organizational procedures are all part of process innovation. Considerations include logistics, legal compliance, employee willingness and training, and compliance. Institutions are a major focus for successful process innovation in businesses, which is dependent on both internal and external contexts (Leyer, Durst,2022).

When considering the implications for financial resources, guidelines for managing intellectual capital that are specifically tailored for small and medium-sized firms (SMEs) may offer limited benefits. This is since these guidelines, while stressing the importance of formalizing methods and controls, frequently assume that resources are available, potentially ignoring resource restrictions. Furthermore, they might not be completely aware of the advantages that informal controls which place a strong emphasis on adaptability and responsiveness can provide SMEs. The study's conclusions highlight the significance of taking financial consequences into account when optimizing knowledge management methods for SMEs, as knowledge use has a greater impact on harvesting effectiveness than does knowledge creation alone.

According to the study, SMEs that receive greater financial support are more likely to operate on larger R&D budgets and have higher levels of innovation than their less innovative counterparts. Conversely, scarce financial resources present a serious obstacle to SMEs' ability to innovate. The widely held notion that greater resources equal better outcomes are thought to be an oversimplified theory of public service improvement, highlighting the role that financial resources play in luring in skilled workers, boosting technical proficiency, and upkeep of infrastructure to boost organizational performance.

Literature Review:

Changing nature of businesses which are changing the size of businesses, trend of foreign firms contributions including large firms and increasing competition environment among the companies and their respective developments have put a strong pressure on the companies specifically in the emerging countries (Aldairany et al., 2018). These provocations can only be resolved by inclusion of innovation in the companies (Wenzel et al., 2020).

Previously, the literature has discussed innovation by sorting it out in three divisions, one is product innovation, secondly process innovation and then management innovation (Snihur & Wiklund, 2019). Researchers have identified process and product innovation more important and contributed more while taking into account organizational success.(Chang, Bai, & Li, 2015).

Though previous research has extensively centered on product or service innovation (Zhou & Wu, 2010) and process innovation has been ignored or very less discussed (Chang, Bai, & Li, 2015).

Researchers have summed up Management innovation as "how managers do what they do" (Hamel, 2006). Identifying it as administrative innovation rather than technological innovation, researches clarified that this innovation encompasses novel concepts for hiring staff, allocating resources, and organizing responsibilities, authority, and incentives (Evan, 1966). Moreover, organizational innovation might involve new policies, roles, and procedures (Damanpour and Evan, 1984), adjustments to organizational structures, and adjustments to people's actions and attitudes (Knight, 1967).

Many studies explained product innovation as the process of creating and launching new goods or services to meet the needs and desires of end consumers (Jiménez-Jiménez & Sanz-Valle, 2008). Some of them have discussed it relating to small and medium enterprises where due to SMEs limited financial resources, they must innovate their products in order to grow and survive. This is because large corporations invest more in marketing and distribution channels than do small businesses. SMEs don't look to mass production to gain a cost advantage; instead, they rely on innovative products and services (Tarigan, 2018).

Thus far, the majority of research on the elements that foster process innovation has been on internal organizational issues. Aspects like client focus and organizational structure are addressed at the organizational level (Leyer et al., 2017); aimed at the employee level (Opland et al., 2022). Also, the pandemic's effects have highlighted the necessity of process innovation in particular to maintain operations (Durst et al., 2021).

One study investigates how institutional factors affect process innovation in emerging-market companies which examines the effects of 41 nations' workforce, political unrest, labor laws, corruption, taxation, and transportation on process innovation. The study highlights the significance of certain institutional aspects for SMEs as well as the impact of GDP per capita and firm size on the relationship between institutions and process innovation. It also emphasizes how important it is for future research to take the relationship's company size and context into account. The results indicate that comprehending how institutional factors affect innovation generally and process innovation specifically requires taking the company's size into consideration (Michael Leyer, Susanne Durst, 2022).

While contrasting process and product innovation it has seen that process innovation is crucial in achieving production efficiency-based cost advantage. On the other hand product innovation is related to differentiation strategy(Barney, Wright, & Ketchen, 2001; Porter, 1990).

Since SMEs constitute the backbone of many emerging or less developed economies, they are the business sector in many of these nations that is expanding the quickest.(Savlovschi & Robu, 2011). SMEs make up around 50% of the GDP and are involved in a number of industries, including distribution (50%), manufacturing (10%), services (10%), and agriculture (30%)(Lemuel, 2009).

Due to differing analytical levels, language problems, and conceptual evaluation grounds, no one definition has been agreed upon. A company's performance may be described as an overview of its operations' outcomes stated in both monetary and non-monetary terms, depending on the questions posed.(Challis & Clarkson, 2020; Yeniaras et al., 2021).

The extent to which SMEs improved their cash flow, profit margins, return on investment, and other non-financial metrics, such as staff and customer happiness, innovation, and business strategy.(Gonza´lez-Benito et al., 2009).Because small and medium-sized businesses (SMEs) are so important to the economy of emerging nations, both professional and academic scholars are deeply concerned with SMEs' survival and expansion (Akenroye et al., 2020; Bouwman et al., 2019; Dejardin et al., 2022; Donkor et al., 2018; Ferreira et al., 2020).SMEs must be empowered to flourish in the face of fierce competition through targeted government support, customized strategies that prioritize innovation, and ongoing learning. Together, these initiatives can help SMEs reach their full potential and thrive in the changing business environment. (Hassan Dauda, Gunalan Nadarajah, 2023).

The current digital revolution is providing businesses, particularly SMEs, with more incentives than they had in the past and has created significant prospects for the spread of sophisticated payment systems (Abdulkader et al., 2020; Alam et al., 2021; Kazan et al., 2018).

Additionally, prior research on digital financial services influencing SMEs performance has focused mostly on mobile money payments.(Bosire & Ntale, 2018; David-West et al., 2018; De Luna et al., 2019).

Additionally, prior research on digital financial services has focused mostly on mobile money platforms.This work adds to the body of knowledge regarding the relationship between the performance of SMEs and digital financial services like the QR code system. First off, by examining the special function of dynamic capabilities in the digital payment platform and firm performance nexus, this study adds to the body of research on the relationship between digital services and firm performance.According to the study, QR code payments and mobile money have a major, beneficial influence on business performance, and dynamic capability is a key interacting factor in this relationship.(Klenam, Enya, George, 2023)

Another study explores the relationship between HRM practices,Organization innovation, and SOP(Sustainable Organizational Performance) in emerging nations. Results show that performance management and compensation and benefits directly influence SOP, while employee staffing and staff development have no significant impact. All HRM practices indirectly influence OI, positively influencing SOP and mediating the relationship between HRM practices and SOP(Samma Faiz, Yan Zhao, 2022).

Another study examines the impact of management accounting services on the financial performance of SMEs in Ghana's commerce, service, and manufacturing industries. The sample consisted of 365 Modular registered SMEs, and the study used the agency theory and TAM to analyze data. The results showed a correlation between SMEs' performance and management accounting methods.(Emmanuel, Williams, 2023)

Researchers frequently refer to a lack of financial and human resources (Keizer et al., 2002), but one well-documented significant shortcoming of SMEs is their restricted resources (Garengo et al., 2005; Laforet and Tann, 2006).

The literature uses several methods to distinguish between distinct resources. First, resources can be classified as intangible (such as talents and competencies; Galbreath, 2005; Saunila and Ukko, 2014) or tangible (such as money, materials, and personnel). Some writers distinguish between distinct resource classes (e.g., financial, physical, or human; Rangone, 1999) or their degree of stickiness (particularly in relation to financial and human resources; Bakar and Ahmad, 2010; Bradley et al., 2011b; Hoegl et al., 2008). This indicates that human resources are stickier because employee knowledge is frequently restricted to certain tasks, whereas money resources can be rapidly put to various purposes (Bradley et al., 2011a; Mishina et al., 2004).

According to the Resource-Based View (RBV), resources are allocated differently throughout enterprises, and different resources have different values (Barney, 1991; Rangone, 1999). Hadjimanolis (1999) emphasizes the applicability of the RBV to small businesses, proposing that resource levels may be the cause of variations in SMEs' levels of innovation. There are divergent opinions in the literature regarding how resource scarcity affects innovation. While some say that limitations foster creativity, others assert that having more resources available is essential for seizing new chances (Paladino, 2007; Song et al., 2008; Bradley et al., 2011a; van Burg et al., 2012).

A growing corpus of research indicates that resource scarcity may not always have an impact on firm performance or innovation performance, despite the positive and negative connections that have been proposed between resource scarcity and firm performance. Internal capabilities have a greater impact on increasing competitive advantages than financial resources, according to Maranto-Vargas and Gómez-Tagle Rangel's 2007 research. This highlights the significance of resource recombination within the RBV framework. DeSarbo et al. (2007) provide empirical confirmation that effective resource utilization, as opposed to acquiring new resources, is a major factor influencing corporate performance. They made this observation based on their analysis of 216 US firms across several industries.

A rising corpus of research indicates that resource quantity may not always have an impact on overall firm performance or innovation performance, challenging the presumptive positive and negative correlations between resource scarcity and firm performance. Maranto-Vargas and Gómez-Tagle Rangel (2007), for example, discovered that internal competencies were more important in boosting competitive advantages than financial resources, corroborating the idea that repurposing current resources is essential in the context of the RBV framework. This is supported by empirical data from DeSarbo et al. (2007), which shows that the most prosperous businesses make effective use of their current resources rather than merely obtaining additional ones.

The theoretical stances in favor of a favorable relationship between financial resources and organizational performance are also covered in the subject of financial resources. The notion of public service production, which compares government service production to private production processes, is consistent with the viewpoint of economists. On the other hand, resources play a crucial role in attaining durable competitive advantages according to the Resource-Based View (RBV) (Barney, 1991; Wernerfelt, 1984).

Extensive analyses of empirical research conclude that, to get the greatest possible benefits, effective resource allocation is necessary rather than just increasing spending. According to Alchian and Demsetz (1972), having precise knowledge of the relative productive performance of resources—rather than possessing superior resources—is what leads to effective production with heterogeneous resources. Consequently, improved organizational performance is a result of the efficient use and management of scarce organizational resources (Lee & Whitford, 2013).

Hypothecation:

H_1: There is a positive relationship between process innovation and SMEs performance.

H_2: There is positive relationship between financial resources and SMEs performance.

H_3: The impact of process innovation on SMEs performance is mediated by financial resources.

The hypothesis "H1: There is a positive relationship between process innovation and SMEs performance" posits that there is a direct and favorable connection between the implementation of process innovation and the overall performance of Small and Medium-sized Enterprises (SMEs). This hypothesis implies that SMEs that actively engage in and adopt innovative processes are expected to experience improved performance outcomes. The positive relationship suggested in the hypothesis aligns with the conventional understanding that innovation, particularly in operational processes, can contribute to increased efficiency, cost-effectiveness, and overall competitiveness. The hypothesis implies that the benefits derived from implementing process innovation are expected to manifest in various aspects of SME performance, such as financial indicators, operational efficiency, and possibly market share.

The hypothesis "H2: There is a positive relationship between financial resources and SMEs performance" suggests that there is a direct and beneficial correlation between the availability or allocation of financial resources and the overall performance of Small and Medium-sized Enterprises (SMEs). This hypothesis implies that SMEs with greater financial resources are expected to exhibit enhanced performance outcomes compared to those with limited financial resources. Financial resources are essential for various aspects of business operations, including investment in innovation, expansion, marketing, and day-to-day functioning. Adequate financial resources are often associated with improved liquidity, flexibility, and resilience in the face of challenges.

The hypothesis "H3: The impact of process innovation on SMEs performance is mediated by financial resources" suggests that the relationship between process innovation and the performance of Small and Medium-sized Enterprises (SMEs) is influenced or moderated by the availability and utilization of financial resources. This hypothesis is rooted in the idea that the successful implementation of process innovation may require adequate financial support. Process innovation initiatives often involve upfront costs related to research and development, technology adoption, training, and restructuring. Financial resources can facilitate the smooth execution of these activities, potentially amplifying the positive effects of process innovation on SME performance. Understanding the mediating role of financial resources in the relationship between process innovation and SME performance is essential for policymakers and business leaders. It provides insights into the multifaceted nature of the innovation-performance link, emphasizing the importance of considering financial factors when implementing and assessing the outcomes of process innovation initiatives in SMEs.

Theoretical Framework

Figure 1: Conceptual Framework

This paper explores the relationship of process innovation in SMEs and their performance with the mediating role of financial resources. Here, process innovation is dependent variable, SMEs performance is independent variable and financial resources is playing a role of mediator.

Methods:

Researchers could utilize surveys to gather quantitative data from SMEs, focusing on their levels of process innovation, financial resources, and performance metrics. Likert scales and structured questions can help quantify respondents' perceptions and experiences. Interviews and focus groups could also be conducted with SME owners, managers, and key stakeholders to gather qualitative data on their perspectives regarding process innovation, financial resources, and performance. This can complement quantitative findings. While considering data collection from secondary resources existing datasets could also be used to analyze trends and patterns related to process innovation, financial resources, and SME performance. This can be particularly useful for large-scale studies and cross-sectional analyses. Regression analysis could be used to assess the statistical relationships between variables i.e. multiple regression analysis can be used to examine the simultaneous impact of process innovation and financial resources on SME performance.

Results:

Based on the hypothesis and methods outlined, research would depend on the specific findings of hypothesis analysis. In case of H1, if supported, the research may find a statistically significant positive relationship between process innovation and SME performance. This would imply that SMEs engaging in process innovation are likely to experience enhanced overall performance. In case of H2, if supported, the research may reveal a statistically significant positive correlation between the availability or allocation of financial resources and SME performance. This would suggest that SMEs with greater financial resources tend to perform better than those with limited financial resources. In case of H3, if supported, the research may find evidence that financial resources play a mediating role in the relationship between process innovation and SME performance. This implies that the positive impact of process innovation on performance is contingent on the presence of sufficient financial resources. There could be three possible scenarios.

Full Mediation: Financial resources will completely mediate the relationship between process innovation and SME performance. In this case, the positive impact of process innovation on performance is only realized when financial resources are present.

Partial Mediation: Financial resources will partially mediate the relationship between process innovation and SME performance. Even though financial resources play a role, there are other factors influencing the relationship.

No Mediation: Financial resources will not mediate the relationship between process innovation and SME performance. In this case, the impact of process innovation on performance is direct and not influenced by financial factors.

No matter what the results would come from these, these expected results would provide valuable insights into the dynamics between innovation, financial resources, and SME performance, contributing to both academic understanding and practical implications for policymakers and businesses aiming to enhance SME success.

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A Quantitative Examination of the Variables Influencing the Selling Price of Opulent Residences in Vietnam

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Abstract:

The elements influencing the selling price of upscale residences in Vietnam are examined in this article. The analysis of local and international literature reveals that the theoretical framework identifies four key elements influencing the selling price in the physical attributes, location and orientation, external environment, and standard of management and maintenance services that make up the real estate market. This paper's empirical study indicates that two more aspects should be taken into account: the real estate investor's qualities and the consumer segment's features. Based on the investigation, it was determined that each of the six previously listed characteristics has a unique, positive correlation with the price at which a high-end apartment is sold. Lastly, the piece made a few recommendations, for managers on how to maximise profit in this extremely profitable market sector by optimising the selling price.

1 Introduction

Vietnam's economy is expanding quickly, and it is closely integrating with the global economy. One of the most significant sectors of the Vietnamese economy is the real estate market as practically all of the country's generations view opulent, high-value homes as secure investments that are worthwhile, particularly during the COVID-19 pandemic's difficult period. Surprisingly, the Vietnamese real estate market is still booming despite the COVID-19 epidemic, with prices growing by 15% on average over the previous year (2021–2022) (VNE, 2022). Due to the fact that many international real estate investors and home developers in the area (Japan, South Korea, Taiwan, Singapore, etc.) view Vietnam's real estate industry as having enormous potential and providing excellent economic prospects, it is currently undergoing globalisation. Numerous studies that have been published in the International Journal of Business and Globalisation (IJBG) have addressed local and/or global business challenges in relation to the process of globalisation. Nevertheless, not every industry or area is addressed in an IJBG piece from the past. This study is a trailblazing attempt to address one of these gaps by examining the problems associated with the upscale real estate market in Vietnam's biggest agglomerations.

The culmination of each apartment complex's technological aspects, architectural design, financial resources, level of management, and service charges results in high-end (luxury) apartments (Thuan, 2019). Every flat is a separate property with unique uses, connected to the shared area via traffic. The building's distinctive qualities have been established by free derivative services, as well as a sense of cleanliness, convenience, safety, and civilization (Wackowski, 2022). Consequently, flats are becoming a common housing requirement for those with considerable money and are becoming more and more integrated into the fabric of metropolitan neighbourhoods (Ngoc, 2016). In terms of project size and structure, communication infrastructure, capital raising and sales techniques, pricing strategy, and after-sales obligations, the development pattern of various housing projects in Vietnam's real estate market has fundamentally altered (Ngoc, 2021c). The most well-known aspects of Vietnam's real estate market in recent years have been the absence of clear information, the frailty of state management organisations, the absence of market-oriented and stabilising policies, and the persistent virtual price fever in many areas, which leaves buyers desiring to purchase real estate in the area ignorant of comparable projects, perplexed about the cost and quality of construction, and legally unprepared (Ngoc, 2021b). For a variety of factors, the market is impulsive, which means that the majority of the inventory is in the high-end apartment market. This has left investors with significant financial losses and confused individuals with high incomes who wish to upgrade their living conditions. In addition, the state has volatility in social security and a loss of tax income (Hiep, 2021; Kauko, 2006).

For all investors, it is critical to comprehend clients' perspectives and gauge how they feel about the variables influencing the selling price of upscale apartments (Dana, 2021; Mehmood and Kakar, 2011). Because high-end apartments have a collosal value and customers may only make one purchase in their lifetime, it is becoming more and more important for investors to research the factors that affect high-end apartment selling prices. Even a small percentage difference in price can have a significant impact on the absolute money value of the purchase or sale (Ksenija et al., 2012; Ngoc, 2021c, 2016). Sincere investors, building firms, and company managers anticipate that this study will change the direction of real estate research. There is a vast array of topics that require investigation, both in theory and in practise. As a result, the sole subject covered in this article is the variables influencing how buyers in major Vietnamese cities perceive the initial asking price of upscale apartment projects.

The article's main objective is to examine the variables that influence the selling price of upscale apartments in Vietnam's biggest cities, primarily the capital Hanoi and Ho Chi Minh City. The essay seeks to accomplish the following particular goals in order to reach this goal:

- Determine the elements that influence the selling price of upscale apartments.
- Put forth and validate theories that account for the elements influencing the selling price of upscale apartments.
- Provide many recommendations on how to influence the supply-demand-based high-end apartment selling price in a way that benefits the community and society's stakeholders and promotes the sector's sustainable growth.

The five traditional elements of this study are the introduction, literature review, methods, findings, and conclusions. These sections serve to address the primary research topics in this study.

2 Literature review

As per Thibodeau's (1980) study application model in the housing market, the hedonic valuation approach is a regression model that determines an apartment's worth by analysing its associated features. Every different attribute is represented by an independent variable, and the latent prices of these qualities are represented by coefficients in the model's output.

The following is the form of the flat price or value regression model:

R = f(S, N, L, C, T), in which S denotes structural qualities, N the surrounding environment's feature, L the position, C the transaction contract's characteristics, and T the amount of time the flat will be rented out, swapped. Thibodeau (1980) states that one of the common uses of the hedonic pricing model in the process of urban development is transactions in the housing segment based on appraisal findings. Since different clients have different demands when it comes to accommodations, housing is a heterogeneous commodity. For instance, an apartment's surroundings, balcony orientation, ventilation rate, natural sunlight, proximity to the lift lobby and emergency escape stairs, interior furniture quality, and finishing materials are just a few of its many unique features. Every property has a varied position, whether it is near or distant from the garbage collection area, has easy or difficult access to the road, is across from the lift lobby or is at the end of the hallway. There are differences in the architectural design, colour, and arrangement in addition to the difference in building time. Furthermore, the user's use has a different goal. As a result, a flat with the same amenities may be priced differently based on the goals of the owner. Property valuation is heavily influenced by the monthly service charge and the goal of asset evaluation. The objectivity of property value findings is eroding over time. The hedonic technique is frequently employed since it evaluates and incorporates the worth of particular structural characteristics into the total value of the property or the entire flat. Nevertheless, property values must still be determined fairly and objectively as the foundation for civil transactions.

The value of the flat will depend on how the functions are ordered in the most appropriate and scientific manner, according to Sirgy et al. (2005). The significance of these flat features varies depending on the culture of the respective nation. First-time consumers' intentions will be significantly influenced by their habits and customs (Opoku and Abdul-Muhmin, 2010). According to Kauko's (2006) study, flat features were more significant to occupants than the building's location in Randstad, the Netherlands. As stated by Colwell (1990), an apartment's construction quality, design, locality, legality, and resaleability are its five main features. In technical terms, an apartment is a building made up of walls, floors and ceilings. When a flat satisfies the criteria of robustness, tolerability, and affordable building costs, it is said to have a good structure. First-time house purchasers will thus be particularly interested in the quality of building materials and construction technologies (Colwell, 1990). Anh (2018) investigated how low- and medium-cost home choices are influenced by both financial and non-financial variables. Customers purchasing low- to mid-range commercial and social housing had their decision to select and be content with their home based on a variety of financial and non-financial criteria, which were studied and compared in this study. A research on "using price tools to compete in terms of international economic integration of cement manufacturing enterprises in Vietnam" was conducted by Duc (2008). Hung (2009) put out a real estate value technique based on the position-quality hypothesis. Two categories of variables influence real estate values, according to this method:

1. A category that accounts for building floors, campus size, and housing quality

2. A groups that include location, lodging, travel time to the city centre, and whether the property is in the alley or in front of the group.

According to Binh (2013), the market value serves as the foundation for the taxable value of homes and residential land, and the comparison method is the primary technique for figuring out the taxable price. The thesis develops a set of standards, comprising 12 items to be used in the comparative approach, which are as follows:

1. legal attribute
2. the lot's form,
3. its size and scale
4. benefits of traffic
5. benefits for company

6. social facilities
7. technological frameworks
8. Scenery and surroundings
9. N.M. Ngoc et al.
10. feng shui
11. transaction time
12. market circumstances of deals
13. planning.

Thu (2013) found that the following are the primary elements influencing a choice to purchase a high-end flat:

1. well-built structure
2. administrative services (features of the product)
3. customer support policies, which include financial support from the bank and consumer incentives.

This is the primary component that makes it easier for clients to purchase upscale flats.

Hien (2014) states that there is still a significant discrepancy in the cost of commercial housing constructed by home design and construction companies when compared to the market's average transaction price. This has an immediate impact on corporate interests. Therefore, investment and construction businesses must: in order to finalise the value of new commercial housing

1 To measure the variables influencing housing prices, conduct research and utilise the hedonic model in commercial property appraisal. The rationale for the method's selection, the application's requirements, and a description of the study's applicability for recently constructed commercial housing must all be made very apparent.

2. Put forth a particular database system concept to support the commercial housing valuation process for recently built properties.

3 For every stage of development, suggest a price organisation model that takes into account the conditions and size of each group of enterprises.

4 Provide a method for setting up the appraisal so that it may be completed accurately and efficiently at various points in time.

In his work, Binh (2017) has

1. addressed the theoretical underpinnings of real estate finance policy.

2. carried out theoretical studies on the costs and valuations of real estate.

3. elements were examined in relation to the execution of financial policy that impact real estate values.

In actuality, he:

1 put forth models and theories to account for variables influencing real estate prices when real estate finance policies are put into effect.

2 examined and assessed the present state of financial policies for real estate in Hanoi, outlining the goals attained (real estate revenue is steady and growing, and the income structure is also improved). In particular, three inadequacies in the application of financial policies for real estate in Hanoi were made clear.

3 examined and assessed the present financial policies in Hanoi that are influencing real estate values.

4 His paper presented some recommendations on financial policy for real estate in Hanoi based on the four principles that were proposed.

Lastly, feng shui considerations also affect the cost of luxury residences. Feng shui, in its entirety, is the outcome of research-based understanding of how the environment, the laws of nature, furniture placement, living space design, and techniques for modifying those effects on the environment interact. People from Asia, especially Vietnamese people, think that having good feng shui in their home can bring their luck and success. The home must meet all the requirements for feng shui, including topography, azimuth, ventilation, and reasonable exposure to the sun and wind.

In summary, Table 1 presents the study findings of the aforementioned authors about the variables influencing real estate prices in Vietnam, with a particular focus on the pricing of high-end apartment sector. The criteria that have been identified in this part titled "Literature review" will serve as the foundation for the selection and expansion of the input impact factors that are the focus of our research's verification.

3 Methodology

3.1 Research model and hypotheses

Both qualitative and quantitative approaches are valuable in business research because they enhance each other and add considerably to the depth and insight of study findings (Shepherd and Wiklund, 2020; Dana and Dana, 2005; Rahman et al., 2022). The majority of research articles that solely rely on qualitative research are rejected by reputable journals because of the researchers' partiality and lack of objectivity. In contrast, quantitative research-based articles require additional qualitative supplements to confirm the accuracy and correctness of their own findings through, for instance, comparison with those of other researchers. For this reason, combining a qualitative and quantitative method will result in more adequate research results and, in turn, more objective, multilateral conversations, better conclusions, proposals, and recommendations in the future.

The above-mentioned literature evaluation enables the establishment of a fundamental research model with six independent variables and one dependent variable, the selling price of upscale flats.

1 The apartment's physical attributes;

2 The apartment's location and position;

3 The surrounding environment; and

4 The cost of building

5 level of management service quality

6 features of clientele groups.

The following moderating variables are connected to the dependent variable (investor): position and reputation, marketing strategy, and capability (financial, technical, and managerial). This moderating element influences the selling price of upscale flats through the investor's dedication, advancement, and quality. Consequently, the findings of qualitative study have demonstrated that the selling price of high-end apartments is determined by five independent components and one moderating factor. The official research model is the theoretical model that included the investor's characteristics variable and eliminated the construction cost variable (because of research limits).

The selling price of upscale flats is the dependent variable, or goal variable.

Independent variables, also known as factor variables, are internal aspects that contribute to the value of real estate. These factors include physical attributes, location and position, the surrounding environment, the quality of the management services, and the characteristics of the client group. The investor's characteristics, including their position and reputation in the market, investment capacity, and business force, are the moderating element that affects the link between the independent and dependent variables.

The following are the research hypotheses based on the official model that has been proposed:

H1 The selling price (based on m2) of high-end apartments is influenced by their physical attributes.

H2 The selling price of high-end apartments is positively impacted by both the location of the apartment building and the high-end unit's position inside the building.

H3 The selling price of upscale flats is positively impacted by the neighbourhood.

H4 The selling price of upscale apartments is positively impacted by the quality of the management service.

H5 Buyer demographics have an impact on the asking price of upscale units.

H6 Investor attributes that positively impact the selling price of upscale apartments include location and reputation, finances, technological know-how, managerial ability, and marketing approach.

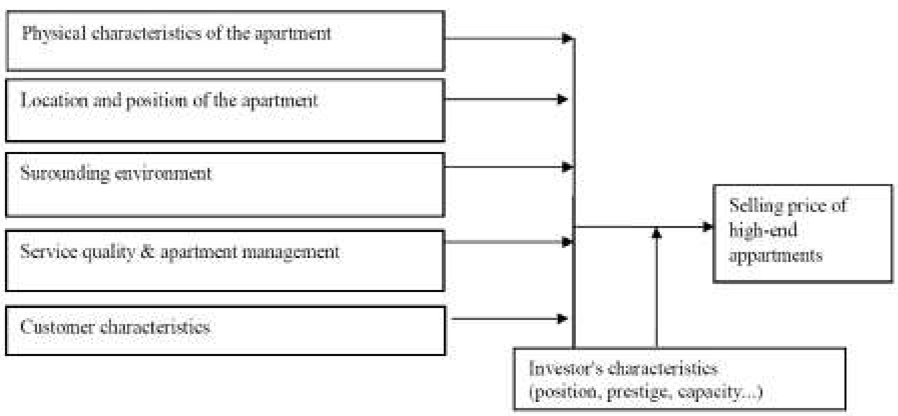
H7 There is an interacting link between the factors influencing the selling price of high-end properties.

As a result, the author particularly examines the following five independent variables, one control variable, and one dependent variable in the linear regression model:

GBCHCC	selling price of high-end apartment
VT	ocation of the apartment and the location of the apartment

VL	physical characteristics of the apartment
MT	ambience
CL	service quality and apartment management
KH	features of the various consumer groupings
DT	traits that the investor possesses

Figure 1 Model of factors affecting selling price of high-end apartments



3.2 Research Methodology

Sample size and sampling technique are the two factors that determine a sample's representativeness, according to Cavana et al. (2001). Thus, researchers may guarantee that the chosen sample subjects are representative of the community by using the proper sample size and sampling technique (Creswell, 2009). The authors of this study employed the seven-step Zikmund et al. (2010) pattern design method, which consists of the following steps:

Step 1: Ascertain the broad research objects the investigator plans to investigate (Creswell, 2009). The objective research objects for this study are real estate trading floors, managers, officers, and executives of real estate investment and trading companies.

Step 2: Choose a sample frame. The list of executives from real estate companies and trading floors was chosen as the study's sample frame.

Step 3: Decide on a sample strategy. Owing to temporal and financial constraints, the research employed a practical sampling technique. Prior to developing a study model and questionnaire, the authors conducted in-depth research and analysed relevant literature to guarantee high dependability, which has been demonstrated by earlier studies. Next, in order to confirm the content's credibility a second time, we speak with specialists. Lastly, the writers use a group of expert investigators that are skilled and educated in information gathering and discovery in order to get the most objective facts possible.

Step 4: Create a plan for sampling. A sample of real estate companies was chosen for this study, and data was gathered over the course of three months using a survey questionnaire.

Step 5: Establish the size of the sample. Hair et al. (2010) recommended that in the event of factor analysis (exploratory factor analysis, or EFA), the number of observations/measures should be 5/1 and the sample size should be at least 50, preferably 100. Five observations are required at minimum for each measurement variable. This study's questionnaire consists of 45 variables, and a minimum sample size of around 225 is estimated.

Step6: Establish the precise sample unit. A representative sampling unit of managers, leaders, brokers, and media who have worked in the real estate industry for a minimum of three years is chosen for this study.

step seven. The author first determines if the sample that was chosen is representative of the research objects throughout the sampling phase. Consequently, in order to gather data for study, It is imperative to guarantee that the subjects of the inquiry are individuals with experience in the real estate sector, particularly in the upscale apartment market. Simultaneously, the enumerators received training on verifying the correctness of the respondents' responses and the questionnaire completion rate. The research was carried out in 2018 and 2019. Before moving on to the study procedure utilising SPSS 22.0 and AMOS software, the data were entered onto a cleaned Excel file.

Following the receipt of the questionnaires, the authors used SPSS software to input and analyse the data from the tables, cleaned and filtered the information, and coded the pertinent information. The acquired data was then described by the authors using statistical analysis. After that, we carried out the further actions:

1. Use the EFA technique to confirm the variable's value.

2 use the Cronbach alpha test to assess the scale's reliability using the reliability coefficient

3. Multivariable regression model verification;

4. Confirmatory factor analysis (CFA).

EFA: Factor analysis is used in this study to condense the collection of observed variables into a few factors that each measure a distinct facet of the research ideas.

Verify that the scale is reliable: Using the processing programme SPSS 22.0, a preliminary evaluation of the reliability and value of the scale is conducted by screening and removing observable variables that do not match the criteria (junk variables). This is done using the reliability coefficient Cronbach alpha and EFA technique.

Multivariate regression analysis: The impact of numerous independent quantitative variables (apartment features, location, surroundings, segment characteristics, customers, and real estate investor characteristics) on a quantitative dependent variable (high-end apartment selling price) is tested using the multiple linear regression (MLR) model.

1. Correlation analysis* Examine the relationships between each independent variable and the dependent variables in the model, as well as between the independent variables themselves. The study takes into account the correlation between the independent variables to find multicollinearity, and it is anticipated that there would be a strong connection between the dependent and independent variables in the research model.
2. **Multivariable regression model testing**
   Multivariable regression can be used to describe the causal link between two variables once a linear relationship between them has been determined. Test the multivariable regression model using the enter technique, where all variables are entered once and the relevant statistical findings are taken into account.
3. Using SPSS software for hypothesis testing, evaluate the multivariable regression model's appropriateness. **R2**
   Verify the model's fit. Based on the histogram of the normalised residuals [see mean (= 0) and standard deviation (= 1)], the hypothesis testing of the residuals' normal distribution is conducted. The selling price of high-end apartments is influenced by a number of factors, including the apartment's physical attributes (VL), location and orientation (VT), ambient environment (MT), service quality and apartment management (CL), and client segment characteristics (KH). It is more likely to state that a component has a bigger effect than other factors in the model the larger the element's beta coefficient.

4 Findings

GBCHCC's EFA study of the factors influencing the selling price of high-end apartments reveals 29 observable variables that meet the criteria. These variables are categorised into six sets of factors, which include: High-end apartment physical characteristics (VL) comprise nine observed variables; apartment location and position (VT) comprise six observed variables; ambient (surrounding) environment (MT) comprise six observed variables; service quality and apartment management (CL) consists of five observed variables, four observed variables are part of the consumer demographic characteristics (KH), four observed variables are part of the control variable, investor characteristics (DT), four observed variables, and the dependent variable is selling price of high-end apartments (GBCHCC), which takes into account three observable factors (which represent survey respondents' perceptions of pricing).

The MLR model is deemed appropriate for the dataset and potentially useful based on the F statistic value that is derived from the model's R square at a very low observational significance threshold (sig. = 0).

Regression analysis of the variables influencing the selling price of upscale apartments is conducted using the entry technique, and the analysis takes into account five components from the scale. The model's fit is assessed using the adjusted coefficient of determination, or adjusted R square. Based on regression analysis, R2 has been modified to 0.889, meaning that about 89% of the variation in the GBCHCC variable can be explained by the model.

Six scale factors were included in the analysis when a control variable was added to the investigation. The corrected R square (R2) coefficient, which is used to assess how well the model fits the data, was raised to 0.01. Based on regression analysis, R2 has been modified by 0.910, meaning that 91% of the variation in the GBCHCC variable can be explained by the model. The F value in the ANOVA analysis table and the data fit model at 95% confidence (the significance level of the F-statistic in the ANOVA is less than 0.05 in the ANOVA) are used to assess the fit of the MLR model.

The physical attributes of the high-end apartment (VL), its location and position (VT), the ambient environment (MT), the service quality provided by the apartment management (CL), the customer demographic characteristics (KH), and the investor characteristics (DT) are the six factors that have a positive impact on the GBCHCC variable and are statistically significant (reflecting the respondents' perception of price).

The regression equations for the normalised variables have the following form:
GBCHCC= 0.299 +0.265VT+ 0.190MT+ 0.165DT+ 0.161VL+ 0.153KH+0.008CL
According to the survey's findings, six factors—the physical attributes of high-end apartments (VL), the high-end apartment's location and position (VT), ambient factors (MT), service quality and apartment management (CL), customer demographics (KH), and investor characteristics (DT)—all have positive slopes, which indicates that they are statistically significant and have a positive impact on the selling price of high-end apartments. But still, The estimation results (Table 2) demonstrate that the selling price of high-end apartments (GBCHCC) is positively impacted by the physical characteristics of the apartments (VL), the location and position of the high-end apartments (VT), the ambient characteristics (MT), the service quality and flat management (CL), the customer characteristics (KH), and the investor characteristics (DT). These effects are statistically significant (P 0.05). Thus, we have established that:

- The selling price of high-end flats is positively correlated with the physical attributes of the property.
- The selling price of high-end apartments is positively correlated with both the apartment's location and the building's orientation.
- The selling price of high-end residences is positively correlated with the surrounding surroundings.
- The selling price of high-end apartments is positively correlated with both unit management and service quality.
- The selling price of high-end flats is positively correlated with the investor's attributes.

The selling price elements of high-end apartments are positively correlated with the demographic features of its customers. There exists an interacting link between the variables that make up the selling price of high-end residences. That is, the following hypotheses are accepted: H1, H2, H3, H4, H5, H6, and H7.

5 Conclusions

5.1 Constructive remarks and advice

5.1.1 Regarding placement of high-end apartment and position of the apartment building

Like any real estate, its value is primarily determined by location—specifically, location, location, and location—because once real estate is acquired, it cannot be moved. The placement of high-end apartments or other buildings adjacent to the property is much more important and affects the selling price in major Asian cities where the land is filled with people. One noteworthy example is the $100,000 USD per square metre land sale held on Ho Chi Minh City's Thu Thiem peninsula. The regression model mentioned above, which has a constant beta value of 0.265, reflects this.

5.1.2 Regarding surrounding environment

The high-end apartment building's surrounding landscape setting has a beta coefficient of 0.190, making it the second most significant feature after location. With the help of investors, local government, and citizens, the surrounding landscape environment may be improved. The landscape environment is designed and developed concurrently with the construction of apartment complexes and other real estate in developed nations. The development of the surrounding environment and infrastructure is relatively sluggish and disorganised in Asian nations, particularly Vietnam.

5.1.3 Regarding real estate investor

With a beta coefficient of 0.165, the investor's standing and reputation rank third and have a significant impact on the selling price of real estate that is deemed to be branded. Investors market their company ideas as novel, distinctive, and grandiose because they have the financial means and extensive network to support them. In order to undertake construction investment projects, real estate investors frequently have expert human resources in support of financial and technical management.

5.1.4 Regarding physical characteristics of high-end apartment

Technical factors such as size, shape, area, facade width, depth, and topography of real estate will affect the use of its value partly due to the exploitation process, and partly due to the psychology of users, so it will affect the value of real estate. Real estate with good technical conditions and reasonable size always has a higher value than others (land plots or apartments). These technical factors make up the physical factors (with a beta coefficient of 0.161) of real estate.

5.2 Theoretical and practical contribution

The theoretical methods and challenges surrounding the price of assets (in this example, high-end real estate assets) and associated affecting elements have been systematized by the article literature study.
The collection of criteria that have been discovered, which is the result of theoretical evaluations, may serve as the foundation for several studies in the field of real estate valuation, which is a crucial area of study and instruction that attracts the attention of academics.

5.3 Limitation and future research direction

The study for this subject is confined to densely populated areas in Vietnam where apartments are the primary form of accommodation for individuals, particularly young adults with low incomes. The variables influencing the selling price of flats, particularly those that are high-end in different cities and provinces across the nation, are not covered by the article's conclusions. Nonetheless, because one of the co-authors of this paper based the study on her PhD dissertation, it is among the first studies in the subject of real estate valuation.

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The Nexus of Fiscal Leverage and Technological Advancements: A Pinnacle Exploration into Shaping Corporate Investment Paradigms

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Abstract:

This study conducts a meticulous exploration of the intricate interplay between financial leverage and technological advancements within the Chemical and Pharmaceutical Sector of Pakistan. The research reveals complex discoveries by using a strong empirical approach and quantitative assessments carried out over a predetermined length of time. These findings have the ability to significantly influence business strategy, direct financial decision-making, and assist in the development of customized policies that address the particular opportunities and problems faced by Pakistan's chemical and pharmaceutical sector. The initial findings demonstrate dynamic interactions, highlighting the importance of the research in managing the changing financial-technological nexus in this particular industrial setting. This research adds a great deal to the body of knowledge by providing specific insights into the complex links between financial leverage, investment decisions, and technological advancement with a focus on Pakistan's chemical and pharmaceutical industry.

The initial findings demonstrate dynamic interactions, highlighting the importance of the research in managing the changing financial-technological nexus in this particular industrial setting. This research adds a great deal to the body of knowledge by providing specific insights into the complex links between financial leverage, investment decisions, and technological advancement with a focus on Pakistan's chemical and pharmaceutical industry. Secondary data technique has been obtained from annual reports from 2016 TO 2021. Hence, a random model has been used to determine the relationship among the variables such as investment, financial leverage, technology innovation Profitabilty. The results indicate that financial leverage has a negative and significant relationship with investment. On the other side, investment has an insignificant relation with technological innovation.

Keywords: Financial leverage, R&D investment, Technology innovation, Profitability

Introduction:

In the dynamic landscape of global business, the interplay between financial leverage and technological advancements is a pivotal determinant of corporate strategies and investment paradigms. This study embarks on a comprehensive exploration titled "Revelations in the Synergy of Financial Leverage and Technological Advancements: An Exemplary Inquiry into Investment Paradigms within the Chemical and Pharmaceutical Sector of Pakistan|". Rooted in the strategic importance and innovation intensity of the chemical and pharmaceutical sector, particularly within the economic landscape of Pakistan. This research seeks to unravel the intricate relationship between corporate investment and technological advancements. By focusing on a sector known for its strategic significance to contribute nuanced insights that can guide corporate decision-making, influence policy formulations, and foster sustainable economic development(Iqbal, Xu, Fareed, Wan, & Ma, 2022).

The significant intersection of economic, technological, and regulatory issues characterizes Pakistan's chemical and pharmaceutical industries. Contributing enormously to the nation's economic growth, creating employment, and export potential in this industry. This sector's intricate financial leverage dynamics require an in-depth study of the three pillars: Profitability, financial leverage and innovations in technology. Financial leverage which refers to things like taxation, subsidies, and fiscal policies, has significant effects on the decisions that firms make regarding their economy(Santosa, 2020). Technological developments also catalyze a catalyst for revolutionary shifts, bringing up new directions for research and development, process optimization, and improved product offers. In order to navigate the complexity of today's corporate landscapes, it becomes essential to understand the symbiotic link between these components(Papadimitri, Pasiouras, & Tasiou, 2021).

The study aims to shed light on the factors that influence the impact of financial leverage on company investment through a thorough review of Pakistan's corporate sector, theoretical frameworks, and empirical analysis. The study's conclusions offer insightful information to policymakers and corporate finance professionals alike, advancing our knowledge of the factors influencing investment choices in Pakistan. Corporations play an important role in the economic growth of a country(Shaikh, Raza, Balal, Abbasi, Delioglu, & Shaikh, 2022). Economy is the backbone of the development of a country. The main idea of this study is to investigate the relationship between financial leverage and firm investment. Whereas, investment plays a significant role in any organization. The organization needs the investment for their business transactions. This study's emphasis is on how the leverage policies of an organization affect the investments. Relationship of financial leverage and firm investment are very tricky and complicated in corporate finance. (Brusov, Filatova, & Orekhova, 2022)stated that investment is irrelevant to leverage. But, (Gibson, Gurmu, Chua, Van Bavel, & Myers, 2023; O'Connell, AbuGhazaleh, Tahat, & Whelan, 2022; Wang, Wang, & Xu, 2022) stated that leverage has a significant relation with investment decision. This study highlights factors which effect the firm investments.

Equity and debt financing are two sources of financing. Organizations can generate equity financing through issuing the company shares. Preferred share and common share are the main type of the company share. Investors own the company shares in exchange of money(Huynh, Hoque, Susanto, Watto, & Ashraf, 2022). Firm can also generate debt finance by borrowing funds. Capital structure of organization is formed by the debt and equity financing. This study demonstrated the effect of leverage policy on investment decision (Iqbal et al., 2022).

Investment

Investment plays a vital role in the economy. Main objective of investment is to get reasonable return in the future. Investment process is that companies use investor's funds for business operations. Companies distribute net profit among investors in the form of dividend. Investment decision is affected by security, risk and inflation. Investor can sacrifice their present for their future benefits. Investment increases future return and also money value. Money value is important factor in investment decision. Some people are not willing to invest their money for risk market. These types of investors lose their money value in the future. So, investors should invest their money for future return(Kalash, 2023).

Investment risk is that investors have a possibility of default of money in the future. This risk factor discourages the investor to do investment. Standard deviation is used to determine the risk factor of the investment (L. Zhao, Liu, Li, Yang, Wang, & Xue, 2022).Interest rate risk is the risk that arises for bond owners from fluctuating interest rates. If, a person holds the bond at the maturity then the chance of interest rate risk is low(L. Zhao et al., 2022)Liquidity risk is raised on the investment. And it means that seller's default to sale their asset immediately in the market at a fair price (L. Zhao et al., 2022).Inflation can affect the investment at the global level. Inflation is the uncontrollable factor. It affects the investment opportunities due to unpredictability of market or economy conditions.

Corporate investment and research and development (R&D) investment are closely related ideas that are essential to a business's expansion, inventiveness, and overall strategic progress. The term "research and development investment" describes the monetary resources devoted to methodical inquiry and development endeavors with the goal of producing novel goods, services, or procedures. Maintaining competitiveness, promoting innovation, and ensuring long-term success all depend on this investment. However, corporate investment covers a wider range of activities, including capital expenditures in areas such as technology, infrastructure, acquisitions, and market expansion, in addition to research and development. Corporate investment adopts a complete strategy, taking into account a variety of assets and techniques to strengthen overall business capabilities, whereas R&D investment concentrates on producing intellectual capital and new solutions. In order to maintain a balanced and sustainable approach to growth and competitiveness in the ever-changing business environment, successful firms frequently incorporate both corporate investment and research and development into their strategic planning.(Ellili, 2022).

Underinvestment

Underinvestment means to generate funds through debt financing. The companies have less opportunities available to generate funds. So, they decided to take debt. Inversely relationship exists between financial leverage and growth opportunities of firm. Leverage provides the growth opportunities to the underinvestment firm. Risk factor is found in the underinvestment companies. In the few cases, companies invest in the poor project. But, these projects do not generate the reasonable return(Tran Minh, Nguyen Thi, & Thi Be, 2022). However, these affect the financial position and profits of the company. Underinvestment firm generate their financing through financial leverage. Low growth companies provide securities to the lender. Companys used their assets as a collateral (asset back securities). Investors are not willing to invest in high leverage firm. Because, high debt firm have more from have more chances of bankruptcy. It can easily generate funds through the asset back securities. According, leverage plays a vital role to overcome the underinvestment problem by providing the financing to the business operations(Hussain, Lee, & Chen, 2022)

Overinvestment

Overinvestment refers investment expenditure beyond that required to maintain assets in place and to finance positive NPV projects. In these kinds of situations, conflicts may arise between managers and shareholders. In the firm managers spend extra amount in the fixed assets and operating activities. Which result in, manager wasted the free cash flow by investing into poor projects. Overinvestment firm have a high growth opportunities and availability of finance. But firms failed to achieve their goals. It can create agency problem between shareholders and management of firm. Shareholders have to bear the loss and profit of companies. Firm management invest funds into the poor and risky project. In few cases, high leverage firm affect the shareholders return. Organization always prefers to pay off their credit obligation rather than dividend. Managements wrong decision affects the company's cash flow and performance. In case, company did not generate high profit and net sales then, shareholders return would be affected by wrong strategy of the company. It creates a conflict of interest among shareholders' the management and shareholder's goals. In the result, overinvestment could arise the agency problem. Moreover, leverage policies help to reduce the overinvestment problem.(Aivazian, Ge, & Qiu, 2005b)

Financial leverage

Leverage is another resource of money financing. Capital structure consists of the equity and debt. Equity financing is generated through issuance of new shares. Shareholder get the dividend on their investment. Leverage is the external source of funding is generated through borrowing money from the lenders. Financial leverage is also considered as debt financing. Financial leverage can be defined as an organization that has ability to generate funds through debt or borrowing money. Firms use this leverage money for purchasing assets and financing into the diversified projects. Simply, financial leverage provides the funds for the business operating activities. Total liabilities to total asset is used to determine the financial leverage(Geno, Firmansyah, Prakosa, & Widyansyah, 2022).

Investment and financial leverage are the main sources of business financing. Leverage acts as a coin. It has both negative and positive aspects for the business. Risk factor is always associated with the leverage firm. High leverage firms face high risk as compared to the low leverage firms. High leverage firm have to pay off the interest amount and principal amount to the lender. High leverage firms generate low profit and growth opportunities. Because, high debt companies have to pay off their debt amount. Itis difficult for the firm to pay off their debt and generate high profits. If high leverage firms would default to pay off their borrowing, then high leverage firms have more chance of bankruptcy. It is the dark side of leverage. In the result of under and over-investment, leverage has caused agency problems and asymmetric information among the management and shareholders of company (Kalash, 2023).

High leverage companies must have to repay their obligations or borrowing or otherwise they will be facing the bankruptcy and solvency problem. High leverage firm have the low investment opportunities. Investors are mostly not willing to invest in the high leverage firm. Investors goals is to maximize their return on the investment. But high leverage firms face difficulty in maintaining the positive cash flow. Firms should manage their capital in such way. So, they can maintain the positive cash flow. So, lower leverage firm have more growth opportunities. It has not faced the bankruptcy risk. Mostly investors made their investment decision after the overview of company's financial position and cash flow. Hence, company positive cash flow affects the investment decision. It provides a signal to the investor for reasonable investment opportunities (Santosa, 2020).

Tax deductibility provides compensation to the high debt firms. Few investors want to invest in the debt facing firms to avoid tax. Shareholder have to pay double tax to the company one at the company level and other at personal level. High leverage organizations have opportunities of the tax incentives. Leverage is positive aspect is that it reduces the ownership dilution. It helps in avoid the takeover or acquisitions. Leverage provides the tax incentives to the debt financing firm. And leverage is used to solve the over and underinvestment problem (Bhat, Chanda, & Bhat, 2023).

Technology innovation

Technology innovation encompasses the dynamic process of conceiving, developing, and implementing novel ideas, products, or processes that bring positive change and address evolving needs. It involves research and development efforts to discover new scientific principles or methodologies, leading to the invention of innovative technologies. Successful innovation requires widespread adoption, continuous improvement, and commercialization, often disrupting existing industries and markets. It occurs across various sectors, including healthcare, information technology, manufacturing, and energy, and plays a crucial role in driving economic growth, competitiveness, and societal progress by creating jobs, enhancing productivity, and addressing global challenges(Santosa, 2020).

Theoretical models

Pecking Order Theory

Pecking order theory explains that the cost of financing increase with the asymmetric information. Capital structure of the corporations such as internal financing, debt and equity financing are the main source of the financing. According to this theory, management prefers the internal financing. Internal financing is generated through the retain earning of the company. If, the company have not generated enough retained earning then company should go for the debt financing. POT suggests last option that the company have to issue the share(Naranjo, Saavedra, & Verdi, 2022). Organization has to pay the transaction fee issuance of the equity share. Pecking order theory explained that internal financing creates a positive image for both public and investor. Internal financing explains that companies have enough cash for their operating activities(Naranjo, Saavedra, & Verdi, 2022; Pratiwi & Yulianto, 2022)

Agency Theory

Agency theory highlights the relationship of the management with shareholders. Owners provide finance for the operating activities of the firm. Owners appoint the managers for the company management. And these managers act as “Agent”. Agency theory elaborate the principals and agent relationship. Agency conflicts arise when firm management works for their own interest. Company’s principals (owners) and agents(management) do not have the same goals. Sometimes, manager misuse their power for their own sake. Agency problems should be avoided by separating the control of the owners and management of company(Almashhadani & Almashhadani, 2022). Managers have many tasks to manage the company. Company executives may have a desire to expand a business into other markets. This will sacrifice the short-term profitability of the company for prospective growth in the future. Shareholder wants a current high return on their investment. So, it may create conflicts of interest among the principal and agents. Management has a responsibility to expand the company's profit and compete with the competitors. Management should set their goals according to the shareholder's expectations.(Amin, Ur Rehman, Ali, & Ntim, 2022)

Trade-Off Theory

Debt and equity are the main components of the capital structure. Trade-off theory explained that company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. According to the M M Irrelevance theory elaborated that taxes and bankruptcy costs has not affect the company stocks. TOT explained that debt financing provides tax incentive benefits to the company. In the debt financing, company have to pay the interest cost on the borrowing. Double taxation should be avoided through the debt financing. In the income statement, interest cost provides tax benefits to the company. On the other side, equity financing charge more transaction fee for issuance of the shares of the company. Equity financing is more expensive as compared to the debt financing. Risk factors are involved in the debt financing. WACC of the company is decreased with the increase in the risk factor of the firm. TOT also explored that company should have to maintain the optimal capital structure. Trade-off theory highlighted the positive and negative aspects of debt financing(Hastutik, Soetjipto, Wadoyo, & Winarno, 2022).

Bankruptcy Incentive

Bankruptcy arises when firms are unable to pay off their borrowing. Bankruptcy incentive consists of the direct or indirect cost of the bankruptcy. The administrative cost represents the indirect bankruptcy cost of the company. Direct cost is those that involve the filing of bankruptcy. The bankruptcy risk level is high due to an increase in the debt ratio of a company(Stef, 2022). If, the firm generates more financing through borrowing. If firms fail to pay off their borrowing amount then companies have to face bankruptcy risk. It is the main reason that investors are not willing to invest in the high debt firm (Olbert, 2023; D. Zhao & Song, 2022)

Relationship between Profitability, technology innovation, investment and financial leverage

Financial leverage affects a company's investment choices and is often referred to as the debt-to-equity ratio. A higher proportion of debt in the capital structure is implied by increased financial leverage, and this might affect the cost of capital. Leveraged companies may have to pay more in interest, which limits their capacity to make new project investments. Financial leverage, on the other hand, has the ability to increase returns on equity and so increase available capital for investment. The relationship is complex and can change depending on the economy and industry. Financial Leverage and Technology Innovation:

Financial leverage of funds might affect a company's capacity for innovation. High leverage has the potential to reduce a company's financial flexibility and raise its cost of capital, which could limit its ability to engage in novel ventures. Conversely, some contend that a modest amount of debt might offer tax benefits, freeing up capital for businesses to invest in innovation. The industry, the type of innovation, and the firm's risk tolerance are probably the main determinants of the link. Larger organizations can take on bigger investment initiatives because they frequently have greater resources and access to finance markets. There is typically a positive correlation between Profitability and investment, as larger organizations are better equipped to do research and development (R&D) and investigate novel business opportunities. The strength and course of this relationship, however, can be influenced by the industry and the firm's strategic approach. Profitability and Technology (Rizqia & Sumiati, 2013; Stef, 2022).

Technology innovation is a major driver of investment as businesses seek to stay competitive, improve efficiency, and capitalize on emerging opportunities. Investments in research, development, and the adoption of cutting-edge technologies enable companies to enhance their products and services, streamline operations, and gain a competitive edge. The success of technological investments is often linked to a company's ability to adapt to market trends, stay ahead of competitors, and meet evolving customer demands(Pererva, Kosenko, Kobielieva, Tkachev, & Tkacheva, 2017).

Financial leverage can significantly impact a company's ability to invest in technology innovation. Access to capital, whether through loans or other financial instruments, can provide the necessary funds for R&D, the acquisition of intellectual property, and the implementation of innovative technologies. However, excessive financial leverage can also pose risks, as high levels of debt may limit a company's financial flexibility and increase vulnerability to economic downturns(Huynh et al., 2022).

The most successful companies recognize the synergies between financial leverage, technology innovation, and investment. Strategic alignment involves deploying financial resources to support technological advancements that align with the company's overall business objectives. For instance, a pharmaceutical company may leverage financing to invest in research for the development of breakthrough drugs. The strategic integration of financial and technological strategies ensures that investments contribute to long-term competitiveness and sustainability. Balancing financial leverage, technology innovation, and investment requires careful risk management. Companies need to assess the potential returns on technological investments, consider the associated risks, and ensure that financial leverage is structured to support these initiatives without compromising financial stability. Strategic risk management helps mitigate uncertainties and enhances the likelihood of successful outcomes.

Financial leverage, investment, Profitability, and technological innovation are all intricately interacting. Large companies with high levels of financial leverage could be able to make significant expenditures in innovation, but they might also be more vulnerable to negative financial outcomes. Although they might be nimbler in pursuing creative ventures, smaller, less leveraged businesses might run into financial difficulties. These elements' effects depend on each firm's unique market conditions, risk tolerance, and strategic aims(Bhat, Chanda, & Bhat, 2023). Comprehending these associations necessitates a sophisticated examination that takes into account market circumstances, industry trends, and the unique circumstances of every company. Important insights into the interactions between financial structure, investment choices, business size, and technological innovation can be gained through empirical research that uses data from many industries and economic environments(Bon & Hartoko, 2022).

In conclusion, the relationship between financial leverage, technology innovation, and investment is a dynamic and symbiotic one. Successful companies navigate this relationship by aligning financial strategies with technological goals and ensuring that investments contribute to sustainable growth and competitive advantage. The ability to strike a balance between financial flexibility, innovation, and strategic investments is essential for companies seeking to thrive in today's rapidly evolving business landscape(Papadimitri, Pasiouras, & Tasiou, 2021).

Objectives of the Study:

The primary objective of this exploration is to unravel the multifaceted nexus of financial leverage and technological advancements and its impact on the corporate investment paradigms within the chemical and pharmaceutical sector of Pakistan. The study seeks to:

- Offer strategic insights and guidance for businesses seeking to optimize R&D investments within the context of fiscal leverage and technological advancements.
- Analyze the chemical and pharmaceutical sectors' technological histories to pinpoint significant advances that have impacted innovation, methods of production, and market competitiveness.
- Analyze how financial strategies and technology adoption interact, and figure out how these components affect investment choices and strategic planning as a whole.
- Provide an overview of the possibilities and challenges that arise from this relationship, with a focus on sustainability, competitiveness in the global market, and the possibility of industry-wide collaborations.

Significance of the Study:

The study has significance as it might provide important stakeholders such as researchers, policymakers, and business executives with information about the changing chemical and pharmaceutical landscape in Pakistan. The goal of the study is to provide practical insights that can inform strategic decision-making and policy creation by shedding light on the complex relationship between financial leverage and technical advancements. Given the rapid pace at which technology is developing globally and the increasing importance of the chemical and pharmaceutical industries in advancing national economic objectives, this research is particularly pertinent. A comprehensive understanding of the factors influencing R &D investments is essential as industries face previously unseen obstacles, such as the effects of world catastrophes and shifts in customer preferences. Companies leveraging this nexus gain a competitive edge by transforming traditional practices in response to dynamic market demands. Understanding and harnessing the significance of this interplay ensures future resilience, positioning businesses at the forefront of evolving industries(Shaikh et al., 2022).

The monetary conditions of the pharmaceutical and chemical sectors, the path toward technological growth and development, and the ways in which these variables influence investment paradigms are all going to be addressed in more detail in the parts that follow. Through a meticulous examination of this nexus, we aim to contribute to the broader discourse on economic development, innovation, and sustainable growth in the context of Pakistan's chemical and pharmaceutical industries (Papadimitri, Pasiouras, & Tasiou, 2021).

Literature View

Financial leverage, technology innovation and Profitability are the three major components that can affect the R & D investment. Different studies have been conducted in various countries. Following is their literature review which supports the findings of the present study:

(Gagnon, 2023)investigated the debt effect on the firm investment decision. Debt overhang reduces the shareholder's return. Because, shareholders want to invest in these firm which give the future return and also have a low chance of bankruptcy. Hence, high leverage firm have more low growth opportunities as compared to low leverage firm. Leverage is providing more benefits for bondholders as compare to the shareholders.Firm investment descison is effected by agency cost and asymmetric information. Because, sometimes company invests into the poor projects. So, Firm faced the overinvesment and underinvestment issue due to the agency cost and asymmetric information. (Ferguson, Skovsgaard, Jensen, & Mikkelsen, 2023)observed that leverage positively affects the firm’s value. This study explained that manager increase the leverage propostion due to their peronal conflicit of interest. Firm managers should adopte those policies which increase the shareholder divdend and optimal capital structure. Shareholder’s main objective is to obtain profit maximization Sometimes, manager obtain the free cash flow by investing into the poor project. This type investment affected the whole profits of the firm .Hence, It created the agency problem.

(Che, Wang, Liu, & Zhang, 2023)argued that systematic risk has positive relation with the operating leverage. But systematic risk has negative relation with the financial leverage. This study examined the data of the manufacturing firms from Period 1966-1985.Sampling result is that systematic risk has positive relation between financial leverage and operating leverage as well. This study was based on the Mandelker and Rhee work. (Che et al., 2023)worked on the relationship of leverage and growth of the companies. This study sample is between 2000 and 2999 industrial firms. This study determined the relation of leverage with the large and small firms or core and non-core segments. Results of this study showed that Leverage and growth have negative relation in the large growth companies. And non-core segments elaborated the positive relation among the growth and leverage.

Aivazian, Ge, & Qiu (2005b) intended that leverage effects on the firm investment decision. Data collected from 1035 major Canadian industrial companies. Sample covered the time period from 1982 to 1999. It also elaborated that the central point of the study had to determine the relationship among financial leverage and investment. This research examined the effect of the overinvestment and underinvestment problem. Robustness test has been used in this study. This study found that the leverage and investment have a negative relationship. Leverage has more impact on the low growth companies rather to the high growth companies.

(Hashim & Hamidi, 2021)elaborated the impact of the leverage on the Mauritian Firms. For this research, data of 27 Mauritian firm was collected listed in the Mauritian stock exchange. Researchers also conducted this research on the low growth firm and high growth firm. Liquidity, Tobin's Q, Profitability, Sales Growth, Leverage, Cash Flow are variables used in this study. This study found out that investment and leverage have negative relation in the low growth companies. But, in the case of the high growth companies, investment and leverage relationship depends upon the company investing strategy and conditions. This study results were conducted through the research regression.

(Engel & Stiebale, 2014)analyzed the Investment dealing in the private equity firm. Panel data of the US and France Firms are used in this research. Robustness test was implemented in this study. This research concluded that portfolio firms have obtained the increase in the investment and reduction in the financial constraints. Buyout provided the investment opportunities for new companies. Mostly, new companies need financing for launching the new products. Buyout facilitates the companies by providing them finance. But, Buyout level in decreased due to overinvestment issue. In the case of small and medium-sized enterprises, the relationship is totally different. Increase in the financial constraints and decrease in the investment relation are found in the SME. UK stock exchange polices and regulation is much betters then the France stock exchange.

This study examines into the connection between a firm's success in R&D innovation, financial leverage, and R&D investment. The study, which uses companies in the UK and the EU, indicates that changes in financial leverage and R&D investment changes one year ahead of schedule have a negative link that is tempered by the success of technically and commercially feasible inventions. The paper provides empirical evidence to support its predictions, based on International Accounting Standard 38, and reveals that the success of R&D innovation has an impact on how corporations finance future R&D investments. The study emphasizes how important accounting disclosures are in forming networks of open innovation (O'Connell et al., 2022).

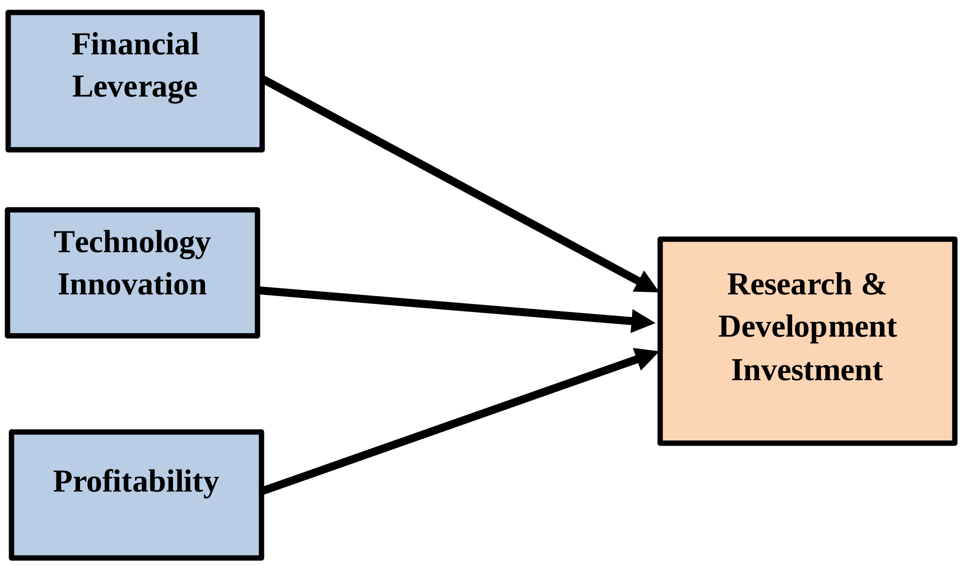
This study looks into how financial leverage affects innovation in Chinese non-financial public companies that have been listed for ten years on the Shenzhen and Shanghai stock exchanges. The analysis uses three financial leverage proxies and differentiates between state (SOE) and nonstarter ownership (NSOE) using panel fixed effects and system GMM techniques. The findings show that while financial leverage has a detrimental impact on input innovation, it has a beneficial impact on output innovation as determined by patents(Iqbal et al., 2022).

The goal of this study is to examine, within the framework of 126 Chinese listed semiconductor idea stocks, the effects of proactive green technology innovation, more especially green process and product innovation, on company financial performance between 2010 and 2020. The results, which employ a difference-GMM approach, show that proactive green process innovation improves financial performance over the short and long terms. Proactive green product innovation has no effect in the short term, but it has a beneficial long-term financial performance benefit. The study also emphasizes how absorptive ability has a moderating impact, highlighting the necessity of encouraging green technology innovation methods to improve overall financial success(Lin, Cheah, Azali, Ho, & Yip, 2019).

THEORETICAL FRAMEWORK

Fig 3.1

THEORETICAL MODEL



Independent variable Dependent variables

Model formulation

Following is the model equation:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e}$$

Where;

- β_0 = Intercept

- $\beta_1 = \beta_2 = \beta_{3=}$ Coefficient Terms
- $X_{1=}$ Financial leverage
- $X_{2=}$ Technology innovation
- $X_{3=}$ Profitability
- Y= R & D Investment
- e is the error term.

Dependent variables

1. **R & D Investment**

Investment in research and development (R&D) is the money a business sets aside for the methodical exploration and use of novel information in the pursuit of innovation. Therefore, the amount capitalized will not be included in the calculation of R&D expenses. As a result, the increase of R&D spending figure by adding back the amount of research expenditure capitalized. The sum of a company's R&D expenses for a given fiscal year is represented by the resulting figure. To account for size impacts, we divide the overall R&D spending (during the fiscal year) by the total assets at the conclusion of the fiscal year. By deducting any capitalized R&D from total assets(O'Connell et al., 2022).

.**Research and development (R&D) Investment =Total assets- Research and development (R&D) expenditure**

Independent variables

This study consists of three independent variables i.e., is Financial leverage, Profitability, Profit margin respectively.

1.Financial leverage

Leverage is another source of money financing. Firms utilize the debt financing for purchasing assets and financing into the projects. Capital structure consists on the equity and debt. Debt is the external financing which is generated through the borrowing money from the lenders. Companies have to pay off the interest and principle amount on the debt financing.(Iqbal et al.,

2022) Investment and financial leverage are main source of business financing. Leverage acts as two faced. It has been both negative and positive sides. Risk factor is associated with the leverage firm. High leverage firm face the high risk as compared to the low leverage firm. If, firms generated finance through the debt financing. So, high debt facing firms have more chance of bankruptcy and solvency risk(Shaikh et al., 2022). It is the dark side of leverage. And on the other hand, leverage provided the tax incentives to the high leverage companies. Company's takeover would be avoided through debt financing. It is the positive aspect of the leverage. Negative relationship exists among the investment and leverage.

$$\textbf{Debt ratio} = \textbf{Total liabilities/ Total Assets}$$

Financial leverage ratio demonstrated by the total debt to total assets (Aivazian, Ge, & Qiu, 2005)used this formula in their study. Debt ratio represented the firm ability to repay its debt. Total liabilities are divided by the total assets to the determination of the debt ratio(Geno et al., 2022).

2. **Technology Innovation**

By measuring the percentage of operating income allotted to research and development (R&D) activities, the Research and Development-to-Operating Income Ratio (R&D/Operating Income) is a financial indicator that evaluates a business's dedication to innovation. The formula shows the financial commitment to technical developments in relation to the earnings from core business operations. It does this by dividing the overall R&D expenditures by operational income(Pererva et al., 2017).

A greater percentage denotes a more substantial investment in innovation and points to a pro-active strategy for technological advancement. On the other hand, a lower ratio can indicate a more cautious or limited approach. Keeping an eye on changes in this ratio gives analysts, investors, and stakeholders important information about a company's innovation patterns and its dedication to promoting technological advancement and maintaining competitiveness. Interpreting the ratio in light of industry standards and expectations is essential (Ren, Liu, & Xiong, 2022).

Formula:

Technology innovation =Research and Development Expenditures *R&D*/Operating income

3. **Profitability**

A key measure of how profitable a company is return on assets (ROA), which quantifies how well an organization makes money from its assets. The correlation between ROA and leverage emphasizes how debt affects profitability; greater leverage has the ability to improve returns while simultaneously increasing financial risk. Spending on research and development (R&D) is essential to a company's long-term growth and innovation, even though it frequently reduces short-term profits. The way that ROA, leverage, and R&D investment interact shows how important it is for companies to find a careful balance between short-term financial results and long-term, innovation-driven growth in order to succeed in fast-paced markets (Heath, 2022).

ROA= Total income/ Total Assets

RESEARCH METHODOLOGY

The population of this study is the chemical and pharmaceutical sector of Pakistan. Sample was selected on the basis of sample size and sample Technique. Seven years data of these companies has been covered from 2016 TO 2021.Convenient sampling technique was adopted. Secondary data has been collected through the annual financial reports of the companies. Descriptive, correlation, and panel regression analysis have been used to identify the effect of leverage on the firm investment. Stata 14 software has been used in this study to elaborate the relationship among the research variables.

DATA ANALYSIS AND RESULTS

Table 01

Description

Variable	Obs	Mean	Std. Dev.	Min	Max
RD investment	234	14.315	43.811	-328.277	303.224
Financial leverage	234	2.24	2.983	-1.935	23.966
Technology Inv	232	1.512	.615	0	2.022
Profitability	234	5.717	15.645	-156.677	36.945

According to these statistics, the sample firms' average change in R&D investment one period ahead (INVESTMENT=14.31473) and average financial leverage (ΔLeverage = 2.24) have both decreased. The technology innovation is variable has a mean of 1.512, which indicates that 15.12% of firm-year observations have capitalized R&D expenditures. This number is generally consistent with previous research.

Table 02

Correlation

Variables	(1)	(2)	(3)	(4)

(1) RDinvestment	1.000			
(2) Financiallever~e	-0.280	1.000		
(3) TechnologyInv	0.169	0.039	1.000	
(4) Profitability	0.089	0.030	0.470	1.000

Table 2 shows that the statistics demonstrate the negative (-0.280) association between financial leverage and investment. We observe a high association between increases in financial leverage and business size, even though the majority of the correlations are less than 0.1. Regression analysis for this study, however, revealed that this connection has no effect on the primary findings when used as the condition index for the regression estimations. Given that this number is well below the generally accepted threshold, multicollinearity in regression estimates is not a problem.

Assumption:

Histogram used to elaborate the normality test of the data. Figure 2 explained that 80% of the data represented the normal curve. Proper ball shape formulated into this histogram. Ball shape is the important significant to show the normality of the data. So, we will be accepting the hypothesis H_0 and reject alternativeH_1 hypothesis. Because, normality distribution found among the variables of this study. If, the p-value is greater than 0.05. It means that normality is existing in the data. Hence, H_o hypothesis accepted and H_1 hypothesis rejected. Jarque-Bera test confirmed the existence of normality in the data. Therefore, Variables are normally distributed among the data of this study. These point does not represent any pattern. All the points are scattered. It does not show any positive or negative relationship. Scattered plot is used to identify the heteroskedasticity into the data. But the scattered plots evaluated the satisfied results. No trend is found in the scattered plot. Hence, data are free of heteroskedasticity problem. There is not any heteroskedasticity problem find into the data. So, Null hypothesis was accepted to justify the heteroskedasticity problem does not exist in this study-value is equal to the 0.0684. If, alpha value is less then to the p-value. Then, no heteroskedasticity element is found in to the data. P-value is 0.0684., which, is greater than to the 0.05. Results of the tests concluded that there is no heteroskedasticity problem into the data.

Estimation Methods

The first step in estimation is to estimation technique for our cross-sectional time-series (or panel) dataset is the first stage in the estimating process utilizing the method outlined by O'Connell. Significant variation was discovered across firms in this investigation. Based on the Hausman test, additional analysis indicates that the firm fixed-effects model makes the most sense in the current situation. Using Driscoll-Kraay estimates and random effects. Even so, indigeneity issues are lessened by the empirical framework's emphasis on a leading dependent variable and first difference estimation. The purpose of this investigation was to look for indigeneity. Through the use of several different techniques, the study was unable to find any statistical evidence of indigeneity.

Table 03

Random effect

Rdinvestment	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Financialleverage	-5.641	1.057	-5.34	0	-7.713	-3.568	***
TechnologyInv	25.602	5.61	4.56	0	14.608	36.596	***
Profitability	-.319	.194	-1.64	.101	-.7	.062	
Constant	-9.829	9.389	-1.05	.295	-28.231	8.572	

Mean dependent var	14.489	SD dependent var	43.959
Overall r-squared	0.103	Number of obs	232
Chi-square	48.058	Prob > chi2	0.000
R-squared within	0.256	R-squared between	0.030

*** *p<.01,* ** *p<.05,* * *p<.1*

Relationship of the leverage and investment are justified by the panel regression. Panel data consists on the cross section and time series. Fixed effect and random effect model are used to determine the panel regression. Fixed effect model is that values are remaining fixed in to study. But random model are which values are extract from the large pollution. Research considered that fixed effect model is better than to the random model. Because, fixed effect model given the more constant results. Hausman test result provided the help to choose among the fixed and random model. Hausman test result will be significant then fixed effect model choice. On the other side, results will be insignificant then random effect model decided.

Table 04

Fixed effect

RD investment	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Financial leverage	-7.311	1.281	-5.71	0	-9.837	-4.785	***
Technologizing	38.579	6.6	5.85	0	25.56	51.598	***
Profitability	-.526	.204	-2.58	.011	-.929	-.123	**
Constant	-24.447	10.176	-2.40	.017	-44.52	-4.374	**

Mean dependent var	14.489	SD dependent var	43.959
R-squared	0.258	Number of obs	232
F-test	21.990	Prob > F	0.000
Akaike crit. (AIC)	2243.794	Bayesian crit. (BIC)	2257.581

**** p<.01, ** p<.05, * p<.1*

The findings of this study's regression of our dependent variable, financial leverage, only on the independent factors are displayed in Column (4) of Table 4. This study included the measure of technology innovation and the change in financial leverage (ΔLEVERAGE) as independent variables in Column (4). This study introduced a phrase in Column (4) to describe how leverage ,profitability and technological innovation interact. To account for sample variance across time, year-specific dummy variables were introduced into each model.

According to Hypothesis 1, changes in financial leverage in the current period will significantly and negatively impact changes in R&D investment one period from now. Based on a two-tail significance test, the regression coefficient estimate for financial leverage in Table 4 is positive and significant at the 1% significance level (i.e., Profitability:0.024; t-statistic = 2.27, $p < 0.01$). This result provided compelling evidence in favor of hypothesis 1 by showing that variations in a business's financial leverage during the current period have an adverse effect on changes in Profitability in the future. Based on a first difference calculation, this result is in line with earlier research that demonstrated a negative correlation between Profitability and financial leverage. Larger businesses typically have better access to capital markets, which enables them to use higher amounts of debt to leverage their operations and improve financial efficiency. As a result, there is generally a considerable correlation between business size and financial leverage.(Bhat, Chanda, & Bhat, 2023; Lin et al., 2019).Financial leverage and research and development (R&D) may be inversely correlated since organizations that make significant R&D investments may give preference to internal funding and risk-averse capital structures. Elevated research and development expenses may result in reduced financial burden, hence preserving adaptability to technological advancements and market fluctuations and decreasing dependence on outside debt financing.(Ren, Liu, & Xiong, 2022).

According to Hypothesis 2, at the 1% level, there will be a positive and significant interaction between increases in R&D investment and technology innovation measure (i.e., β[TECHNOLOGY INNVOATION= 0.000; t-statistic = 5.85, $p >0.01$). Research and development (R&D) investment drives technology innovation by providing the necessary financial resources and infrastructure for experimentation and exploration. This symbiotic relationship fosters the creation of cutting-edge solutions, fuels economic growth, and enhances competitiveness in the rapidly evolving global landscape. Ultimately, sustained R&D investment is essential for driving continuous technological advancements and maintaining a competitive edge in today's dynamic markets. According to the forecast, the relationship between changes in financial leverage and the success of technological innovation is negligible at the 1% level, as indicated by the results in Column (4).

According to Hypothesis 3, Investment in research and development (R&D) can boost profitability because it allows businesses to create novel goods and processes that provide them a competitive advantage in the marketplace. Through R&D, businesses may stay ahead of the curve, open up new markets, draw in more clients, and eventually increase their bottom line. The deliberate distribution of resources towards research and development is indicative of a proactive stance, according to the ultimate objective of enduring financial gain and expansion at the 1% level, as indicated by the results in Column (4) of Table 4 (i.e., β[PROFITABILTY = 0.011; t-statistic = -2.58, p >0.01). On the other side, random effect showed the insignificant relationship with profitability. Because short-term financial advantages may not completely capture the long-term benefits and innovation-driven returns associated with research and development activities, the link between profitability and R&D investment is typically negligible.(Kim, Kim, & Lee, 2011; Ren, Liu, & Xiong, 2022).

Table 05

Hausman test

	Coef.
Chi-square test value	-79.148
P-value	1

The fixed effects estimator is consistent but inefficient, whereas the random effects estimator is both consistent and efficient, according to the null hypothesis. If the random effects model is preferred and the p-value for the Hausman test is greater than the selected significance level (often 0.05), the null hypothesis cannot be rejected. Before executing the commands on the analysis be sure to replace the example dataset and variables with the data and variables.

Discussion

The relationship between financial leverage, investment, profitability and technological innovation is examined in this research. According to the theoretical model, modifications made one period in advance. In the present era, financial leverage has little bearing on technological progress. This study does, however, also raise the possibility that businesses may place a higher priority on risk aversion and financial stability than on aggressive innovation, especially if they work in sectors with lengthy product development cycles or high levels of uncertainty. In these situations, financial leverage may exist but may not always result in higher investments in technological innovation. The expense of obtaining financing was cited as another factor that may influence a company's choice to pursue technological innovation. There may be little correlation between financial leverage and innovation if firms are afraid to use excessive leverage for innovation projects due to the high cost of debt. The demonstrate a negative association between changes in technology innovation one period ahead of time and financial leverage, which is consistent with our initial theoretical prediction. The industry's competitive environment may have an impact on how important the relationship is. Regardless of their financial leverage, businesses may feel driven to innovate in highly competitive markets, while this incentive may be weaker in less competitive ones.

Short-term financial benefits frequently take precedence over long-term innovation and cause corporations to emphasize cost-cutting measures instead of considerable research and development investments, profitability and R&D investment may have an inconsequential relationship. This study is the first (of which we are aware) to utilize the information offered by a firm's decision to capitalize on R&D after applying the detailed criteria of the Profitability. Larger firms often have better access to capital markets, allowing them to take advantage of debt financing opportunities. These firms may find it easier to issue bonds or secure loans due to their size, creditworthiness, and established market presence(Bhat, Chanda, & Bhat, 2023).

The tax shield associated with interest payments on debt can be more valuable for larger firms with higher taxable income. The deductibility of interest expenses makes debt financing more attractive for tax purposes, incentivizing larger firms to leverage. Larger firms are often more mature and stable in their operations. Given their well-established position in the market and track record of reliability, lenders may be more inclined to grant credit. It's crucial to remember that different industries and periods of time may have different trends in the positive association between business size and financial leverage. Furthermore, even though this link is shown on average, individual businesses may stray from it in light of their unique situation and strategic decisions(Geno et al., 2022; Hashim & Hamidi, 2021).

Furthermore, prior study has shown that there is a negative correlation between financial leverage and investment. By focusing on investments made a year in advance and utilizing a first-difference paradigm, it expands on this study. In order to demonstrate the intertemporal character of financing decisions, this study focuses on the relationship between changes in financial leverage in the current period and changes in investments made a year later(O'Connell et al., 2022). This study takes endogeneity and missing variables into account by using a first-difference paradigm. Particularly if they have a large debt load, companies with higher financial leverage may also be more risk averse. A company may decide to make more cautious investment choices in order to reduce the danger of future financial difficulties if it has a higher amount of debt. A high degree of financial leverage can result in financial constraints that make it difficult for businesses to get more funding for investments. The inability to secure external finance and the requirement to settle outstanding debt could impede the organization's capacity to make fresh investments(Pererva et al., 2017).

This research contributes significantly to our comprehension of the complex interplay between financial leverage and technological innovation in Pakistan's pharmaceutical sector. By utilizing sophisticated statistical techniques for empirical analysis, the study not only measures the influence of financial leverage on innovation but also reveals intricate industry-specific elements influencing this relationship. Beyond its theoretical contributions, the study offers concrete suggestions for pharmaceutical companies looking to improve their capital structure. This has practical implications for investors, legislators, and industry practitioners in the ever-changing financial and technological landscape of the pharmaceutical industry. Furthermore, by exploring the particular difficulties faced by Pakistan's pharmaceutical industry, the research adds to the international conversation on financial leverage and innovation by offering a context-specific perspective for understanding the nuances involved. The research findings have implications for strategic decision-making not only in the industry but also in emerging markets and high-R&D intensity industries. This makes the findings an invaluable tool for scholars, practitioners, and policymakers who must navigate the complex interplay between corporate finance and technological advancements in developing economies(Shaikh et al., 2022).

CONCLUSION

In conclusion, the excellent investigation of the mutual benefit of investment and technology development in Pakistan's chemical and pharmaceutical sector has produced important insights with wide-ranging consequences for researchers, policymakers, and industry players. Carefully examining the dynamic interplay between investment strategies and technology advancements highlighted how important financial leverage paradigms are in determining how innovation develops in this industry. Using a strong empirical approach and quantitative analysis revealed complex connections between financial leverage, investment choices, and the rapidly changing technology landscape.

The results not only add to the body of knowledge already in existence by providing targeted insights into the particular possibilities and problems faced by the Pakistani chemical and pharmaceutical sector, but they also lay the groundwork for well-informed corporate strategy and policy development decisions. This study's focus on the changing intersection of technology and finance in this particular industrial setting makes it an invaluable tool for understanding the challenges of innovation in a constantly changing economic environment.

The study's findings also highlight the need for a sophisticated comprehension of the relationships between financial leverage and technical breakthroughs. The initial results, which highlight dynamic interactions, demand more investigation to fully grasp the complexities of these links. Companies may be more risk-averse due to the nature of the chemical and pharmaceutical industries, which frequently require intense regulatory scrutiny and the dangers connected with new technology. Under such circumstances, businesses could be hesitant to use financial resources for innovation, which would lead to a negligible correlation between financial leverage and technological innovation.

The Chemical and Pharmaceutical Sector in Pakistan remains a vital engine of economic expansion and technological progress, and the conclusions drawn from this investigation will be useful in directing future efforts to maximize investment returns, encourage new ideas, and create sustainable policies that will advance the sector. All things considered, this excellent investigation not only makes a significant contribution to the scholarly conversation but also offers useful information with broad ramifications for the strategic and financial environment of Pakistan's chemical and pharmaceutical industry.

LIMITATION

There are following limitation of the study:

- The findings might not be as applicable to other industries or international contexts because of their low generalizability outside of Pakistan's chemical and pharmaceutical sector.
- When conducting analysis, relying solely on historical data may fail to account for current market conditions and industry changes, as well as the newest developments in technology.

- The study may have overlooked qualitative components of innovation or particular difficulties faced by businesses because of its heavy emphasis on quantitative studies. This emphasizes the necessity for a more well-rounded mixed-methods approach to gain a whole understanding.

RECOMMENDATIONS

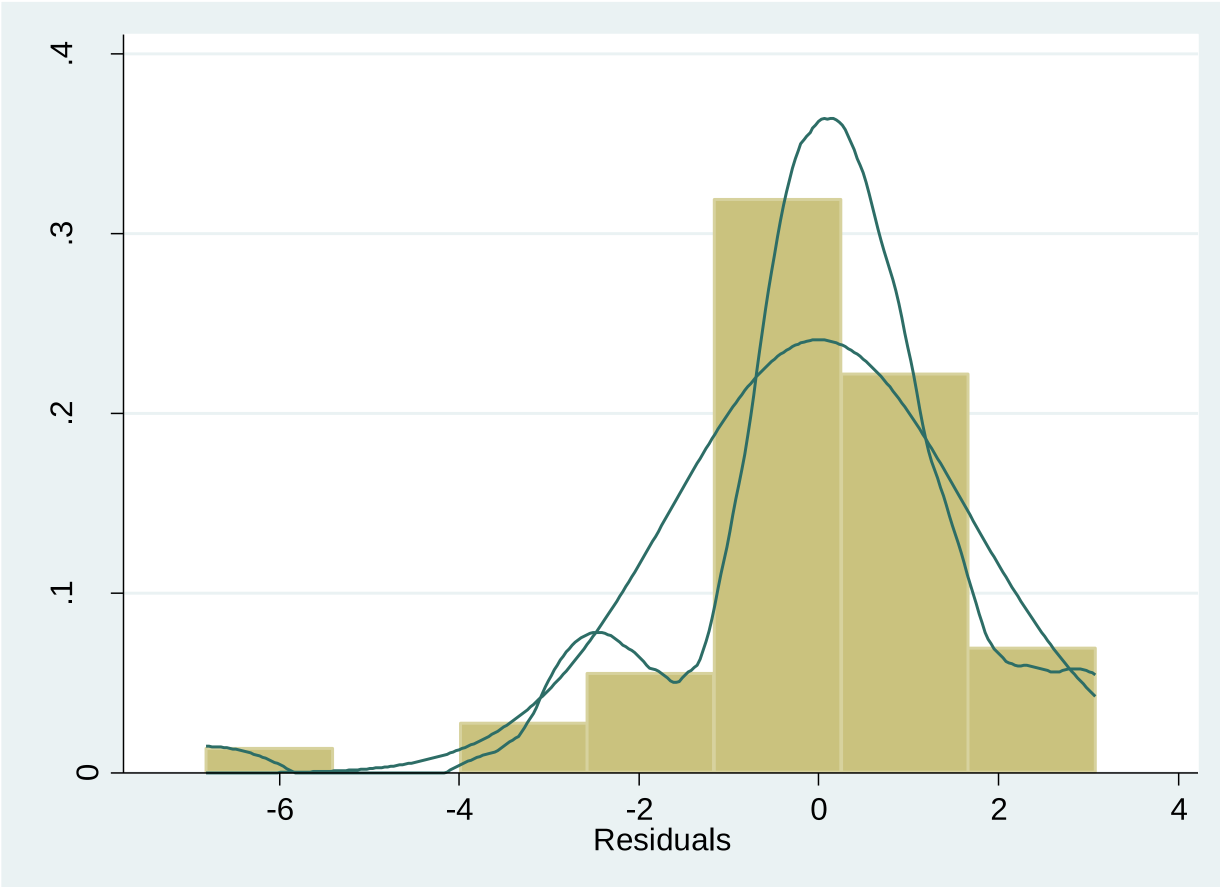
There are many following recommendations of this study:

- Pakistani firms should adopt a channelized debt financing mechanism.
- Investors should encourage investing in the adventurous projects.
- Companies have to maintain the optimal capital structure.
- Government should step forward and set up different institutions and seminars for promote investing culture into Pakistan.
- Investors must show interest towards education and should not feel reluctant in getting them educated.
- Further works must be done in the manner so that further profitable finding should be gained which guide in making good capital structure decisions.

Appendix

Figure o2

Assumption table of normailty



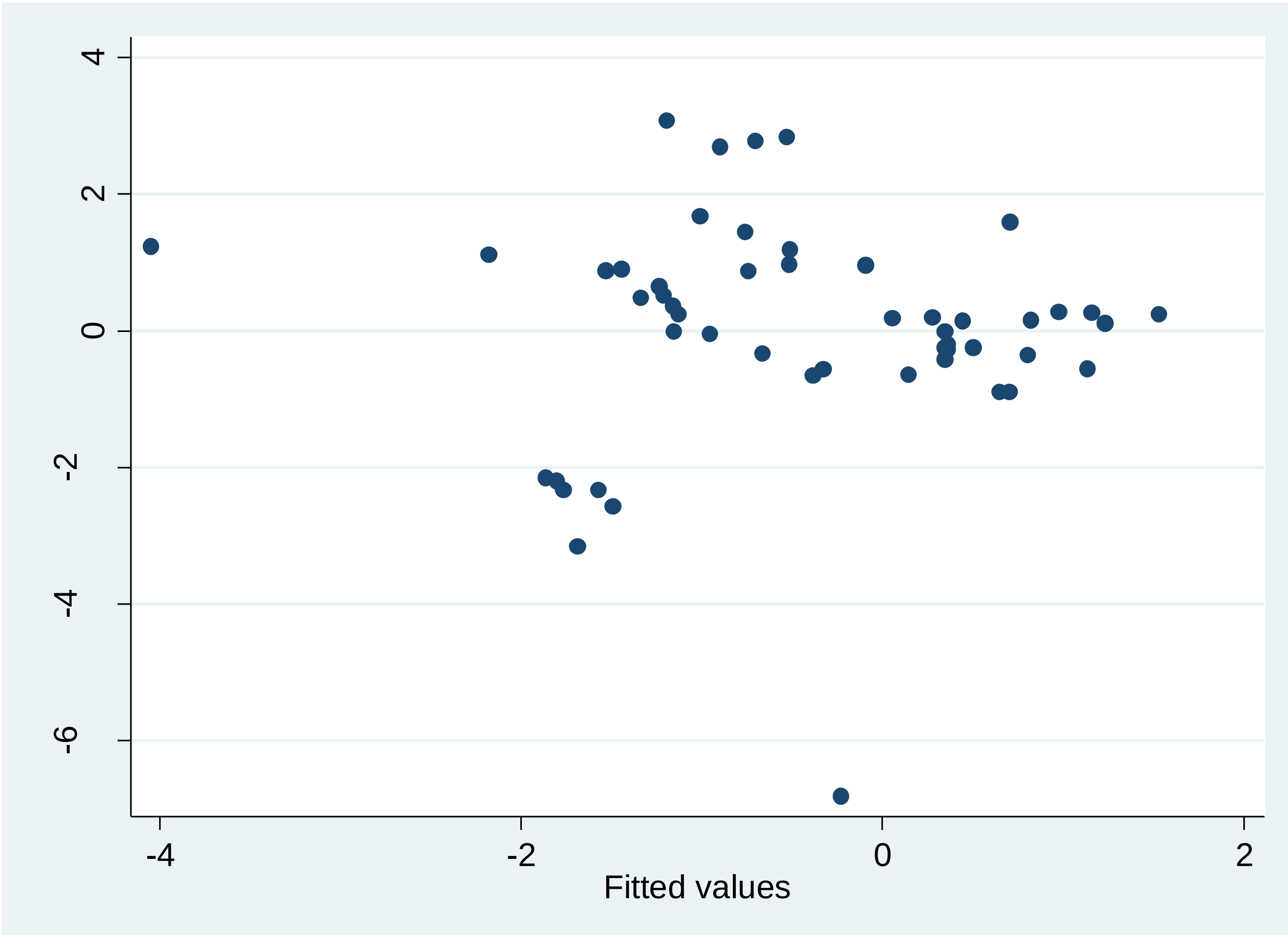
JB test

jb resid

Jarque-Bera normality test: 2.743 Chi(2) .2538

Jarque-Bera test for Ho: normality:

Scatter plot



Breusch-Pagan test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of investment

chi2(1) = 3.32

Prob > chi2 = 0.0684

OLS regression Table

```
. reg RDinvestment Financialleverage TechnologyInv Profitability
```

Source	SS	df	MS
Model	49512.1522	3	16504.0507
Residual	396873.88	228	1740.67491
Total	446386.032	231	1932.40707

Number of obs	=	232
F(3, 228)	=	9.48
Prob > F	=	0.0000
R-squared	=	0.1109
Adj R-squared	=	0.0992
Root MSE	=	41.721

RDinvestment	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
Financialleverage	-4.215107	.9170654	-4.60	0.000	-6.022114	-2.4081
TechnologyInv	12.39031	5.061538	2.45	0.015	2.416936	22.36368
Profitability	.0394313	.1981537	0.20	0.842	-.3510153	.4298779
_cons	4.957289	7.90278	0.63	0.531	-10.61453	20.52911

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Impact of Financial Leverage on Firm's Profitability: Proof from Coke and Refined Fuel Sector of Pakistan

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Abstract:

The basic reason of this revision is to examine the impact of financial leverage on ROA and EPS in Coke and Refined Petroleum Sector of Pakistan. It aims to determined that how the profitability of this sector is affected by financial leverage. For analysis purpose we selected nine companies listed in Karachi Stock Exchange. Source of data collection is secondary data collection in which we examine the financial statements of selected firms. To check the significance of financial leverage on ROA and EPS we develop hypotheses. We used descriptive statistics, correlation matrix and regression analysis to check the relationship between variables and significance of financial leverage on firms' profitability. After analysis we find out that financial leverage has significance impact on firm ROA and has not significant impact on EPS.

Key Words: Financial leverage, ROA, EPS

Introduction:

Financial leverage is basically the cost of borrowing. It helps to analyze that how much borrowed money is used by firm to finance their fixed assets. Firm has option to use either equity or debt to finance their assets. The assent of financial leverage is crucial not only for firms to measure their borrowing and financial needs but also for policymakers to encompass the strategic directions regarding the capital structure (Akhtar, Yusheng, Haris, Ain, & Javaid, 2021). Few studies have proposed that the relationship between firm profitability performance and financial leverage can be undesirable because of higher finance costs (Barry & Mihov, 2015). Various researchers has interest in financial leverage to examine association between financial leverage and firm financial performance. Moreover, (Kraus & Litzenberger, 1973) discussed that a higher level of debt can protect your income from massive level of taxes therefor, we analyzed that debt is advantageous for companies. Nevertheless, the burden of massive debt is the danger of bankruptcy by increasing the marginal cost and failing the marginal benefit. Some firms use debt to finance their assets, some uses mixture of debt and equity, some use only equity they avoid debt to finance their assets because on debt they have to pay fixed amount. That fixed amount is financial leverage. And it is also known as interest. Financial leverage is very important for any firm, therefore right mixture of debt and equity is essential for firm profitability. As we mention above, financial leverage is the cost of borrowing, Therefore, it has some positive and some negative impacts on firm. According to (Brealey, Myers, Allen, & Mohanty, 2018), the pecking order theory encourages businesses to prioritize their sources of financing by putting internally generated funding first, debt financing second, and equity financing third. As the cost of borrowing increases firm has to pay more and the cost on it which reduces the net income of firm. Therefore, the firms which do not use financial leverage to finance their assets have to pay low amount of interest which means that their profitability is high. On the other hand, firm with high level of financial leverage have lower profitability because their cost of borrowing is high. And they have got to pay a high amount of interest. Profitability plays crucial role in the process to find the profitability of the firm we want to know that firm's performance, Return on Assets (ROA) and Return on Equity (ROE) these accounting procedures widely used to examine the profitability of the firm (Rahman, Saima, & Jahan, 2020).

Generally financial leverage is measured through the amount of total debt a company holds by dividing the amount of total assets. Financial leverage has a positive impact of firms during prosperity phase but have adverse impact during the recession period. Therefore, the decision of financial leverage is important for any firm. The main objective of our study is to check that financial leverage has positive or negative effect on coke and refined petroleum sectors of Pakistan. For research purpose many studies have been done on impact in the different sector of the industry to measure the profitability of the firm but there is paucity to make research on coke and fuel refined sector of Pakistan. There are many several factors which can affect firm profitability. However, in our study we just focus on financial leverage and its impact on firm performance. We also want to check the increase or reduction in the productivity of selected firms outstanding to rise or fall in the financial leverage. The rest of the study is designed as follows 2. literature review, and hypothesis development are discussed in Section 3. Methodology of the study, the results of the study are outlined in Sect. 4. Finally, Sect. 5 presents the conclusion, recommendation, limitations and future implications.

Literature Review:

The existing literature of financial leverage has just focused on the two aspects i.e., risk and return. Nevertheless, recent researchers of financial leverage have focused on the return of the companies. The notion of leverage is a crucial financial assessment that every entity utilizing fixed operational costs and or fixed interest expenses should familiarize themselves with. Businesses with elevated leverage face a heightened risk of failure should they fail to fulfill their debt obligations, encompassing interest and principal payments. Leveraging provides tax advantages and additionally enables the company to secure adequate funds for facilitating business expansions. Several notable studies, including (Ardalan, 2017) Capital Structure Theory, (Kraus & Litzenberger, 1973) Trade-Off Theory, Pecking Order Theory, etc., have highlighted the association between profitability and financial leverage. The research conducted by (Ozdagli, 2012) revealed that elevated financial leverage has the potential to reduce the market beta of stock returns, indicating an unfavorable relationship between financial leverage and stock returns. According to (Chen, 2020), Numerous studies have been conducted on the linkage between firm performance and financial leverage. Nevertheless, upon consolidating the findings of both local and international scholars, it becomes evident that the outcomes of these academic works differ, with a predominant tendency towards negative results.

Moreris (2010) theoretically describes the liquidness relation as “realizable cash on the balance sheet to short term liabilities.” In rotate, “realizable cash” is clear as runny possessions advantage other property to which a cut practical.

(Modigliani & Miller, 1958) and (Rahman et al., 2020) first introduced a theory known as “Capital Structure Irrelevance”. This theory is also referred to as MM I. They argued that in a perfectly competitive market, it is totally unimportant how a firm organizes its accounts. So, a firm’s capital structure has no impact on its performance. But the central assumption of this theory doesn’t consider the tax effect, transaction cost, inflation and bankruptcy risk.

Many observational investigations explored the correlation between corporate framework and company earnings in both advanced and emerging nations, yielding varied outcomes. For instance, in the United States, (Roden & Lewellen, 1995) (Rahman et al., 2020) scrutinized the impact of corporate structure on earnings, utilizing a dataset of 48 U.S. enterprises spanning from 1981 to 1990, revealing a constructive association between earnings and overall debt as a part of the complete acquisition financing arrangement. (Margaritis & Psillaki, 2010) and (Rahman et al., 2020) exploration similarly identifies a notable positive relationship between corporate performance and debt levels, utilizing high and low expansion French companies.

Additionally, as per (Pandey, 2009), financial leverage involves the utilization of fixed charge sources of funds, including debt and preference capital, in conjunction with the owner's equity within the capital structure.

(Bui, 2017; Kumar & Jain, 2023) assessed that the outcome of debt ratios on the firm performance and the result appeared that there were strong negative effects of financial leverage on the performance of the company.

(Sadiq & Sher, 2016) to examine the blow of Financial Leverage on productivity, the study include 12fuels Company programmed on Pakistan stock exchange. The researcher found that financial Leverage has a significance relation with the ROA.

Solomom & Oluwadeetan (2015) to find the effect of Financial Leverage on companies’ performance. Independent variable Financial Leverage and profitability used as a dependent variable. Result shows if companies increase in Financial Leverage than companies will decrease in EPS and vice versa ROA.

Ali, Adnan, et al. (2016) to see a relationship profitability and Financial Leverage in fuel and coke sector of Pakistan during 2005-2011. Positive and negative relationship between chosen variable.

Therefore, the main focus of our study is to check that financial leverage has positive or negative effect on coke and refined petroleum sectors of Pakistan. There are many other factors which can affect firm profitability but in our study we just emphasize financial leverage and its impact on firm performance. We also want to check the increase or reduction in the productivity of selected firms outstanding to rise or decrease in the financial leverage.

Research Objective

The main impartial of the learning is to

- Determine the impact of financial leverage on the selected companies.
- Analyze that how their profitability is effected and the significance of financial leverage on ROA and EPS.

Research Methodology

Data Collection

The source of data collection is secondary data collection. Data is collected through the State Bank of Pakistan website. In which we took the financial statements of selected firms for the period of six year and examine them. As our sector is coke and refine petroleum sector so we consider the financial statements of the nine firms which are listed in KSE for the period of six year.

The financial data for the period of 2012-2017 is used and it becomes 54 observations. And we just have nine companies which are listed in KSE so we select all the nine as sample.

Variables

Independent Variables

The repressor variable was financial leverage in under consideration study and the calculation was made as the ratio of total debt to total assets. Total debt involves temporary and long term debt. This ratio reveal the firms total responsibility in relation to their total assets

Financial Leverage = Total Debts / Total Assets

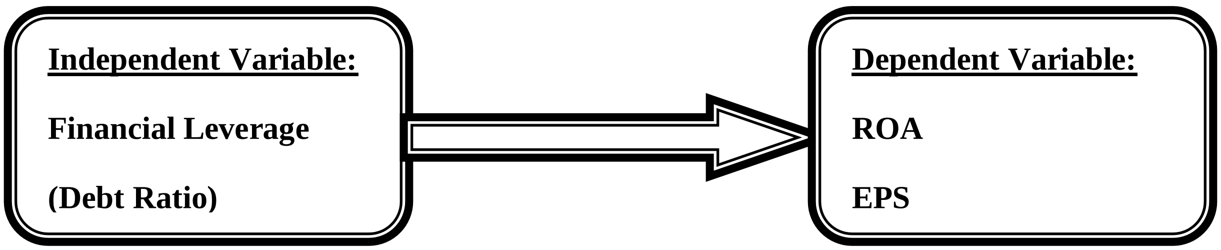
Dependent Variable

Return on Asset, Earnings against one Share was in use as dependent variable.

ROA = Net Income / Total Assets

EPS = Net income / No of exceptional

MODEL



Statistical Models

ROA □□□$_0$□□□$_1$ (Financial_ Leverage) □□□

EPS□□□□$_0$□□□$_1$ (Financial_ Leverage) □□□

Hypothesis Testing

The impartial of this education is to revise the blow of financial leverage on ROA and EPS coke and refined petroleum firms of Pakistan listed in KSE so we make hypotheses to achieve our objectives.

Hypothesis 1

Ho: ROA is not significantly affected by FL

H1: FL has a significant impact on firm ROA

Hypothesis 2

Ho: EPS is not significantly affected by FL

H1: FL has appreciable impact on firm EPS

Data Analysis Techniques

Our study uses Panel Data. First of all we use the **Descriptive Statistics Analysis**, then we applied **Correlation Matrix** to measure the relationship between different variables under consideration, we also used **Pooled Regression Analysis** to estimate the impact of financial leverage on ROA and EPS. For this purpose of analysis the E - views software version (8) is used to analyze financial data.

Results and Findings

After the analysis of data we found that relationship between financial leverage and firm profitability is negative. This means the increase in financial leverage decrease the firm's profitability and EPS. But on the other hand financial leverage has significant impact on firm ROA and also significant impact on EPS.

Table – 1

Descriptive Statistics of Variable

	Financial Leverage	ROA	EPS
Mean	0.636	0.155	25.52
Median	0.670	0.139	28.15
Maximum	1.187	0.582	286.92
Minimum	0.203	-0.324	-159.64
Std. Dev.	0.242	0.199	55.26
Observations	54	54	54

Mean represents the average value; standard deviation shows deviation of value from mean. The financial leverage standard deviation is 0.242. The financial leverage average is 0.636. The ratio of return on asset (ROE) mean is 0.155 and standard deviation is 0.199. The ratio of return on equity (EPS) mean is 25.521 and standard deviation is 55.26.

Correlation Matrix

Correlation show the relationship between the variables is either positive or negative it also show the movement of the relationship.

Table – 2

Correlation of Financial Leverage on ROA & EPS

	Financial Leverage	ROA	EPS
Financial Leverage	1		
ROA	-0.794	1	
EPS	-0.361	0.355	1

The table- 2 results indicate that the relationship between financial leverage and ROA is strong negative. While the financial leverage and EPS has a moderate negative correlation.

Regression Analysis

Regression analysis indicates either the null hypothesis rejected or not. If p-value is less than 0.05 then we reject null hypothesis but if p-value is more than 0.05 we will not reject the null hypothesis.

Table - 3

Regression Panel Least Square

Variable	Coefficient	t-Statistic	Prob.
C	0.797931	33.64058	0.0000
ROA	-0.985322	-9.855625	0.0000
EPS	-0.000323	-0.898312	0.3732
R-squared	0.700632		
Adjusted R-squared	0.688892		

The results in table – 3 indicate that our p-value of ROA is less than 0.05 so we will reject our null hypothesis. Financial leverage has significant impact on firm ROA ratio.

While p-value of EPS is also greater than 0.05 so we will don't reject our null hypothesis. Financial leverage has no significant impact on firm EPS.

Coefficient explains that ROA and EPS have negative relation with financial leverage. And the Adjusted R – squared shows that variation between dependent and independent variable is 0.68.

Conclusion & Recommendations

The learning was lead to conclude the impact of FL on firm productivity and EPS. After the analysis of data we found that association between financial leverage and firm profitability is negative. This earnings the increase in financial leverage decrease the firm's profitability and EPS. But on the other hand financial leverage has significant impact on firm ROA and has no significant impact on EPS. So, we conclude that extremely leveraged coke and refined petroleum firms have lower effectiveness and earnings per share. So, firm of coked and refined petroleum sector are recommended to reduce their financial leverage in order to increase their profitability and earnings per share.

Limitation of Research

- External factors affecting financial leverage are also neglected.
- Only six-year data is taken for analysis purpose.
- We also face time and sources constrained to conduct this research.

Future research directions

Future studies should focus on comparative analyses, assessing the impact of financial leverage on the financial performance of Pakistan's firms, depending upon the variables used for this study. The targeted sectors should span automobiles, construction, metal, electronics, telecommunications, fashion, pharmaceuticals, mining, and media. Utilizing debt to equity, Return on Assets (ROA), Return on Equity (ROE) and Earning per Share (EPS) as substitutes for financial leverage, the objective is to discern their influences on financial performance across four or more sectors in Pakistan. Furthermore, prospective research should endeavor to compare the impacts of financial leverage on financial performance across two or more countries in Europe and Asia, incorporating one or more sectors into the analysis.

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"Exploring the Impact of Food Quality and Price/Value on Consumer Behavioral intensions mediating the role of customer satisfaction: A Case Study of FoodPanda"

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Abstract:

In this 21st century, services of food delivery are emerging as a new wave in the food and beverage industry. Right now, we can order food with the click of one button of phone or on laptop. During this study, we analyzed those factors that influence customer behavioral intentions when using any food delivery app like Foodpanda. In the beginning of research we collected data from different sources. We conducted a survey through Google form. We distributed questionnaire among people and got response from 346 respondents. We placed this data on SPSS and run some analysis. Analysis showed that the factors (price and quality of food) of the Foodpanda application create a significant impact on customer behavioral intentions to use food delivery services. Results showed that customer satisfaction play a mediating role between price, food quality of product and behavioral intentions of consumers.

Keywords:

Consumer behavior, Food quality, Price/value, Behavioral intentions, E-commerce, Satisfaction

Introduction:

In the contemporary era of digital technology and on-demand services, the food delivery industry working on transformation, change its way consumers interact with their service and make choices in the realm of culinary delights. Among the myriad of platforms facilitating this gastronomic evolution, FoodPanda stands out as a prominent player, connecting consumers with a diverse array of culinary options at the tap of a screen. As the landscape of food delivery services continues to evolve, understanding the factors that shape consumer behavior on such platforms becomes paramount.

Existing literature in the field of online food delivery services has primarily focused on broader aspects such as convenience, trust, and variety of choices influencing consumer behavior (e.g., Smith et al., 2019; Wang & Kim, 2020). While some studies have acknowledged the importance of factors like food quality and price (e.g., Li & Wang, 2018; Nguyen et al., 2017), a notable research gap persists regarding a comprehensive exploration of the nuanced interplay between food quality, price/value, consumer satisfaction, and subsequent behavioral intentions on specific platforms such as FoodPanda.

For instance, Li and Wang (2018) investigate the role of food quality in consumer choices but did not extensively explore its impact on satisfaction and subsequent behavior. Similarly, Nguyen et al. (2017) delved into the influence of price on consumer decisions but did not thoroughly examine its interconnected dynamics with consumer satisfaction. The need for a more granular understanding is evident, especially within the context of a specific platform like FoodPanda, where factors like food quality and price/value may have unique implications for consumer behavior.

This research delves into the intricate interplay between two pivotal factors—food quality and price/value—and their collective impact on consumer behavior on FoodPanda. The choices consumers make in terms of where to order their meals and the criteria influencing these decisions are at the forefront of this investigation. By focusing on FoodPanda as a case study, we aim to unravel the nuances of consumer preferences, satisfaction, and the subsequent behavioral outcomes that drive the dynamics of this burgeoning industry.

Food quality and price have long been recognized as key determinants in consumer decision-making within the food industry. However, the advent of online food delivery platforms introduces a unique set of dynamics, where convenience, choice abundance, and digital interfaces further influence consumer choices. The significance of understanding these dynamics extends beyond mere academic curiosity; it holds practical implications for both food vendors and platform providers seeking to optimize their offerings and enhance the overall consumer experience.

In this paper, we seek to bridge the gap in current literature by providing empirical insights into how food quality and price/value independently influence consumer satisfaction and, subsequently, shape behavioral intentions on FoodPanda. Our investigation is anchored in the belief that unraveling these relationships is crucial for stakeholders aiming to not only attract but also retain customers in an increasingly competitive and dynamic marketplace.

Research Objectives:

1. **Assess the Impact created by Food Quality on the satisfaction of customer:**
    - Examine how the perceived quality of food, offered on FoodPanda influences consumer satisfaction.
2. **Evaluate the Influence of Price/Value on Consumer Satisfaction:**
    - Investigate how the perceived value for money, considering the pricing of food items, affects consumer satisfaction on the FoodPanda platform.
3. **Explore the direct effects of quality of food and Price/Value of food on behavioral intentions of consumers:**
    - Investigate individual impact of price and quality of food on the behavioral intentions of consumer, such as repeat orders, referrals, and overall engagement with the platform.
4. **Explore the Role of Consumer Satisfaction as a mediator:**
    - Analyze consumer satisfaction as a mediator between food quality, price/value, and behavioral intentions of consumers. Explore how satisfaction acts as a bridge between these variables.

Supporting Theory:

Expectancy-Disconfirmation Theory:

- This theory express that satisfaction of consumer can be evaluated through the discrepancy between expectations of consumer and perceived performance of consumers. In my study or research work, consumers form expectations regarding food quality and price/value when using FoodPanda. The extent to which these expectations are met or exceeded influences their satisfaction and subsequent behavioral intentions.

Literature Review:

The landscape of online food delivery services has witnessed exponential growth, reshaping traditional dining habits and fostering a digital ecosystem where consumers can conveniently access a diverse array of culinary options. Central to this transformation are the factors that influence consumer behavior, and among them, food quality and price/value stand out as pivotal determinants. While the extant literature has made substantial strides in understanding the dynamics of consumer decision-making in the broader context of online food delivery, a focused examination of the interplay between food quality, price/value, consumer satisfaction, and behavioral intentions on specific platforms, such as FoodPanda, remains relatively scarce.

1. **Quality of food and Behavioral Intentions of consumers:**

A research conducted by Anderson et al. (2019) examined the relationship between quality of food and behavioral intention, this study was conducted on restaurants. They searched that higher perceived food quality positively influenced customers' intentions to revisit the restaurant and recommend it to others. This suggests that when customers perceive the food quality to be high, they are more likely to engage in positive behaviors towards the establishment.

2. **Price and Behavioral Intentions:**

In a study by Chen et al. (2018), researchers investigated the impact of price on customers' behavioral intentions in the fast-food industry. They found that lower prices positively influenced customers' intentions to visit the restaurant more frequently and increase their consumption. Price discounts and promotions were found to be effective strategies to drive customer behaviors.

3. **Customer Satisfaction as a Mediator:**

A study by Wang and Li (2020) explored the role of customer satisfaction as a mediator between quality of food, price and behavioral intentions in hotel industry. They discovered that customer satisfaction partially play as a mediating variable between quality of food, price and behavioral intentions of consumers. They suggest that if customers are satisfied with the quality of food and perceive the price to be fair, they are more likely to exhibit positive behavioral intentions of consumers.

All of the studies highlight importance of both quality of food and price in influencing customers' behavioral intentions. Additionally, customer satisfaction plays a significant role as a mediating variable, linking quality of food, price, and behavioral intentions of consumer together.

4. **Price Perception and Customer Satisfaction:**

A study by Giese and Cote (2002) examined price perception impact on consumer satisfaction. They found that customers who perceive a fair and reasonable price for a product or service tend to have higher levels of satisfaction. On the other hand, customers who perceive the price to be too high or unfair may experience lower satisfaction levels.

5. **Price-Quality Trade-off and Customer Satisfaction:**

Study conducted by Zeithaml (1988), researchers explored a relationship exist between the price, perceived quality of food, and customer satisfaction. They discussed in their study that consumers who perceive a higher price to be associated with higher quality tend to have higher levels of satisfaction. However, if customers perceive a discrepancy between the price paid and the perceived quality received, it can lead to lower satisfaction levels.

6. **Price Discounts and Customer Satisfaction:**

A study by Dodds et al. (1991) examined that price discounts create impact on consumer satisfaction. They studied that customers who receive price discounts or promotions tend to experience higher levels of satisfaction. This suggests that customers perceive the discounted price as a good value and feel more satisfied with their purchase.

Overall, these studies indicate that price plays a crucial role in customer satisfaction. When customers perceive the price to be fair, reasonable, and aligned with the perceived value or quality of the product or service, it tends to positively impact their satisfaction levels. Additionally, price discounts and promotions can also enhance customer satisfaction.

7. **Perceived quality of food and Customer satisfaction:**

A study by Varki and Colgate (2001) analyzed that the perceived quality of food create impact on consumer satisfaction in the restaurant industry. They analyzed that customers who perceive the food quality to be high tend to have higher levels of satisfaction. This suggests that the taste, freshness, presentation, and overall quality of the food significantly influence customer satisfaction.

8. Consistency of quality of food and Consumer satisfaction:

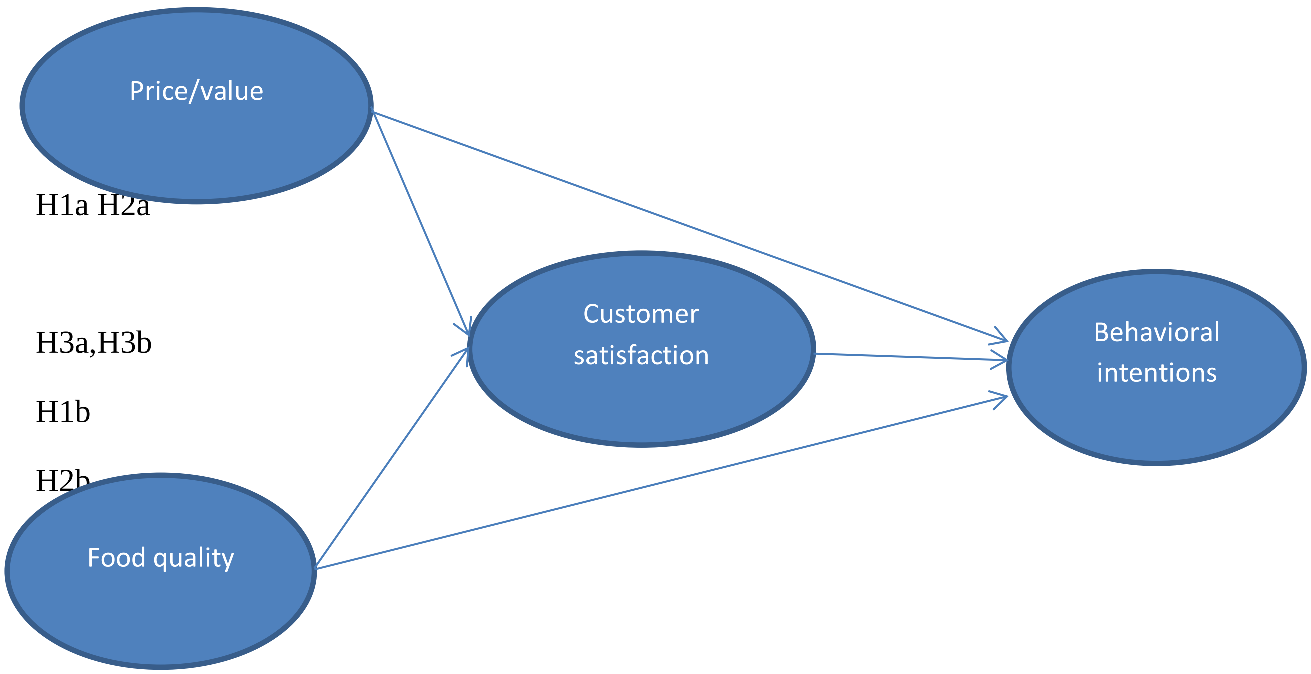
A study conducted by Ryu and Jang (2007), researchers examined that the relationship exists between consistent quality of food and consumer satisfaction. They showed that consumers value consistent quality of food across multiple visits to a restaurant. When customers experience consistent food quality, it enhances their satisfaction and builds trust in the restaurant.

9. Service Quality and Food Quality Interaction:

Another study conducted by Sulek and Hensley (2004) explored that interaction between quality of service and quality of food in the context of consumer satisfaction. They found that both service quality and food quality independently contribute to customer satisfaction. However, the interaction between these two factors can amplify or diminish the overall satisfaction levels. When both service and food quality are high, it leads to higher customer satisfaction.

Overall, these studies clearly show the importance of quality of food in shaping consumer satisfaction. Perceived quality of food, consistency of food quality, and the interaction between quality of service and quality of food all play significant roles in determining customer satisfaction levels. So, it's crucial for restaurants and food establishments to prioritize and maintain high food quality standards to ensure customer satisfaction.

Framework:



Hypothesis:

1. Main Effects Hypotheses:

H1a: Perceived quality of food has a positive impact on Consumer Satisfaction on FoodPanda.

Hypothesis suggests that consumers who perceive higher food quality on FoodPanda will report higher levels of satisfaction.

H1b: Perceived Price/Value has a positive impact on Consumer Satisfaction on FoodPanda.

This hypothesis posits that consumers who perceive better value for the price paid on FoodPanda will report higher levels of satisfaction.

2. Direct Effects Hypotheses:

H2a: Perceived Food Quality positively influences Behavioral Intentions on FoodPanda.

This hypothesis anticipates that higher perceived food quality will directly lead to more positive behavioral intentions of consumers, like repeat orders.

H2b: Perceived Price/Value positively influences Behavioral Intentions on FoodPanda.

This hypothesis suggests that higher perceived value for the price paid will directly lead to more positive behavioral intentions.

3. Mediation Hypotheses:

H3a: Consumer Satisfaction mediates the relationship of perceived quality of food and behavioral intentions of consumers on FoodPanda.

Hypothesis proposes that the influence of perceived quality of food on behavioral intentions mediated by consumer satisfaction.

H3b: Consumer Satisfaction mediates the relationship of perceived Price/Value and behavioral intentions of consumers on FoodPanda.

Hypothesis suggests the influence created by perceived price/value on behavioral intentions of consumer is mediated by consumer satisfaction.

Methodology:

A quantitative research was designed. Structured questionnaire was used to investigate the impact of food quality and price/value on consumer behavior on the FoodPanda platform. The questionnaire comprises Likert-scale items measuring perceived quality of food, price of food, consumer satisfaction, and behavioral intentions. Sampling method was employed, the sample size was determined by using G*power software to ensure adequate statistical power. The study aims to collect responses from FoodPanda users, with demographic information as control variables. Data analysis will involve descriptive statistics, multiple regression analysis to examine relationships and mediation analyses.

Results:

The survey that was conducted between 346 respondents utilized questionnaire that comprise 4 sections i.e demographics, independent variables (Food Quality, Price), Mediator (Customer Satisfaction), Dependent variable(Behavioral Intentions). All the data in these sections is prevalent in the discussion of study. The responses were collected from the users of Foodpanda. These346 questionnaires received from respondents considered valid for research. Demographic data is available in Table 1.

Table 1.

Respondent Demographics (N=346)

Gender		
Responses	Frequency	Percent
Male	153	44.2
Female	193	55.8
Age		
18-20	170	49.1
21-30	176	50.9
Occupation:		
Student	239	69.1
Employed	106	30.6
Unemployed	1	.3
Frequency of Using Food Delivery Services		
Rarely	48	13.9
Frequently	192	55.5
Occasionally	106	30.6

Table 1 shows the summary of demographics. Every respondent has been using foodpanda. Female respondent was more than male respondents. Female respondents are 55.8% out of 100%. Here the male percentage is 44.2%. Among the respondents 170 respondents aged between 18-20. Here 49.1% respondent age are 20 or less than 20. 176 respondents aged between 21-30. Here 50.9% are 30 year old or in between 21 to 30.

Here majority of our respondents are students. 69.1% from 100% are students. 30.6% out of 100% are employed, doing any job. Here only 0.3% out of 100% that is the 1 person out of 348 is unemployed. Majority of the market of foodpanda is the students who are studying in school, college, universities.

More than half of respondents are using foodpanda frequently in their daily life. 55.5% respondents are using Foodpanda on frequent bases. 30.6% respondents use Foodpanda on occasions. 13.9% respondents are using Foodpanda on rarely bases. But they are satisfied with the service of Foodpanda.

Table 2:

Reliability Test, Descriptive statistics, cronbach's Coefficients Alpha:

Cron bach's Alpha	N of Items
.905	20

	Mean	Std. Deviation
BI	22.1734	2.40747
FQ	21.8468	2.10099
P	21.8960	2.10744
CS	21.9335	2.21685

We conducted survey from 346 Foodpanda users related to the factors like price and quality of food that influence customers behavioral intentions. This measure included two components: price and quality of food. Pearson correlation analysis utilized to determine the relationship between all these variables.

Table 2 clearly display that all coefficients are significantly greater than .80. The internal consistency of the variables verified with Cronbach Alpha is .905. This clearly shows that items for all the factor are reliable and have high internal consistency. For reliability testing, any Cronbach alpha coefficient value greater than 0.70 is considered good according to the researchers.

According to Taber (2017), alpha values are considered as excellent if (0.93–0.94), strong if (0.91–0.93), and reliable if (0.84–0.90). The overall alpha for internal consistency across the scale is .905, that is significantly higher than the recommended limit of .70. All of the independent variable has positive Pearson correlation coefficients. No variable have negative Pearson correlation coefficients. The mean of the overall variable come in the range of 21, which means that all of the respondents have a neutral impression of the survey.

Table 3:

Regression Analysis:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.752[a]	.566	.564	1.59048

a. Predictors: (Constant), P, FQ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1131.935	2	565.967	223.736	.000[b]
	Residual	867.660	343	2.530		
	Total	1999.595	345			

a. Dependent Variable: BI

b. Predictors: (Constant), P, FQ

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1.719	.971		1.771	.078

FQ	.457	.057	.399	8.075	.000
P	.478	.056	.418	8.466	.000

a. Dependent Variable: BI

Variable Entered	Beta
Food Quality (FQ)	.457
Price(P)	.478
F-value	223.736
R-square	.566
Adjusted R-square	.564

Note: N=346; *p<0.05 **p<0.01. Dependent variable: Foodpanda Consumer behavioral Intention

Regression analysis used to test the hypothesis. Above tables shows the results of multiple regression analysis that was used to test the variables of the model. In Table 3(i), Independent variables are explained collectively as R-squared is .566. This indicated that both of the independent variables can justify 56.6% of the variance in intension to share the variables of Food quality and value/price. Dependent variable in the analysis was behavioral intention of consumer.

As shown in Table 3, the model consisted of price, food quality, which influences consumers' behavioral intention to use Foodpanda . Standardized coefficient beta analysis accounts for a single variable, while the remaining variables are derived as constants. The beta value was obtained by applying the standardized beta coefficient for the price variable is 0.478. This explains that one standard deviation increase can up the standard deviation of the price variable by 478. The positive correlation also indicates that as the value of the independent variable goes up, other values, like the mean and standard deviation, tend towards upward direction (Frost, 2017).

The value of beta obtained by applying the standardized beta coefficient for the variable of food quality is .457. This shows that one standard deviation increase can increases standard deviation of the food quality variable by .457. That positive correlation indicates that as the value of the independent variable increases, other values, like mean and standard deviation, tend towards upward direction (Frost, 2017).

General regression analysis shows that price and food quality are accepted as significant variables. It is clearly shown here that price and quality of food play an important role in the creation of customer satisfaction. It can be concluded that the changes in consumers' behavioral intentions are positively correlated in the key variables of price and quality of food. Therefore, hypothesis H1a,H1b,H2a and H2b are accepted.

Table 4:

Mediation Analysis					
Model	R	R Square	Adjusted R Square	F	Sig. F Change
1	.752[a]	.566	.564	223.736	.000
2	.844[b]	.713	.710	282.998	.000

Table 4, shows the mediating effect of consumer satisfaction. According to the table, value of R-squared increased from 56.6% to 71.3% with the use of mediator between food quality, price and behavioral intention of consumer. Table also denoted that our model is significant. A good fit exist in the model because the value of F increased from 223 to 282 with the value of mediator. All of conclusions indicate that our hypothesis H3a and H3b are accepted.

Conclusion:

This research paper has achieved its objective. On the bases of results we concluded here that factors price and quality of food has a significant impact on consumer behavioral intentions. During the use of Food Panda app these factors must be taking into consideration. During research we analyzed that customer satisfaction played a mediating role between price, food quality and behavioral intentions. All of our hypothesis H1a,H1b,H2a,H2b,H3a,H3b are accepted. These results from the analysis clearly indicated that clear understanding of behavioral intentions towards the app of FOOD PANDA.

Limitations:

- Data collected from Lahore city
- Limited variables used in this research
- Only one mediators used

Future Recommendations:

- Future research can be conducted in more than one city or country
- Can use more independent variables that effect behavioral intentions of consumer
- Consumer loyalty can be used in future research as a mediator
- Highly recommended to use PLS software for analysis

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The Impact of Social Media On Business Performance

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Abstract:

Social media is an important part of today's world. It is often used in businesse organizations, and to understand current events and trends. The aim of this study is to investigate the impact of social media and to examine to what extent social media affects on organizational capabilities and business performance in food industry. The purpose of this study is determine connection between social media and business process performance by carefully examining the food panda company whose data will analyze. The impact of social media on business life will be analyzed. This case study was conducted using on-line advertising in the on-line gaming industry, which uses the social media most. Research model support of food panda, an online advertising company will be created. The impact of using six social networks on business and marketing will be analyzed. Mixed method research will be used, including quantitative analysis based on a surveys and qualitative analysis based on interviews. By using social media, improvement in business will be seen. Impact on business will be observed by shared content. Enterpreneurship has the potential to improve your business performance. Although these effects will not due to any one of the six social media tools, the success of all six social media tools in social media will impact on Panda food's ability to collaborate with internal and external businesswill be studed.

Key Words : Social Networking Tools, Business Process Efficiency, Food Panda Case Study, General Content.

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Introduction:

Social media platforms are becoming more and more common and are being utilized on a daily basis by a wide range of businesses, from start-ups to huge corporations and small to medium-sized businesses.In order to stay up-to-date on trends and current events, it is frequently utilized in business. Even though social media is widely used, not much is known about the precise effects that these tools and technologies have on the efficiency of business processes in the food sector. While the market for applications is booming, emerging technologies are becoming more and more popular among organizations in business networks as tools. Utilizing the newest social media technology, networked businesses appear to perform better than their rivals and cite cost savings and increased productivity. It's critical to comprehend the precise effects that social media have on the efficiency of company processes. The discovery of a clear link between the two will facilitate the transition to Food Panda, a new corporate climate where businesses will optimize the advantages of incorporating social media suites into their regular operations. This research aims to assess the degree to which the use of social media technology affects business process performance in a measurable way, going beyond a simple list of advantages and disadvantages. Social media's effects on management, governance, knowledge management, and strategic competitiveness may have an impact on a company. In this study, the research topic is: "What effect does social media have on business process performance?" What is the impact of shared content on business performance? To what degree do business skills impact social media tools?

The goal of this study is to gain a deeper understanding of the social media landscape and the practical applications of popular social media tools. Analyze a case and evaluate how IT and business managers of a successful social media-based company assess this influence in order to respond to the research question. It will be interesting to observe how much social media technologies affect both intra- and interorganizational activities in the online food sector. The goal of the research is to find connections between social media and the effectiveness of business processes by closely examining the strategies implemented by Food Panda, the organization for which we will perform a case study. We'll examine the effect on corporate performance.

Literature Review

The methods that have been employed in other studies to examine the literature will be adhered to (Kumar et al., 2020; Salo, 2017), especially the three-step procedure that Salo (2017) recommends. Our initial step of the literature research on social media in business-to-business marketing was guided by the growing body of knowledge on the topic. The rules for the literature review will be developed in the second stage, followed by a process for the inclusion and exclusion of publications in the third stage. Every study on social media marketing will have the following components:

Leading marketing journals, such as the Journal of Business and Industrial Marketing, the Journal of Marketing, the Journal of Service Research, the Journal of the Academy of Marketing Science, the Journal of Business-to-Business Marketing, the Journal of Personal Selling and Sales Management, the Journal of Marketing Management, the Journal of Business Research, and the Journal of Marketing Science, were carefully searched for titles and abstracts. We next looked through conference proceedings (IMP, AMA, AMS, etc.) and ProQuest's dissertations list to find unpublished research. It was discovered that in 2009, the first collection of articles about social media in business-to-business marketing was published. Therefore, 115 publications that look at social media in business-to-business marketing were found after looking through papers published between January 2009 and December 2020.

Social media technology adoption is crucial for businesses looking to thrive in the information technology disruption era of hyperconnected company operations. The deployment of modern business models is frequently delayed by the issues facing the business sector because of a high level of worry. In reality, the utilization of social media for digital marketing plays a significant role. Thus, innovation will be the company's primary tool for responding to and taking advantage of this disruption. The aim of this research is to ascertain how innovation and social media affect the performance of small and medium-sized businesses. This study employs the diffusion of innovation theory to validate that the attributes of innovation and organizational features are what propel SMEs to adopt technological innovation.

Networked Publics Theory

This theory suggests that social media networks act as a platform for public conversations and debates. It states that publics are formed when people come together in an online space to discuss topics of mutual interest.

Social media and business performance

To understand how social media affects business performance, we approach businesses from the perspective of resource-based views. According to the resource-based view, businesses have access to a unique collection of resources (such as social media, IT infrastructure, and human resources) that are hard for competitors to imitate and unique to their business. The foundation of a firm's performance and competitiveness is its unique resource mix. You can interact with your customers on social media and learn what people are saying about your company. Social media can also be used for mobile applications, giveaways, and advertising. Social networking can assist your company in gaining clientele, gathering feedback, and cultivating a devoted clientele.

H1: Social media affects the business performance

H0: Social media don't affect the business performance

Social media and sharing content

A key component of social media and marketing is sharing. Understanding the value of sharing and implementing it into your content strategy will help you expand your audience, create a community, and position your business as a reliable authority. People from the actual world live in an unrestricted, free universe. Online, anyone can be anybody or anything. Particularly in social networks, it is evident that an individual's life can differ significantly between the real and virtual worlds. Social media is an online platform that facilitates interpersonal communication between people, enabling them to engage without geographical or temporal constraints. Social media, according to Kaplan and Haenlin (2010), is a category of internet-based apps that combine technology and philosophy and allow users to produce and share content. Users of social media services can exchange ideas, viewpoints, experiences, and opinions, making it easier for users to communicate information with one another (Akrimi & Khemakem, 2012). Yoo and Gretzel (2011) assert that social media can fulfill the information needs of consumers by providing factual, specific, experience-based, and non-commercial information that can be accessed and obtained through sources outside of the consumer's social circle. Social media is one of the platforms that makes it possible for business owners to communicate with customers and other interested parties at any time and from any location. Social media serves as an excellent conduit for information and contact between producers and customers, regardless of location or distance. Social media is a type of media that may be used to locate customers and establish a brand's reputation. Social media breaks down human socialization barriers, including time and distance constraints. Through social media, people can connect with one another at any time, from anywhere, regardless of day or night, distance, or other constraints. The modern world is greatly impacted by social media. When used appropriately, this can contribute significantly to trade, media marketing, networking, forming new relationships, strengthening existing ones, and other activities. According to Ferrinadewi (2004), promotion is a type of communication that explains a product and persuades potential buyers about it in an effort to attract their attention and educate, remind, and persuade them. Similar to science, marketing is dynamic and ever-evolving. There must be changes in the marketing industry. As the cradle of marketing, the business sector is ever-evolving to keep up with the times. Notwithstanding the shifts, marketing is usually accompanied by three elements: consumers, competitors, and companies. These three elements are constants in any marketing conversation. Identifying market conditions by taking market conditions into consideration is the first stage in a marketing process. This condition impacts the company's prospective performance as well as the level of competition, demand for the products the company produces or sells, costs associated with running the business, and revenue the company makes. A commercial endeavor that uses the internet to market a product is known as online marketing. One of the most recent technological innovations in the globalization age is the internet, which has made it possible for people all over the world to connect and exchange information, including details about the goods and services that are being sold. The alternative to using the internet, of course, to market a product in this global age is online marketing. Because they may now be completed online, a number of purchasing and selling transactions that were previously limited to in-person meetings, phone calls, and mail are now considerably simpler. Free commerce is growing as a result of technological advancements, as if there were no restrictions on trade in terms of time or space. This results in increased competition that all stakeholders, particularly the firm as a producer, must contend with. An online business is one that operates via the internet, typically using a website or other application medium to transmit or sell information. Using electronic commerce, or e-commerce, is one way to leverage technology to increase company rivalry and sell goods and services. A new marketing paradigm is emerging in the form of a modern market, a consumer-focused marketing idea, or a marketing revolution manifested as an online marketplace.

H2: Sharing content affects the business performance

H0: Sharing content don't affect the business performance

Sharing content and business performance

We make the assumption that the collection of tool features together creates an ecosystem of shared content that facilitates business networking, network effects, and improved performance, in line with Oesterle et al. (2001) and Van Heck and Vervest (2007). According to these writers, the network must have evolved networked business operational logic in order for such network effects and improved performance to materialize. This logic makes it simple for many business players to join and establish connections between networked and proprietary processes and data. By enabling "rapidly pick, plug, and play" business process configuration to quickly satisfy a specific aim, such as responding to a client order or an unforeseen circumstance, such logic makes the network intelligent (Van Heck & Vervest, 2007). They facilitate consumer interaction and provide social capital that motivates people to participate, interact, and cultivate relationships with customers. Utilizing the internet for business purposes is a creative approach to carrying out corporate operations. Businesses can use the internet to carry out a variety of business-related tasks electronically, including operational tasks, commercial transactions, and information sharing with suppliers and customers to keep up relationships before, during, and after the purchase process. To increase their market share, businesspeople want efficient marketing media. Marketing communications and social media as a marketing tool are undoubtedly connected. The purpose of this study was to evaluate social media's efficacy as a tool for online business marketing.

Business capablities and business performance

The notion of a resource-based view states that a firm's competitive advantage and superior performance are primarily attributable to its unique capabilities. It is possible to distinguish between capabilities and resources. Capabilities are recurring patterns of activity in the utilization of resources to generate, produce, or deliver value to a market, whereas resources serve as the fundamental units of analysis (Barney 1991). It should be noted that while obtaining resources is simple, building business-wide capabilities to leverage them to improve performance is more difficult. Hence, whereas resources are easily copied, business practice-integrated talents cannot.

H3: Business performance is enhanced by business capablities

H0: Business performance is not enhanced by business capablities

Seven Functional building blocks Impact of the Functionality on Capabilities.

Table.1

Online food ordering	Foodpanda maintains a website and a mobile app that people can use to order food
Easy accessibility	People can search for restaurants that deliver food to their addresses using Foodpanda's website/app.
Effective payment gateway	Once the meals are finalized, people can check out their cart and pay via online payment gateways or through cash-on-delivery.
Fast delivery	Once the order is confirmed, a notification goes to the restaurant. Every restaurant that partners with Foodpanda gets access to a 'merchant app'
Live tracking	Customers can track the entire process right from food preparation to delivery on Foodpanda's app/website.

Research Model

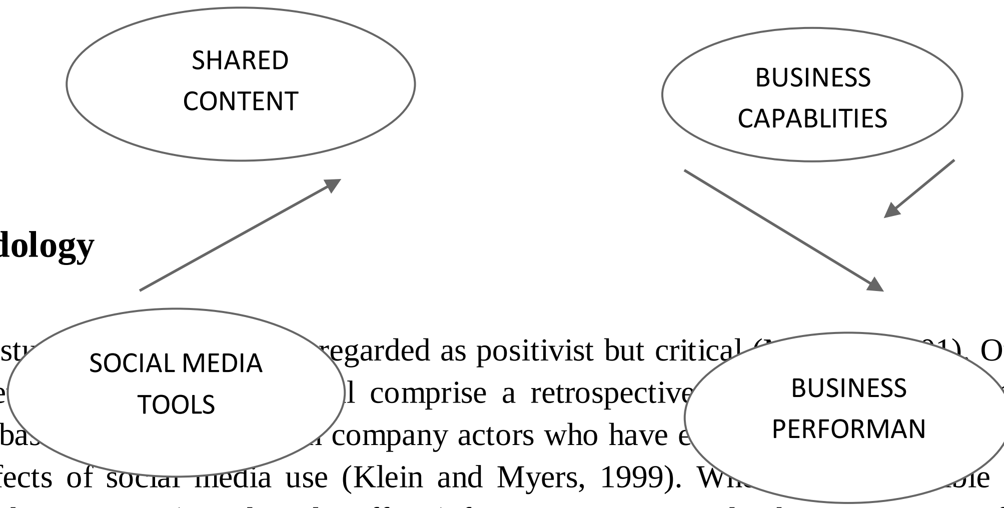
Figure summarizes our research model on the impact of technologies on latent factor and of this factor on business performance.

Proposition 1 assumes that ‘use of multiple tools covering a set of functionalities enhances latent factor Networked Business Operating Logic’.

Proposition 2 assumes that “using social media tools influences latent factor (sharing content)”.

Proposition 3 "Business capablities represent the effect on business performance "

Figure 1: Conceptual Framework



Methodology

Our case st regarded as positivist but critical Our mixed-me l comprise a retrospective le instance, ba company actors who have e ed to the effects of social media use (Klein and Myers, 1999). Wh ble to isolate a phenomenon (social media effects) from its context, in-depth investigation of a single example is a suitable research technique (Yin, 1994). Myers (2007) makes a distinction between four research methods (action research, case study research, ethnography, and grounded theory) and three categories of qualitative research in information systems (positivist, interpretist, and critical). Since we were not involved in the creation of the social media platforms currently in use, our research is not action research, and its conclusions will not have any bearing on.

We will employ a mixed research approach, combining qualitative and quantitative analysis, to uncover empirical support for the two premises and to address the research question, which asks what effect social media has on corporate performance. The indicators given below will be used to evaluate each latent factor in the study model using Likert scales (1–5). In our survey question 8, we will use the business process performance self-assessment approach (BPP) (see Table 2). Even if this company has a number of responders, our research will be based on observations from a single company and one case.

Table.2

1	In which department do you work?
2	How long have you been working at the company?
3	Which tools do you use on a daily basis
4	How much does the tool improve your work? (scale 1-5)
5	To which business capabilities do you believe Web technologies contribute most?
6	Which technologies have contributed the most to the business capabilities?
7	How satisfied are you with using tools in your company? (scale 1 (low) -5 (high))
8	Rate how much your work has improved or has become more difficult since the introduction of the tool (worse - neutral - better 5 points scale)

Summary of the survey questions. Note that questions 4, 5, and 6 will be asked for each of the six tools and each of the seven business capabilities)

Data collection

In order to learn more about how the technologies are seen and how they might improve business processes, a questionnaire will be distributed to every employee of the Food Panda Company. Out of the 120 employees who took part in the poll, 60 responded. Table 2 presents a summary of the survey questions. Based on the requirements of their jobs and the business units they are employed by, the 60 respondents are divided into two categories: technical personnel and business employees. Workers classified as "business" include those in the Publisher Team, Marketing, and Advertiser Team. Technical supervisors, product managers, and system developers are classified as "IT" employees.

We will conduct five interviews with key company managers—the Chief Technology Officer, the Director of Marketing, the Director of Advertiser Relations, the Chief of Product, and the Product Manager—in order to verify the survey results. The following open-ended questions form the basis of the interviews: (1) Describe your tasks and the tools you use to complete them; (2) Explain how the tools affect your work and the performance of the company; (3) Identify the tools and technologies you have avoided and explain why; (4) Describe the biggest disappointment and greatest success your company has had with technologies; and (5) What will be the role of applications in the next three years? We'll examine the Food Panda situation.

Food panda case in online food industry

Foodpanda is an online marketplace that links customers to thousands of nearby restaurants offering food delivery services. It continues to run one of the most well-known restaurant ordering apps. Customers can order for pickup or home delivery at the best cost after perusing a variety of menus. It only requires a few clicks. You can see meal point menus, reviews from patrons, and more for over 5,000 restaurants on Foodpanda. Many restaurants use Foodpanda as a marketing tool, especially those that are opening soon. Restaurants that register on Foodpanda can enhance their visibility. Additionally, they can pay a set fee to have their brand promoted on the app. Online food advertising presents a huge commercial possibility due to the fact that over 100 million people utilize these social media platforms. Delivery Hero, a company established in Berlin, owns the online food and grocery delivery platform. With its headquarters located in Singapore, Food Panda serves as Delivery Hero's flagship brand throughout Asia. It provides a platform for online and mobile advertising with the goals of helping publishers monetize their content and advertisers engage with users through brand engagement. Promoting an offer (such as a survey, sale, registration, or application install) can be done by direct advertisers or advertiser networks. Marketers purchase tools in order to reach a certain audience with their offers. Advanced targeting options, like regional, demographic, or application-level targeting, may be requested by customers. Reactions to offers are received by these social technologies, and those responses are turned into leads for sales.Users who obtain these leads are referred to as "incentivized traffic" and are rewarded. Rather than having an innate liking for the brand, good, or service, their incentive to finish an order is to get more free discount coins in their subsequent purchase.

Conclusion:

Gaining a deeper understanding of the social media landscape and the practical applications of popular social media technologies is the aim of this research. In order to accomplish this, we will distinguish between "social media use," "social media-triggered organizational capabilities," and "business process performance," using the resource-based view of the firm as the theoretical foundation. We will outline three rather straightforward concepts that connected performance, capabilities, and social media use. It will discovere the variety of social media platforms that are connected together create a social media ecosystem that will improve company capabilities. Additionally, we will discovere empirical data to bolster the claims, leading us to the conclusion that, in this particular case study, social media utilization might improve company skills. We also draw the conclusion that better business process performance will a direct result of increased business capabilities. There are significant limitations to our investigation. Initially, case study focuse on online advertising in the online food sector, which naturally relies largely on social media usage. Future studies must examine the effects of social media on other businesses. Second, we limited our analysis to a single, fledgling company. There are still more organizations of all shapes and sizes that require analysis. Third, a basic self-assessment instrument to evaluate the performance of the business processes will be used. Additional performance metrics ought to be incorporated into future studies.

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Impact of Work-Family Benefits on Job-Satisfaction and Employees' Productivity

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Abstract:

Purpose

The study is conducted to derive the relationship between the use of work-family benefits by the organizations, job satisfaction, and employees' productivity. As family plays significant role in one's life, so the work-to-family enrichment, and work-to-family conflict will play mediating role for the research process.

Methodology

To attain the purpose of the study, the research will follow qualitative research methodology, for which it is going to gather data from 50-60 already published scholarly articles or reports of different organizations, whereas data collection and analysis will be done as per Partial Least Squares (PLS) Path Modelling.

Analysis

The findings are expected to show that Work-to-Family Enrichment shows greater relationship to the job satisfaction and employees' productivity than the Work-to-Family Conflict. Thus, the organizations can use this research as framework to invest on different work-family benefits to enhance Work-to-Family Enrichment factor and contribute to more job satisfaction and productivity of their employees.

Originality/value

To enhance the credibility and originality of the study, the research is going to use multiple mediation models to check relationship between WFE, job satisfaction and employees' productivity, and same is with WFC, whereas experts' feedback will be used to ensure credibility and avoid biased approach during the research process.

Table of content

Introduction:

Background of the Study

With the increasing demands of the workplaces, the organizations are now focused to evaluate about improving their employees' performance (Dhanda & Kurian, 2021). With such concerns, the discussion about work-life balance and its impact on work performance has remained an attraction for the researchers. Work-life balance or other flexibilities and resources are offered by the organizations to allow the employees to have better family life. When the employees have better earning, peaceful working environment, health incentives, and other allowances, they can fulfil the social and financial needs of their families in better way. This results in happy and healthy family with less conflicts (Hayman & Rasmussen, 2013). Thus, the employees can use their energy on their work efficiently, and do better to gain more benefits for their families. On the contrary, if the employees are not provided with enough resources; rather they are stressed with over time work, less wages, and no incentives then it becomes harder for them to maintain work-life balance. Such situations result in the conflicts between families that raise social and financial burden over the employees and they become tired of their routine (Henseler & Ray, 2016). Thus, they gain no motivation to perform well at workplace and start finding other opportunities which may help them to earn better for their family needs. Therefore, good organizations ensure that their employees are comfortable and having work-life balance, so that they can remain satisfied with their job and perform excellent at workplaces.

Research Aim

Due to increasing significance of the work-life balance, organization are concerned to know what factors help them to enhance employees' satisfaction and productivity. Thus, the aim of the current study is to evaluate relationship between work-family enrichment to the job satisfaction and employees' productivity, and compare it to the relationship between work-family conflicts to the job satisfaction and employee's productivity to better understand their impact on the work-life balance.

Research Objectives

The main objectives of the study are as following;

- To understand the significance of work-family benefits in a life of an employee.
- To study the relationship between work-family enrichment to the job satisfaction and employees' productivity.
- To study the relationship between relationship between work-family conflicts to the job satisfaction and employee's productivity.
- To derive a comparison, the impact of work-family enrichment and work-family conflict on the job satisfaction and employees' productivity.

Research Questions

The research questions of the study are as following;

- How does the work-family benefits lead to motivation and satisfaction of an employee?
- How does work-family enrichment or work-family conflict affect the employees' job satisfaction and productivity?
- When comparing the impact of work-family enrichment and work-family conflict on job satisfaction and employee's productivity, which factors works as supportive?

Significance of the Study

The study is of great significance as it enables the organizations to better understand how can they keep their employees motivated and what factors may lead to better job satisfaction. Though, many companies focus on the work-family benefits, but some still think that paying less to the employees enable them to hire more work force, whereas amount can be spending on the workers' training and purchase of workplace resources. Thus, the current study will show how important family is for an individual, and why the organizations should keep their focus on family benefits.

Research Layout

The study will consist of five sections; introduction, literature review, research methodology, data analysis and discussion, conclusion and recommendations. These five chapters will be divided as following;

- Chapter 1 will explain the research aim and objective and will elaborate on why the conduct of the research process is significant.
- Chapter 2 will present the review of already published literature to develop theoretical base of the study and understand research gap.
- Chapter 3 will elaborate on the research methodology, data collection, and data analysis strategy with adaption of research model.
- Chapter 4 will reflect on how the collected data was analyzed and will answer the research questions to test the hypotheses of the study.
- Chapter 5 will conclude the entire study and will present recommendations for the future students, and associated authorities.

Literature Background

A lot of literature has already been published regarding work-family benefits or work-life balance, associated with job satisfaction. However, the current study has extended the research to the impact of work-family benefits on the job satisfaction and employees' productivity. Thus, this section of the study presents the theoretical background through review of already published literature.

Song et al. (2021) explored the factors that might affect the job satisfaction of an employee, with the implication of Chian Mediation Model. The study collected quantitative data through conducting surveys to the employees of different organization in different cities of China, via using professional platform “Wenjuanxing.” The findings of the study showed the employees work for the better future of their families, and thus when they get benefits which might leave better effect on their social life or family life, then employees were more satisfied. Along with this, the job with autonomy, the self-governed jobs, lead to more satisfaction because this gives them freedom of deciding their work routine and enable them to achieve work-life balance. For every employee, the family is the priority, and thus when they are given opportunity to spend enough time with their family, enough resources to facilitate their wives or children, and good environment to keep the employees less stressed, then better and positive outcomes are achieved (Song, et al., 2021).

Shivakumar & Pujar(2018) defined work as the physical and mental effort by an individual to complete a project or task. It signifies the regular activity, which results in daily, weekly, or monthly earning. On the other hand, life is characterized by various desires and drives, such as the desire to acquire and achieve something or to grow to a significant state. These desires and drives cause stress in life and resultantly affect the work performance of the individual. Thus, it is crucial to keep a balance between work and life, which will not only help to focus on desires but also to improve work performance. Resultantly, the individual will be able to manage his/her time efficiently and to perform better at the workplace. The study also highlighted that lack of management between work and life may lead to severe issues, such as extreme stress, anxiety, poor performance, and physical sickness (Shivakumar & Pujar, 2018).

Furthermore, in 2012, Kumari published a study regarding work-life balance, in which they highlighted that every individual work for their family benefits, such as a father works too hard to give his children a better life. Thus, when the organizations offer work-family benefits, that lead to more job satisfaction among employees and keep them motivated to perform excellent. That is why the organizational leaders and managers focus on bonuses, incentives, insurances, allowances, and attractive rewards to improve the living standards of their employees and give them a feel of achievement when they can do something good for their families. Especially, good rewards and incentives enable the employees to meet their day-to-day requirements peacefully and keep them less financially stressed, due to which the employees can give their maximum productivity to perform excellent at workplace, and present better solutions for workplace problems.

Another study (Jung & Sohn, 2022) was also published to explore the relationship between career commitments and work-family benefits. For this purpose, the study adapted dualistic model of passion and investigated the relationship between work-family benefits and work passion and career commitment. The study adapted quantitative research methodology, for which 250 employees participated in research, and they all belonged to different South Korean workplaces. The findings of the study, though, did not show any significant relationship between work-family benefits and work passion, but work-family benefits left positive impact on job satisfaction and kept employees motivated to show great career commitment. Especially, when the employees get better opportunities, in terms of defined working hours, less stressful workplace environment, good wages, better incentives, and family allowances, then remain happy and satisfied in their family life and so they remain fresh and motivated at workplace too. Thus, the work-family enrichment leaves positive effect on the harmonious work passion and career commitment, which leads to more job satisfaction and employees productivity. The study (Jung & Sohn, 2022) also studied the work-family conflict and its impact on the work passion and career commitment. The findings revealed that when the employees work in stressed workplace and get less incentives, they remain stressed. Thus, stressed employees cannot perform excellent at their job and remain less passionate towards their career commitment.

Better incentives actually leave better psychological impact on the person, as it enables them to think of the benefits they will attain in return to their hard work and so they remain more motivated to perform excellent. On the contrary, if one is not getting enough rewards in return to their hard work, they will remain psychologically stressed and will start searching for other jobs to earn better for their family's future, and therefore they remain less motivated to show career commitments.

Recently, Vargas et al (2023) derived a relationship between use of work-family benefits to the job satisfaction, for which the study used two mediators work-family conflict and work-family benefits and studies their impact on the job satisfaction. The study adapted quantitative research methodology and conducted survey from 1051 employees of the Colombian organizations. the findings of the study are highly significant to reflect the positive relationship between work-family benefits over the employees' job satisfaction. Now, the current study has also kept this literature as a base of study and will continue working on the topic to further investigate the relationship between work-family conflict or work-family enrichment to the job satisfaction and employees' productivity. In this way, the research will be extended to investigate the impact of these factors over employees' productivity too.

Research Methodology

Research Method

The research will adapt qualitative research methodology, as per which the data will be collected through already published literature, reports, and case studies, and then it will be analyzed to evaluate the relationship between work-family enrichment/work-family conflict to the job satisfaction and employees' productivity.

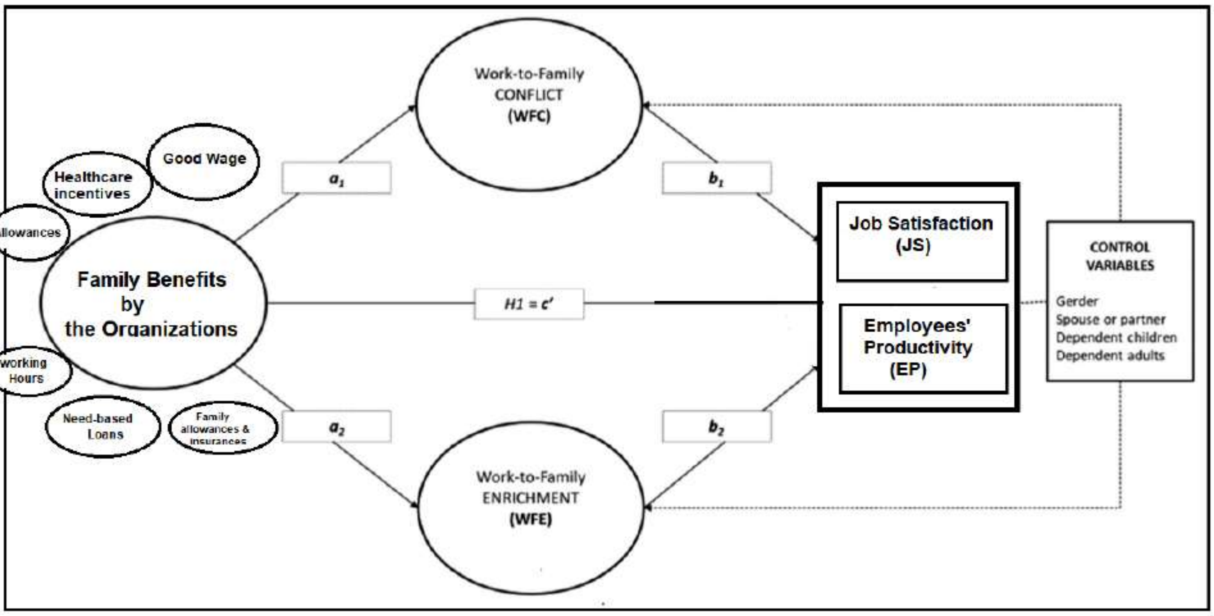
Research Justification

The study follows the qualitative research methodology due to lack of time and budget. On the contrary, the quantitative research requires enough time to design a questionnaire, conduct survey, gather data, and analyze it, whereas the sample size remains limited. The qualitative research allows the research to gather data from wide sample, and even the published studies from different regions can be used to analyze the data. Thus, the validity of the study is extended. However, the biased approach might affect the research methodology, for which experts' feedback are taken to ensure that no unethical conduct is performed during the studies, and research findings are credible and reliable to be published.

Research Modelling

The study is going to investigate impact of work-family benefits, that are offered by the organizations, on the job satisfaction of the employees and their productivity. Thus, the three main factors of the study are Family-Benefits, Job Satisfaction, and Employees' Productivity. However, Family-Benefits may be good wages, better social structure, allowances, incentives, insurance, children medical care, need-based loans, family interactions, healthy working hours, and more. Thus, the impact will be investigated through use of Partial Least Square (PLS) Path Modelling (Henseler & Ray, 2016), which is defined as the variance-based structure equation modeling, on the basis of which variance and relationship between the variables can be derived. Thus, the current study is going to use the model as tool to fetch data out of the already published literature and then evaluate the variance in relationship between work-family conflict and work-family enrichments when studying their impact on job satisfaction and employees' productivity. Thus, the variables of the study are as following;

- Work-Family Enrichment (WFE) – Independent
- Work-Family Conflict (WFC) - Independent
- Job Satisfaction (JS) - Dependent
- Employees' Productivity (EP) - Dependent



Hypotheses

Thus, on the basis of above model, and variables, following hypotheses can be established;

H_a: The relationship of WFE is stronger to the JS and EP, when compared with WFC.

H_0: There is no significant relationship between WFE, JS, and EP.

H_b: The relationship of WFC is weaker to the JS and EP, when compared with WFE.

H_0: There is no significant relationship between WFC, JS, and EP.

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The Impact of Sehet Sahulat Card On the Access to Health Care and Financial Protection in Punjab, Pakistan

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Abstract:

On December, 15, 2015 Sehat Sahulat Program was introduced in Pakistan and researchers remarkably explains extraordinary achievement for the popularity and satisfaction of this program but the data for beneficiary socioeconomic class, gender and age is still lagging. This article is designed to explain the comprehensive data related to age, gender and socioeconomic class which is more beneficiary to Sehat Sahulat card. This study also highlights the inflation aspect and financial protection policy. This Study enrolls 264 in-ward patients from Shalamar Hospital, qualitatively assembled data by questionnaire design for patient’s Demographics, SSC history, family structure, Income statement, religious sect and treatment coverage. This study explains the frequency of urbanized population, 48 (27.9%) male, 38 (41.3%) females, Age group; 40-50years, 67 (62.6%) male and 40 (37.4%) female are greater. Study shows Muslim in-patient population 225 (85.20%), non-Muslim 39 (14.80%), SSC history; once 75 (65.21%), twice 24 (20.86%) and more than twice 16 (13.91%), family members past card history, 50 (18.90%) yes, 214 (81.10%) No data found. This Study explains greater frequency for family structure, 4-6 members;147 (55.70%), salary range under 25-35k, secondary education 104 (39.40%), marital status;120 (69.8%) males and 75 (81.5%) females are greater. This study helps future researchers for yearly analysis and policy design for the expansion of this program. This study shows limitations of time constraint, funds availability and previous literature gaps but do not affect data quality.

Keywords*:* Health index, World Health Organization, Sehat Sahulat Program, financial protection, Health Policy

Introduction:

The Sehat Sahulat Program (SSP) is a joint venture of the government of Pakistan with all the public and private hospitals to increase the health access to every individual without any socioeconomic difference of age, sex, race, and ethnicity for every province (Hasan et al., 2022; Jafree, 2023; Tariq et al., 2021). The main objectives of SSP are to ensure the enhancement of population health status and to reduce the out-of-pocket (OOP) expenses e.g., personal health care, prescription medicine expense, treatment expense, physician service charges, procedural, and community hospital expense(Forman et al., 2022; S. A. Khan et al., 2023). Awareness, effectiveness and the impact of Sehat Sahulat Program was very much addressed from the date of its launch to the recent times(S. J. Khan et al., 2023; Shahbaz et al., 2023). This study is designed to access the socioeconomic class which is more beneficiary to SSP services. This study aims to give broad perspective to understand the health needs of population according to the constant inflation and helps to manage the SSP main objective by upgrading the health policy according to the facts and figures. According to Global Health Security index (GHSI), Pakistan overall health security index is 30.4 and ranked 135 out of 195, which means that Pakistan health care system is only efficient to 59 countries but worse than to 134 countries in the world. Regardless of services provided by SSP, researchers focused more on their utilization (*Global Health Security Index: Advancing Collective Action and Accountability amid Global Crises*, 2021). However, there is no study exist, according to our knowledge, that demonstrate the effects of SSP in case of reduction in disease burden, coverage of enlisted benefits of SSP according to the socioeconomic class. This study highlights these lacking subjects by utilizing all the available resources and helps to provide quality data for future researchers too.

Material and Methods

This Study involves 264 Sehat Sahulat Program patients from general and surgical wards of Shalamar Hospital Lahore. Qualitative research was design after extensive literature review. The data is collected in the form of questionnaire, according to the patient's Demographics, Sehat Sahulat Card (SSC) history, Family members SSC history, family structure, Income statement, religious sect and treatment benefits they are attaining. The Permission for the collection of data is granted by ethical committee of Shalamar Hospital and patients are being asked only to that information required for research proposal.

Results and Discussion

The results show, out of 264 in-wards patients, we have 172 male patients and 92 female patients as shown in Figure 1. The age group divided from 18-28, 29-39, 40-50, 51-61, 62 and above. The percentage frequency for in-ward patients belonging to the age group; 40-50 years is higher. This study shows disease burden in this age group, 67 (62.6%) male and 40 (37.4%) female are greater as shown in Figure 2.

The Sehat Sahulat Program covers the entire population, it is observed that the population belonging to urban area is more likely to admit and avail Sehat Sahulat benefits than the rural population. The percentage of Urban male is 124 (72.1%) and for female 54 (58.7%). The percentage of rural male is 48 (27.9%) and for female is 38 (41.3%) as shown in Figure 3.

As the subject of study, information related to the marital status of enrolled patients is also collected. The percentage frequency of married and non-married males is high. For single males its 52 (30.2%), and for single females its 17 (18.5%). For married males it is 120 (69.8%), and for females its 75 (81.5%) as shown in Figure 4.

The current population of Pakistan is 231.4 million. Out of which 96% population consist of Muslim community. Sehat Sahulat Program covers the entire population of Punjab. Muslim Population in Punjab is 5.35 Lakhs (1.93 percent) of total 2.77 Crore. Christian Population in Punjab is 3.48 Lakhs (1.26 percent) of total 2.77 Crore. The Sehat Sahulat card is equally protecting the rights of minorities. Religion perspective is also the part of our research study as shown in Table 1.

In 2011, National Socio-Economic Registry (NSER) was established by Benazir income support program. NSER is a data repository containing information on the socio-economic status of all the households participated in the data collection exercise. Data of 27 million Households was collected in 2010 for the first time by visiting the doorstep of every household in the country. Before the launch of the Sehat Sahulat Program, former prime minister admires these countless efforts for BISP. Status of individual related to finance can easily be monitored by using this data, and NADRA is also merged to claim the eligibility right to deserving and poor people. Sehat Sahulat program greatly influences the life of those people who are living below the average line. Income details are included as a part of our research to let us know that which class of society is more utilizing this Healthcare resource as shown in Table 5.2, that population of Pakistan mostly falls under the 25-35k pay slab. Out of 264 patients, 110 (41.70%) have income support that falls under this category, as shown in Table 2.

Job creation is one of the key objectives of the government economic reform program. Our data shows that the privately employed people with the age group 40-50 years old are high percentage, which is 46 (43.00%) for privately employed and 27 (25.20%) for government employed patients are utilizing this SSC resource to enhance their health status, in which 67 (62.60%) is the male contribution and 40 (37.40%) is the female contribution. For the second number, young adults are seen in private hospitals with the age group of 29-39 years old, which is 52 (70.30%) for privately employed and 14 (18.90%) for government employed patients are utilizing this SSC resource to enhance their health status, in which 52 (70.30%) is the male contribution and 22(29.70%) is the female contribution as shown in Table 3.

According to the data collected from the hospital, this study shows the average size of family is 4-6 members is high in percentage, which is 147 (55.70%), even second highest number is 7-9 family members is 53 (20.10%). The following table shows the remaining numbers and their percentages as shown below (Table 4).

In 2022, a report generated by Federal Ministry of education, shows the literacy rate of Pakistan which is 62.3 which mean that an estimated population of 60 million is illiterate in the country. Our data shows that out of 264 patients, 104 (39.40%) patients have only secondary education. Only 89 (33.70%) are those in-patients which have any degree.

The research study shows that, out of 172 male patients, only 67 (39.00%) population was previously admitted to the hospital/ treated on Sehat Sahulat card. But the large number of male populations 105 (61.00%) have no past SSC history. In comparison with females, a large population do have past record of hospital admission/ Treatment on Sehat Sahulat card, which is 48 (52.20%) and 44(47.80%) are those which do not have previous usage record as shown in given Table 6.

For that population which have history of past Sehat Sahulat Card are classified into 3 categories, that they used this card once or twice or more than twice. We have seen that single time use of Sehat Sahulat card is greater which is 75 (65.21%), in which 30 (62.5%) are female population and 45 (67.16%) of male population. Those who used SSP card twice, have total 24 (20.86%) population, in which 9 (18.75%) are female population and 15 (22.38%) are male population. For those who used SSP card more than twice, are 16 (13.91%) in total, in which 9 (18.75%) consist of female population and 7(10.44%) of male population as shown in Table 7.

This study also shows the data for the family members of in-patient have admitted/ treated using Sehat Sahulat card. Total 50 (18.90%) population have family members admitted or treated using SSP card, in which 29 (16.90%) are male population and 21 (22.80%) of female population as shown in Table 8.

This study aims to identify the treatment benefits under the umbrella of Sehat Sahulat Program to rule out disease burden is shown in Table 9.

Conclusion

This research study is providing the Social Health Protection to majority of people, not to fall in the trap of poverty due to inflation in Pakistan and increased prices of medical treatments. A large fraction of the population is utilizing the services provided by the Sehat Sahulat Program. This study proves the organizational based efficiency and utilization of all the available resources to provide services in the best possible means and to overcome the disease burden.

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Figure 1

Gender wise distribution of patients

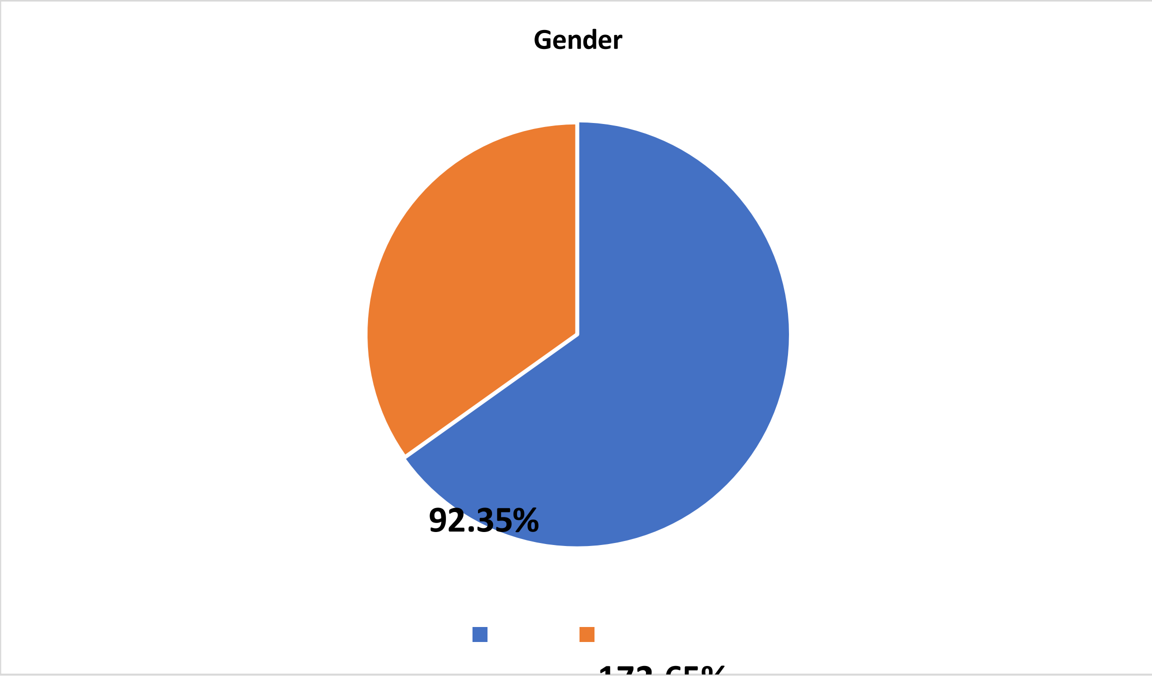

Figure 2

Age wise distribution of Male and Female patients

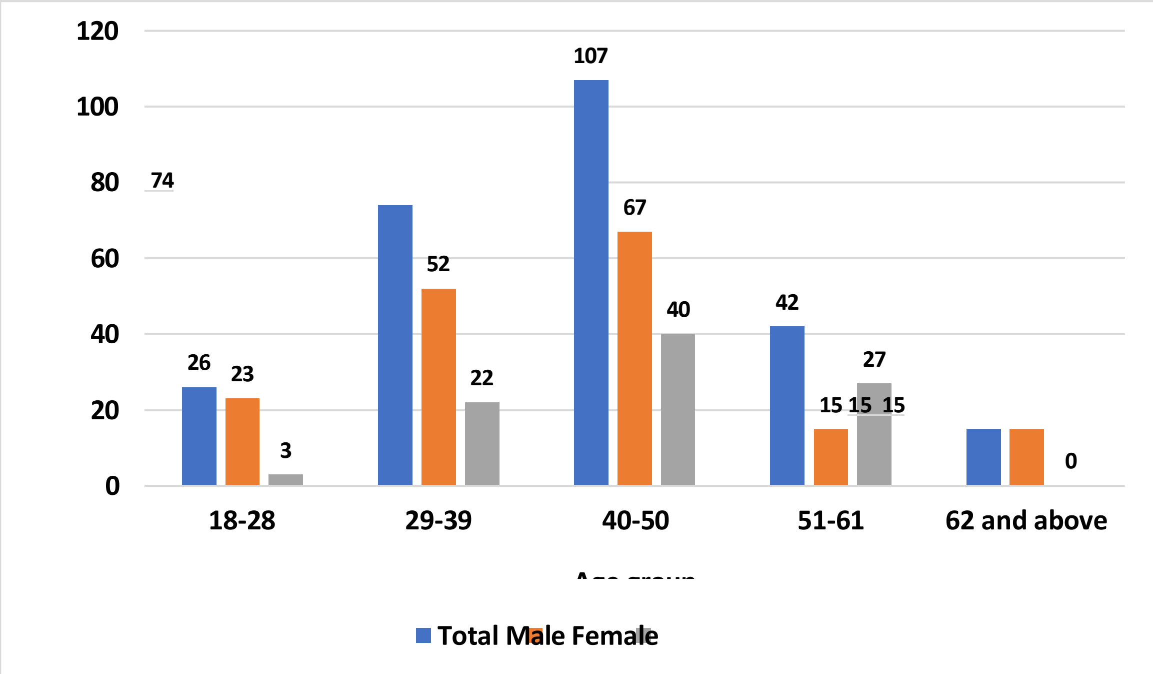

Figure 3

Residence wise distribution of Data for urban / Rural male and female

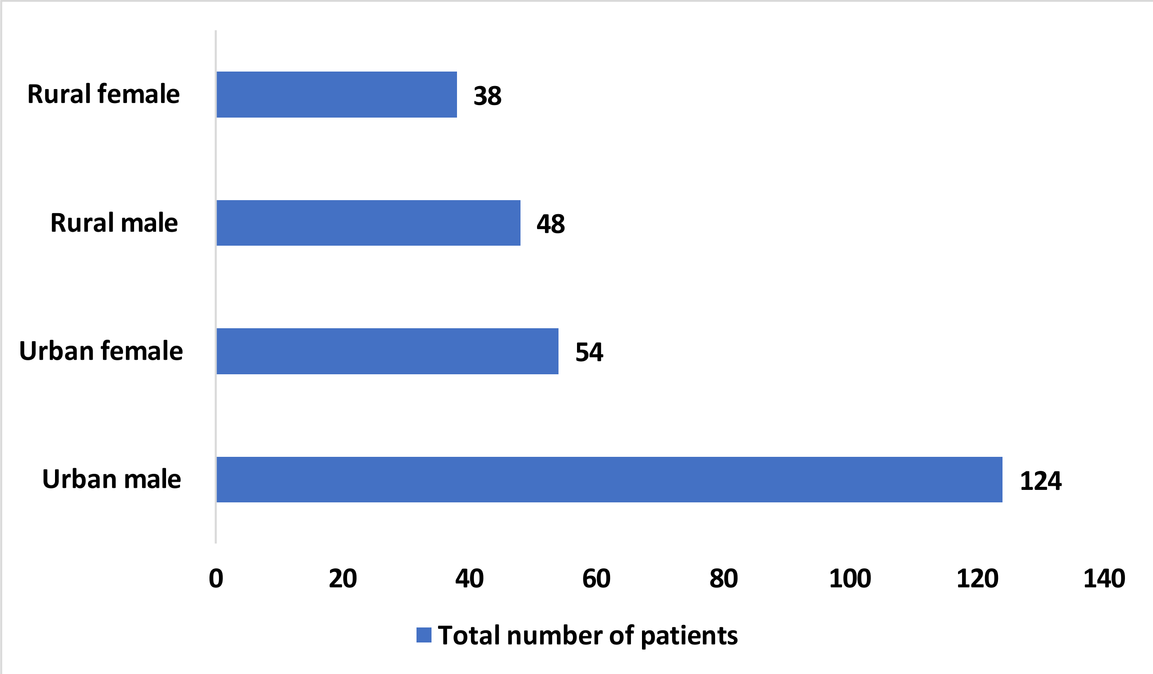

Figure 4

Marital status wise distribution of patients

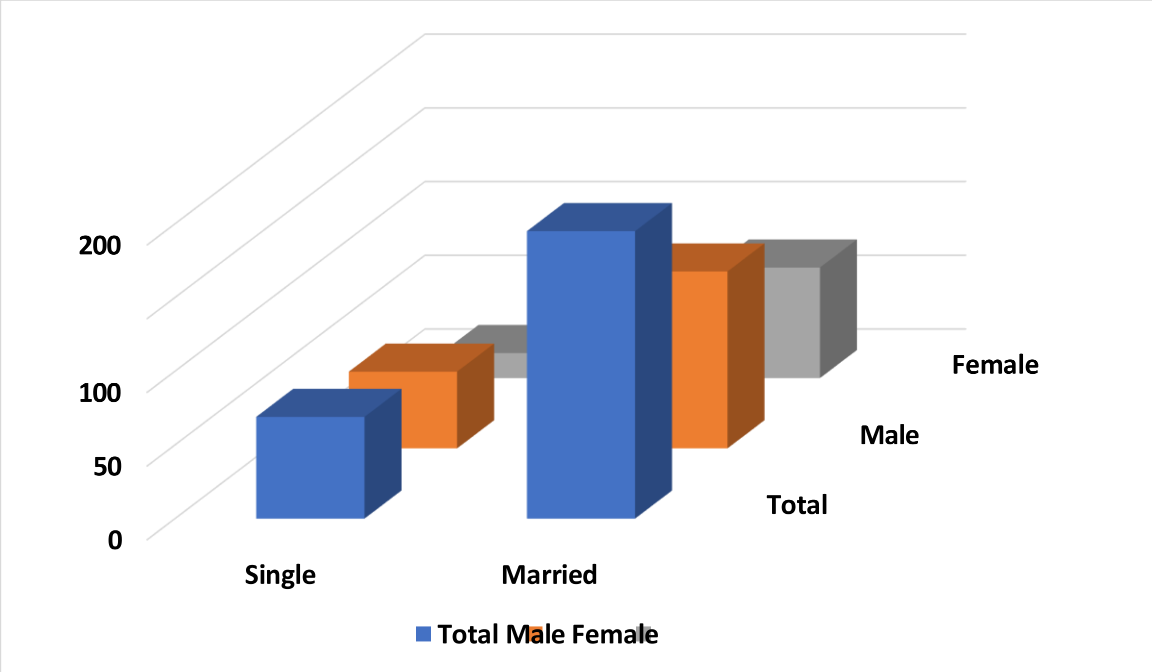

Table 1

Religion wise Distribution of male and female patients

Age	Count / %	Male	Female	Religion		Total
				Muslim	Non-Muslim	
18-28y	Count	23	3	22	4	26
	%	88.5	11.5	84.60%	15.40%	100.00%
29-39y	Count	52	22	66	8	74
	%	70.3	29.7	89.20%	10.80%	100.00%
40-50y	Count	67	40	80	27	107
	%	62.6	37.4	74.80%	25.20%	100.00%
51-61y	Count	15	27	42	0	42
	%	35.7	64.3	100.00%	0.00%	100.00%
62 and above	Count	15	0	15	0	15
	%	100	0	100.00%	0.00%	100.00%
Total	Count	172	92	225	39	264
	%	65.2	34.8	85.20%	14.80%	100.00%

Table 2

Income wise Distribution of male and Female patients

Age	Count / %	Male	Femal e	less 25k	than26k- 35k	36k- 45k	46k- 55k	56k & above	Total
18- 28y	Count	23	3	8	11	7	0	0	26
	%	88.50%	11.50%	30.80%	42.30%	26.90%	0.00%	0.00%	100.00%
29- 39y	Count	52	22	14	33	24	3	0	74
	%	70.30%	29.70%	18.90%	44.60%	32.40%	4.10%	0.00%	100.00%

40-	Count	67	40	25	36	15	19	12	107
50y	%	62.60%	37.40%	23.40%	33.60%	14.00%	17.80%	11.20%	100.00%
51-	Count	15	27	4	22	12	4	0	42
61y	%	35.70%	64.30%	9.50%	52.40%	28.60%	9.50%	0.00%	100.00%
62	Count	15	0	3	8ss	4	0	0	15
and above	%	100.00 %	0.00%	20.00%	53.30%	26.70%	0.00%	0.00%	100.00%
Total	Count	172	92	54	110	62	26	12	264
	%	65.20%	34.80%	20.50%	41.70%	23.50%	9.80%	4.50%	100.00%

Table 3

Employment wise Distribution of male and Female patients

Age	Count/ %age	Male	Female	Employment Private Government.		Total None	
	Count	23	3	20	3	3	26
18-28y	%	88.50%	11.50%	76.90%	11.50%	11.50%	100.00%
	Count	52	22	52	14	8	74
29-39y	%	70.30%	29.70%	70.30%	18.90%	10.80%	100.00%
	Count	67	40	46	27	34	107

40-50y	%	62.60%	37.40%	43.00%	25.20%	31.80%	100.00%
	Count	15	27	30	12	0	42
51-61y	%	35.70%	64.30%	71.40%	28.60%	0.00%	100.00%
	Count	15	0	3	12	0	15
62 and above	%	100.00%	0.00%	20.00%	80.00%	0.00%	100.00%
	Count	172	92	151	68	45	264
	%	65.20%	34.80%	57.20%	25.80%	17.00%	100.00%

Table 4

Family members distribution

Count / %age	Male	Female	Family Members				
			1-3	4-6	7-9	10 and above	Total
Count	23	3	4	14	8	0	26
%	88.50%	11.50%	15.40%	53.80%	30.80%	0.00%	100.00%
Count	52	22	31	33	6	4	74
%	70.30%	29.70%	41.90%	44.60%	8.10%	5.40%	100.00%
Count	67	40	21	67	15	4	107
%	62.60%	37.40%	19.60%	62.60%	14.00%	3.70%	100.00%
Count	15	27	0	22	20	0	42

%	35.70%	64.30%	0.00%	52.40%	47.60%	0.00%	100.00%
Count	15	0	0	11	4	0	15
%	100.00%	0.00%	0.00%	73.30%	26.70%	0.00%	100.00%
Count	172	92	56	147	53	8	264
%	65.20%	34.80%	21.20%	55.70%	20.10%	3.00%	100.00%

Table 5

Educational distribution of In-patients

Count / %age	Male	Female	Education				
			Primary	Secondary school	Diploma	Degree and above	Total
Count	23	3	7	8	4	7	26
%	88.50%	11.50%	26.90%	30.80%	15.40%	26.90%	100.00%
Count	52	22	3	33	20	18	74
%	70.30%	29.70%	4.10%	44.60%	27.00%	24.30%	100.00%
Count	67	40	15	41	11	40	107
%	62.60%	37.40%	14.00%	38.30%	10.30%	37.40%	100.00%
Count	15	27	4	18	0	20	42
%	35.70%	64.30%	9.50%	42.90%	0.00%	47.60%	100.00%
Count	15	0	4	4	3	4	15
%	100.00%	0.00%	26.70%	26.70%	20.00%	26.70%	100.00%
Count	172	92	33	104	38	89	264
%	65.20%	34.80%	12.50%	39.40%	14.40%	33.70%	100.00%

Table 6

Distribution according to Past Sehat Sahulat card use History.

Gender	Count / %	Past Sehat Sahulat card use History		Total
		Yes	No	
Male	Count	67	105	172
	%	39.00%	61.00%	100.00%
Female	Count	48	44	92
	%	52.20%	47.80%	100.00%
Total	Count	115	149	264
	%	43.60%	56.40%	100.00%

Table 7

Distribution according to the frequency of Past Sehat Sahulat card use

Gender	Count / %age	Usage of SSP Card			Total
		Once	Twice	More than twice	
Male	Count	45	15	7	67

	%	67.16%	22.38%	10.44%	100%
Female	Count	30	9	9	48
	%	62.5%	18.75%	18.75%	100%
Total	Count	75	24	16	115
	%	65.21%	20.86%	13.91%	100%

Table 8

Distribution of Patient's family members admitted or treated using SSP Card

Gender	Count / %	Family members admitted/ treated using SSP card		Total
		Yes	No	
Male	Count	29	143	172
	%	16.90%	83.10%	100.00%
Female	Count	21	71	92
	%	22.80%	77.20%	100.00%
Total	Count	50	214	264
	%	18.90%	81.10%	100.00%

Table 9

Treatment wise distribution of patients

Diseases Covered Under SSC																	
Age	Count/ %	Male	Female	Asthma	Appendectomy	Brain biopsy	Burn dressing	Chole cystectomy	Cervical Surgery	Cleft palate surgery	Colon tranplant	Cystogest rostomy	Fissurectomy	Gastrotomy	Hernioplasty	Inguinal hernia
18-28y	Count	23	3	7	1	3	3	2	1	0	2	2	1	1	0	0
	%	88.50%	11.50%	26.90%	3.80%	11.50%	11.50%	7.70%	3.80%	0.00%	7.70%	7.70%	3.80%	3.80%	0.00%	0.00%
29-39y	Count	52	22	10	8	4	7	8	5	4	5	1	5	1	2	1
	%	70.30%	29.70%	13.50%	10.80%	5.40%	9.50%	10.80%	6.80%	5.40%	6.80%	1.40%	6.80%	1.40%	2.70%	1.40%
40-50y	Count	67	40	12	13	12	10	8	8	3	3	6	2	5	1	3
	%	62.60%	37.40%	11.20%	12.10%	11.20%	9.30%	7.50%	7.50%	2.80%	2.80%	5.60%	1.90%	4.70%	0.90%	2.80%
52-61y	Count	15	27	6	1	3	3	3	3	4	1	2	2	3	2	0
	%	35.70%	64.30%	14.30%	2.40%	7.10%	7.10%	7.10%	7.10%	9.50%	2.40%	4.80%	4.80%	7.10%	4.80%	0.00%
62 and above	Count	15	0	4	1	2	0	1	1	0	0	0	1	1	0	0
	%	100.00%	0.00%	26.70%	6.70%	13.30%	0.00%	6.70%	6.70%	0.00%	0.00%	0.00%	6.70%	6.70%	0.00%	0.00%
Total	Count	172	92	39	24	24	23	22	18	11	11	11	11	11	5	4
	%	65.20%	34.80%	14.80%	9.10%	9.10%	8.70%	8.30%	6.80%	4.20%	4.20%	4.20%	4.20%	4.20%	1.90%	1.50%

Diseases Covered Under SSC																		
Age	Count/ %	Male	Female	Lipoma	Oesophagectomy	Pasrtial cystectomy	Shunt	Snake bite	Soft tissue tumor	Spinal fusion	TURP+ Hernioplasty	Upper GI endoscopy	Viral Meningitis	Joint reconstrction	Glucoma	Endoscopic surgery	Breast Lump
18-28y	Count	23	3	0	0	1	0	0	0	1	0	0	0	1	0	0	0
	%	88.50%	11.50%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%
29-39y	Count	52	22	0	1	1	1	0	2	0	1	1	2	0	2	2	0
	%	70.30%	29.70%	0.00%	1.40%	1.40%	1.40%	0.00%	2.70%	0.00%	1.40%	1.40%	2.70%	0.00%	2.70%	2.70%	0.00%
40-50y	Count	67	40	3	2	1	3	1	0	2	2	1	1	2	1	1	1
	%	62.60%	37.40%	2.80%	1.90%	0.90%	2.80%	0.90%	0.00%	1.90%	1.90%	0.90%	0.90%	1.90%	0.90%	0.90%	0.90%
52-61y	Count	15	27	0	1	1	0	1	2	1	0	0	0	0	0	0	3
	%	35.70%	64.30%	0.00%	2.40%	2.40%	0.00%	2.40%	4.80%	2.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.10%
62 and above	Count	15	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0
	%	100.00%	0.00%	6.70%	0.00%	0.00%	0.00%	6.70%	0.00%	0.00%	0.00%	13.30%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	Count	172	92	4	4	4	4	3	4	4	3	4	3	3	3	3	4
	%	65.20%	34.80%	1.50%	1.50%	1.50%	1.50%	1.10%	1.50%	1.50%	1.10%	1.50%	1.10%	1.10%	1.10%	1.10%	1.50%

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Abstract:

On December, 15, 2015 Sehat Sahulat Program was introduced in Pakistan and researchers remarkably explains extraordinary achievement for the popularity and satisfaction of this program but the data for beneficiary socioeconomic class, gender and age is still lagging. This article is designed to explain the comprehensive data related to age, gender and socioeconomic class which is more beneficiary to Sehat Sahulat card. This study also highlights the inflation aspect and financial protection policy. This Study enrolls 264 in-ward patients from Shalamar Hospital, qualitatively assembled data by questionnaire design for patient's Demographics, SSC history, family structure, Income statement, religious sect and treatment coverage. This study explains the frequency of urbanized population, 48 (27.9%) male, 38 (41.3%) females, Age group; 40-50years, 67 (62.6%) male and 40 (37.4%) female are greater. Study shows Muslim in-patient population 225 (85.20%), non-Muslim 39 (14.80%), SSC history; once 75 (65.21%), twice 24 (20.86%) and more than twice 16 (13.91%), family members past card history, 50 (18.90%) yes, 214 (81.10%) No data found. This Study explains greater frequency for family structure, 4-6 members;147 (55.70%), salary range under 25-35k, secondary education 104 (39.40%), marital status;120 (69.8%) males and 75 (81.5%) females are greater. This study helps future researchers for yearly analysis and policy design for the expansion of this program. This study shows limitations of time constraint, funds availability and previous literature gaps but do not affect data quality.

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Results and Discussion

The results show, out of 264 in-wards patients, we have 172 male patients and 92 female patients as shown in Figure 1. The age group divided from 18-28, 29-39, 40-50, 51-61, 62 and above. The percentage frequency for in-ward patients belonging to the age group; 40-50 years is higher. This study shows disease burden in this age group, 67 (62.6%) male and 40 (37.4%) female are greater as shown in Figure 2.

The Sehat Sahulat Program covers the entire population, it is observed that the population belonging to urban area is more likely to admit and avail Sehat Sahulat benefits than the rural population. The percentage of Urban male is 124 (72.1%) and for female 54 (58.7%). The percentage of rural male is 48 (27.9%) and for female is 38 (41.3%) as shown in Figure 3.

As the subject of study, information related to the marital status of enrolled patients is also collected. The percentage frequency of married and non-married males is high. For single males its 52 (30.2%), and for single females its 17 (18.5%). For married males it is 120 (69.8%), and for females its 75 (81.5%) as shown in Figure 4.

The current population of Pakistan is 231.4 million. Out of which 96% population consist of Muslim community. Sehat Sahulat Program covers the entire population of Punjab. Muslim Population in Punjab is 5.35 Lakhs (1.93 percent) of total 2.77 Crore. Christian Population in Punjab is 3.48 Lakhs (1.26 percent) of total 2.77 Crore. The Sehat Sahulat card is equally protecting the rights of minorities. Religion perspective is also the part of our research study as shown in Table 1.

In 2011, National Socio-Economic Registry (NSER) was established by Benazir income support program. NSER is a data repository containing information on the socio-economic status of all the households participated in the data collection exercise. Data of 27 million Households was collected in 2010 for the first time by visiting the doorstep of every household in the country. Before the launch of the Sehat Sahulat Program, former prime minister admires these countless efforts for BISP. Status of individual related to finance can easily be monitored by using this data, and NADRA is also merged to claim the eligibility right to deserving and poor people. Sehat Sahulat program greatly influences the life of those people who are living below the average line. Income details are included as a part of our research to let us know that which class of society is more utilizing this Healthcare resource as shown in Table 5.2, that population of Pakistan mostly falls under the 25-35k pay slab. Out of 264 patients, 110 (41.70%) have income support that falls under this category, as shown in Table 2.

Job creation is one of the key objectives of the government economic reform program. Our data shows that the privately employed people with the age group 40-50 years old are high percentage, which is 46 (43.00%) for privately employed and 27 (25.20%) for government employed patients are utilizing this SSC resource to enhance their health status, in which 67 (62.60%) is the male contribution and 40 (37.40%) is the female contribution. For the second number, young adults are seen in private hospitals with the age group of 29-39 years old, which is 52 (70.30%) for privately employed and 14 (18.90%) for government employed patients are utilizing this SSC resource to enhance their health status, in which 52 (70.30%) is the male contribution and 22(29.70%) is the female contribution as shown in Table 3.

According to the data collected from the hospital, this study shows the average size of family is 4-6 members is high in percentage, which is 147 (55.70%), even second highest number is 7-9 family members is 53 (20.10%). The following table shows the remaining numbers and their percentages as shown below (Table 4).

In 2022, a report generated by Federal Ministry of education, shows the literacy rate of Pakistan which is 62.3 which mean that an estimated population of 60 million is illiterate in the country. Our data shows that out of 264 patients, 104 (39.40%) patients have only secondary education. Only 89 (33.70%) are those in-patients which have any degree.

The research study shows that, out of 172 male patients, only 67 (39.00%) population was previously admitted to the hospital/ treated on Sehat Sahulat card. But the large number of male populations 105 (61.00%) have no past SSC history. In comparison with females, a large population do have past record of hospital admission/ Treatment on Sehat Sahulat card, which is 48 (52.20%) and 44(47.80%) are those which do not have previous usage record as shown in given Table 6.

For that population which have history of past Sehat Sahulat Card are classified into 3 categories, that they used this card once or twice or more than twice. We have seen that single time use of Sehat Sahulat card is greater which is 75 (65.21%), in which 30 (62.5%) are female population and 45 (67.16%) of male population. Those who used SSP card twice, have total 24 (20.86%) population, in which 9 (18.75%) are female population and 15 (22.38%) are male population. For those who used SSP card more than twice, are 16 (13.91%) in total, in which 9 (18.75%) consist of female population and 7(10.44%) of male population as shown in Table 7.

This study also shows the data for the family members of in-patient have admitted/ treated using Sehat Sahulat card. Total 50 (18.90%) population have family members admitted or treated using SSP card, in which 29 (16.90%) are male population and 21 (22.80%) of female population as shown in Table 8.

This study aims to identify the treatment benefits under the umbrella of Sehat Sahulat Program to rule out disease burden is shown in Table 9.

Conclusion

This research study is providing the Social Health Protection to majority of people, not to fall in the trap of poverty due to inflation in Pakistan and increased prices of medical treatments. A large fraction of the population is utilizing the services provided by the Sehat Sahulat Program. This study proves the organizational based efficiency and utilization of all the available resources to provide services in the best possible means and to overcome the disease burden.

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Figure 1

Gender wise distribution of patients

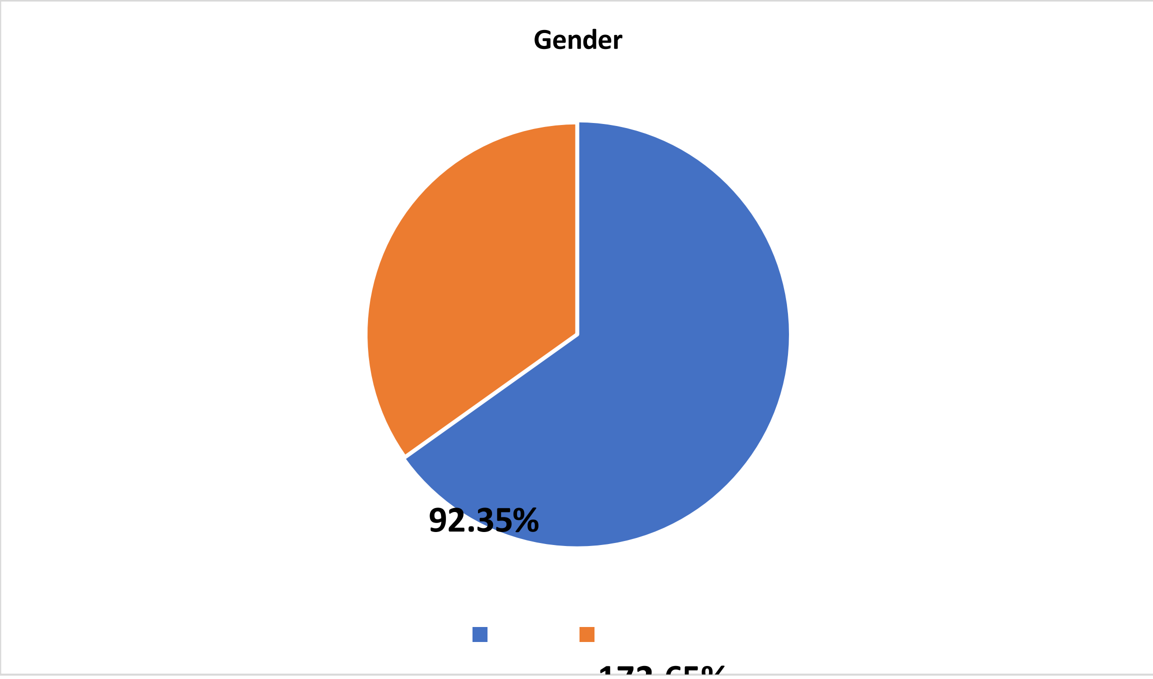

Figure 2

Age wise distribution of Male and Female patients

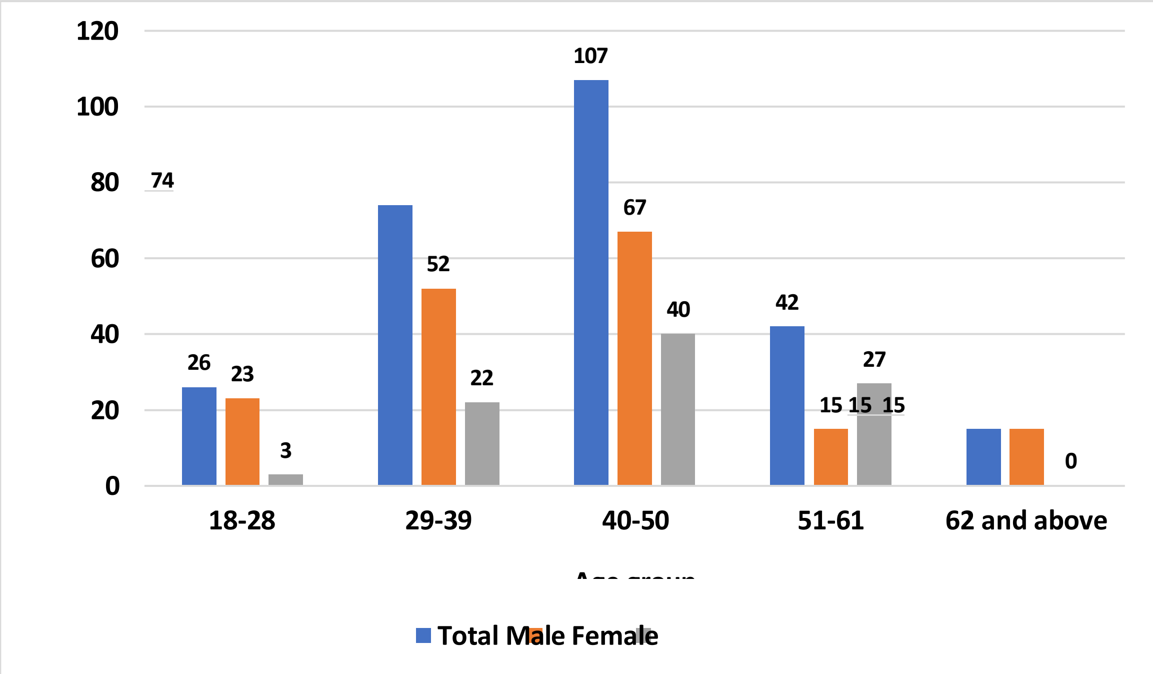

Figure 3

Residence wise distribution of Data for urban / Rural male and female

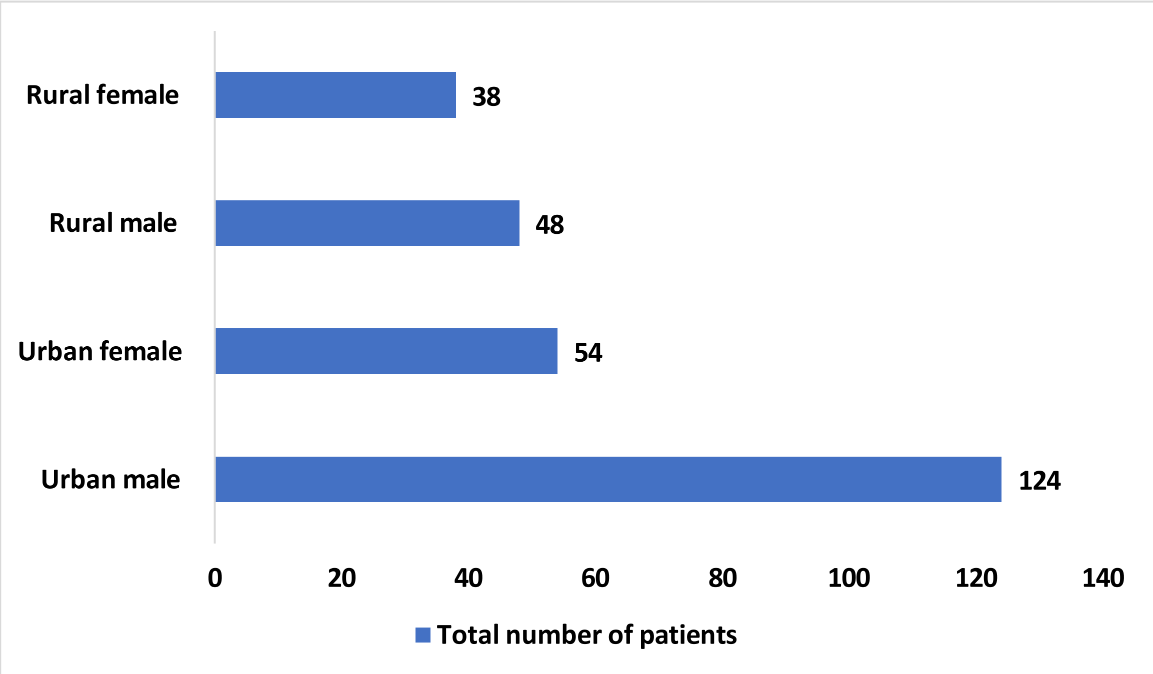

Figure 4

Marital status wise distribution of patients

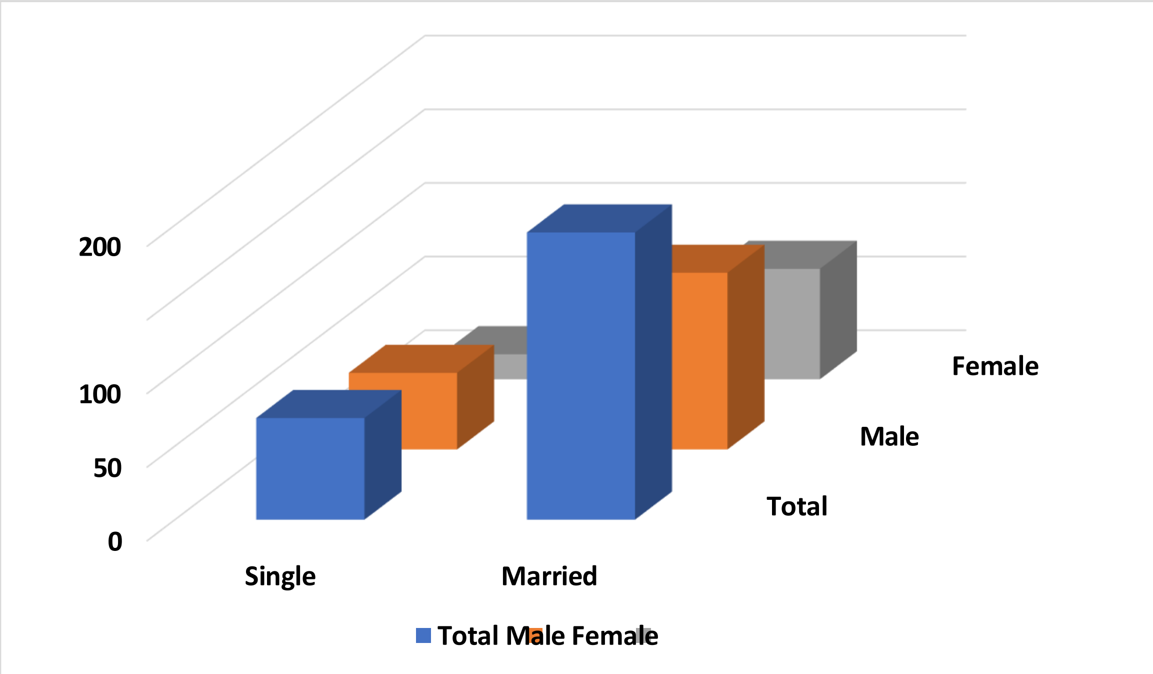

Table 1

Religion wise Distribution of male and female patients

Age	Count / %	Male	Female	Religion		Total
				Muslim	Non-Muslim	
18-28y	Count	23	3	22	4	26
	%	88.5	11.5	84.60%	15.40%	100.00%
29-39y	Count	52	22	66	8	74
	%	70.3	29.7	89.20%	10.80%	100.00%
40-50y	Count	67	40	80	27	107
	%	62.6	37.4	74.80%	25.20%	100.00%
51-61y	Count	15	27	42	0	42
	%	35.7	64.3	100.00%	0.00%	100.00%
62 and above	Count	15	0	15	0	15
	%	100	0	100.00%	0.00%	100.00%
Total	Count	172	92	225	39	264
	%	65.2	34.8	85.20%	14.80%	100.00%

Table 2

Income wise Distribution of male and Female patients

Age	Count / %	Male	Femal e	less 25k	than26k- 35k	36k- 45k	46k- 55k	56k above	&Total

18-28y	Count	23	3	8	11	7	0	0	26
	%	88.50%	11.50%	30.80%	42.30%	26.90%	0.00%	0.00%	100.00%
29-39y	Count	52	22	14	33	24	3	0	74
	%	70.30%	29.70%	18.90%	44.60%	32.40%	4.10%	0.00%	100.00%
40-50y	Count	67	40	25	36	15	19	12	107
	%	62.60%	37.40%	23.40%	33.60%	14.00%	17.80%	11.20%	100.00%
51-61y	Count	15	27	4	22	12	4	0	42
	%	35.70%	64.30%	9.50%	52.40%	28.60%	9.50%	0.00%	100.00%
62 and above	Count	15	0	3	8ss	4	0	0	15
	%	100.00 %	0.00%	20.00%	53.30%	26.70%	0.00%	0.00%	100.00%
Total	Count	172	92	54	110	62	26	12	264
	%	65.20%	34.80%	20.50%	41.70%	23.50%	9.80%	4.50%	100.00%

Table 3

Employment wise Distribution of male and Female patients

Age	Count/ %age	Male	Female	Employment Private Government.	Total None

	Count	23	3	20	3	3	26
18-28y	%	88.50%	11.50%	76.90%	11.50%	11.50%	100.00%
	Count	52	22	52	14	8	74
29-39y	%	70.30%	29.70%	70.30%	18.90%	10.80%	100.00%
	Count	67	40	46	27	34	107
40-50y	%	62.60%	37.40%	43.00%	25.20%	31.80%	100.00%
	Count	15	27	30	12	0	42
51-61y	%	35.70%	64.30%	71.40%	28.60%	0.00%	100.00%
	Count	15	0	3	12	0	15
62 and above	%	100.00%	0.00%	20.00%	80.00%	0.00%	100.00%
	Count	172	92	151	68	45	264
	%	65.20%	34.80%	57.20%	25.80%	17.00%	100.00%

Table 4

Family members distribution

Count / %age	Male	Female	Family Members				
			1-3	4-6	7-9	10 and above	Total
Count	23	3	4	14	8	0	26
%	88.50%	11.50%	15.40%	53.80%	30.80%	0.00%	100.00%
Count	52	22	31	33	6	4	74
%	70.30%	29.70%	41.90%	44.60%	8.10%	5.40%	100.00%
Count	67	40	21	67	15	4	107

%	62.60%	37.40%	19.60%	62.60%	14.00%	3.70%	100.00%
Count	15	27	0	22	20	0	42
%	35.70%	64.30%	0.00%	52.40%	47.60%	0.00%	100.00%
Count	15	0	0	11	4	0	15
%	100.00%	0.00%	0.00%	73.30%	26.70%	0.00%	100.00%
Count	172	92	56	147	53	8	264
%	65.20%	34.80%	21.20%	55.70%	20.10%	3.00%	100.00%

Table 5

Educational distribution of In-patients

Count /				Education			
%age	Male	Female	Primary	Secondary school	Diploma	Degree and above	Total
Count	23	3	7	8	4	7	26
%	88.50%	11.50%	26.90%	30.80%	15.40%	26.90%	100.00%
Count	52	22	3	33	20	18	74
%	70.30%	29.70%	4.10%	44.60%	27.00%	24.30%	100.00%
Count	67	40	15	41	11	40	107
%	62.60%	37.40%	14.00%	38.30%	10.30%	37.40%	100.00%
Count	15	27	4	18	0	20	42
%	35.70%	64.30%	9.50%	42.90%	0.00%	47.60%	100.00%
Count	15	0	4	4	3	4	15
%	100.00%	0.00%	26.70%	26.70%	20.00%	26.70%	100.00%
Count	172	92	33	104	38	89	264
%	65.20%	34.80%	12.50%	39.40%	14.40%	33.70%	100.00%

Table 6

Distribution according to Past Sehat Sahulat card use History.

Gender	Count / %	Past Sehat Sahulat card use History		Total
		Yes	No	
Male	Count	67	105	172
	%	39.00%	61.00%	100.00%
Female	Count	48	44	92
	%	52.20%	47.80%	100.00%
Total	Count	115	149	264
	%	43.60%	56.40%	100.00%

Table 7

Distribution according to the frequency of Past Sehat Sahulat card use

Gender	Count / %age	Usage of SSP Card			Total
		Once	Twice	More than twice	
Male	Count	45	15	7	67
	%	67.16%	22.38%	10.44%	100%

Female	Count	30	9	9	48
	%	62.5%	18.75%	18.75%	100%
Total	Count	75	24	16	115
	%	65.21%	20.86%	13.91%	100%

Table 8

Distribution of Patient's family members admitted or treated using SSP Card

Gender	Count / %	Family members admitted/ treated using SSP card		Total
		Yes	No	
Male	Count	29	143	172
	%	16.90%	83.10%	100.00%
Female	Count	21	71	92
	%	22.80%	77.20%	100.00%
Total	Count	50	214	264
	%	18.90%	81.10%	100.00%

Table 9

Treatment wise distribution of patients

Diseases Covered Under SSC																
Age	Count/ %	Male	Female	Asthma	Appendectomy	Brain biopsy	Burn dressing	Chole cystectomy	Cervical Surgery	Cleft palate surgery	Colon tranplant	Cystogest rostomy	Fissurectom y	Gastrotom y	Hernioplа sty	Inguinal hernia
18-28y	Count	23	3	7	1	3	3	2	1	0	2	2	1	1	0	0
	%	88.50%	11.50%	26.90%	3.80%	11.50%	11.50%	7.70%	3.80%	0.00%	7.70%	7.70%	3.80%	3.80%	0.00%	0.00%
29-39y	Count	52	22	10	8	4	7	8	5	4	5	1	5	1	2	1
	%	70.30%	29.70%	13.50%	10.80%	5.40%	9.50%	10.80%	6.80%	5.40%	6.80%	1.40%	6.80%	1.40%	2.70%	1.40%
40-50y	Count	67	40	12	13	12	10	8	8	3	3	6	2	5	1	3
	%	62.60%	37.40%	11.20%	12.10%	11.20%	9.30%	7.50%	7.50%	2.80%	2.80%	5.60%	1.90%	4.70%	0.90%	2.80%
52-61y	Count	15	27	6	1	3	3	3	3	4	1	2	2	3	2	0
	%	35.70%	64.30%	14.30%	2.40%	7.10%	7.10%	7.10%	7.10%	9.50%	2.40%	4.80%	4.80%	7.10%	4.80%	0.00%
62 and above	Count	15	0	4	1	2	0	1	1	0	0	0	1	1	0	0
	%	100.00%	0.00%	26.70%	6.70%	13.30%	0.00%	6.70%	6.70%	0.00%	0.00%	0.00%	6.70%	6.70%	0.00%	0.00%
Total	Count	172	92	39	24	24	23	22	18	11	11	11	11	11	5	4
	%	65.20%	34.80%	14.80%	9.10%	9.10%	8.70%	8.30%	6.80%	4.20%	4.20%	4.20%	4.20%	4.20%	1.90%	1.50%

Diseases Covered Under SSC																		
Age	Count/ %	Male	Female	Lipoma	Oesophag ectomy	Pasrtial cystectomy	Shumt	Snake bite	Soft tissue tumor	Spinal fusion	TURP+ Hernioplasty	Upper GI endoscop y	Viral Meningitis	Joint reconstrction	Glucoma	Endoscopic surgery	Breast Lump
18-28y	Count	23	3	0	0	1	0	0	0	1	0	0	0	1	0	0	0
	%	88.50%	11.50%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%	3.80%	0.00%	0.00%	0.00%
29-39y	Count	52	22	0	1	1	1	0	2	0	1	1	2	0	2	2	0
	%	70.30%	29.70%	0.00%	1.40%	1.40%	1.40%	0.00%	2.70%	0.00%	1.40%	1.40%	2.70%	0.00%	2.70%	2.70%	0.00%
40-50y	Count	67	40	3	2	1	3	1	0	2	2	1	1	2	1	1	1
	%	62.60%	37.40%	2.80%	1.90%	0.90%	2.80%	0.90%	0.00%	1.90%	1.90%	0.90%	0.90%	1.90%	0.90%	0.90%	0.90%
52-61y	Count	15	27	0	1	1	0	1	2	1	0	0	0	0	0	0	3
	%	35.70%	64.30%	0.00%	2.40%	2.40%	0.00%	2.40%	4.80%	2.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.10%
62 and above	Count	15	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0
	%	100.00%	0.00%	6.70%	0.00%	0.00%	0.00%	6.70%	0.00%	0.00%	0.00%	13.30%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	Count	172	92	4	4	4	4	3	4	4	3	4	3	3	3	3	4
	%	65.20%	34.80%	1.50%	1.50%	1.50%	1.50%	1.10%	1.50%	1.50%	1.10%	1.50%	1.10%	1.10%	1.10%	1.10%	1.50%

Relationship Between AI and Loan Facilities to Women with The Moderating Role of International Policies

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Abstract:

Women entrepreneur are one face of multifaceted global economy, contributing 3 trillion $ is revenue and creating 23 million plus jobs. Despite their significant role, women face many challenges in market, one of which is qualifying for loan. This article provides a comprehensive analysis of the challenges that women-owned ventures face when accessing credit and explores the various factors that contribute to their limited financial availability. Through a review of 125 articles, the researchers aim to gain an overview of how gender biases and differences impact women-owned businesses' ability to access credit, which is crucial for their success. A quantitative study utilizing structured questionnaires will collect data from female entrepreneurs who have recently sought business loans. Analysis will include regression and moderation analysis. The research reveals that while women-owned firms face similar constraints as their male counterparts, there are unique challenges that they face due to their gender. These include risk aversion from banks, lack of financial services, inadequate collateral, and limited access to finance. Interestingly, the findings suggest that women-owned firms are often more creditworthy than male-owned firms, despite their difficulties in accessing financial markets. The main focus of the research is to evaluate how artificial intelligence and machine learning is one of the reasons of gender biasness and the mediating role of international financial service providers prioritize women-led businesses in terms of financing.

Keyword: Women-owned busines, credit facility, artificial intelligence, machine learning, gender bias, loans, entrepreneurship

Introduction:

The substantial increase in women-owned enterprises over recent decades has brought attention to the significant challenges and complexities associated with the businesses they run. Policymakers are particularly concerned about addressing the issues and obstacles that hinder the growth potential of these enterprises, despite their notable contributions to the economies in which they operate (Moreno-Gavara et al., 2019). Insufficient access to timely and adequate funds poses a major challenge for women entrepreneurs, with studies highlighting obstacles such as poor infrastructure, complex procedures, and a lack of secure financing. Gender biases in financial markets and legal frameworks further hinder women's access to economic resources, pushing them towards smaller enterprises in low-productivity sectors.

Financial institutions' reluctance to support less innovative, high-risk small businesses forces women-led enterprises towards moneylenders with exorbitant interest rates. This financial discrimination emphasizes the need to address credit-access barriers faced by women entrepreneurs. Shockingly, reports indicate that women-owned businesses receive nearly 50% less funding than their male counterparts, exacerbating the existing financing gap (Rohit Arora,.special to CNBC.com, 2019). Gender-based discrimination in credit access, both direct and indirect, contributes to the disparity, impacting women's economic performance and growth. While some argue for gender-neutral policies in loan approval, the majority of countries lack explicit measures against gender discrimination in credit provision, perpetuating inequality. (Galli & Rossi,. 2016b)

Women in the United States are outpacing other segments by launching and acquiring businesses at an unprecedented rate. From 1997 to 2002, an average of 424 new ventures per day were initiated by women, totaling 775,000 businesses annually and constituting 55% of all new start-ups. As of 2004, women predominantly owned 6.7 million private businesses, contributing 30% to the nation's business landscape. The growth of women-owned businesses in terms of employment and revenue between 1997 and 2004 outpaced the overall business sector by 23%, 39%, and 46%, respectively. However, these statistics can be deceptive, as the substantial increase seems concentrated in a small fraction of large ventures. (Huarng, Mas-Tur, & Yu,. 2012)

Despite commendable start-up rates and positive survival indicators, a significant majority of women-owned businesses remain small, with less than 10 employees. Women are creating sole proprietorships more rapidly than men, and the percentage of women-owned firms with employees lags behind the overall business landscape. In 1997, a mere 1% of all women-owned businesses had over 500 employees, and this proportion has not significantly changed in the subsequent years. (Bullough et al., 2021)

While a lot of work has been done on above aspects of gender discrimination in credit facilities, limited empirical work has been done on how artificial intelligence further hinders women in accessing the loan facilities while international microfinance founders moderate this negative effects and somehow mitigate or limits them from becoming aggressively harming. Furthermore, the type of lending institution, whether microfinance or traditional banking, plays a crucial role in moderating the relationship between loan availability and gender discrimination. This article explores the varied lending practices of microfinance institutions and traditional banks, examining how these practices impact the accessibility of loans based on gender.

As financial institutions depend more and more on AI and machine learning to make loan decisions, there is a critical knowledge vacuum about how these algorithms could unintentionally reinforce gender bias. Here, research would concentrate on the causes of these biases and strategies for reducing them. While a great deal of research has been done on traditional banking systems, little is known about how gender discrimination in loan accessibility is impacted by alternative lending models like microfinance. It could be instructive to look into how well these models work to lessen discrimination against women.

In the context of loan discrimination, many studies may not adequately address how gender intersects with other demographic characteristics including age, race, and socioeconomic position. Research on the long-term effects of loan discrimination on women's professional advancement and financial well-being is noticeably lacking. These investigations may shed light on the more extensive and long-lasting effects of gender discrimination in lending.

The main area of research concern is comprehending and resolving the intricate obstacles that women encounter while attempting to obtain loans, which are impacted by discrimination based on gender. This study will specifically look into:

Examine how machine learning and artificial intelligence (AI) algorithms employed by financial institutions may reinforce gender bias in loan decision-making procedures, hence possibly harming women business owners. Analyze how gender discrimination in loan accessibility is affected by alternative lending methods, including microfinance, especially when compared to conventional banking systems.

Examine how, in the context of loan discrimination, gender interacts with other demographic variables such as age, race, and socioeconomic status to provide a more comprehensive understanding of the difficulties women encounter. Examine how loan discrimination affects women's career advancement and financial well-being over the long run. This research sheds light on the more extensive and enduring effects of gender discrimination in lending.

The potential for this research to:

• Expose latent biases in automated loan decision-making systems, resulting in more equal financial practices, makes it significant.

• Provide information on how well non-traditional lending and microfinance models work to eliminate gender discrimination, which could change the way financial inclusion initiatives are implemented.

• Offer a more thorough comprehension of the intersectional aspects of loan discrimination, assisting in the development of more effective and inclusive financial regulations.

In general, the goal of this research is to create a more fair financial environment in which women-owned firms can prosper without facing barriers to obtaining essential funding due to their gender. It is consistent with the overarching objective of promoting gender parity in financial access and aiding in the financial empowerment of female entrepreneurs.

Literature Review

One study explores the interplay between societal gender norms and microfinance institutions' (MFIs) outreach to women, particularly examining the moderating role of an international founder in this dynamic. Utilizing data from 213 MFIs across 65 countries, the research finds that gender discrimination negatively impacts microfinance outreach to women. However, this effect is less pronounced in MFIs with an international founder, suggesting that international founders' resources and mission orientation can mitigate the effects of gender discrimination. The paper discusses the importance of aligning organizational actions with societal norms to earn legitimacy, particularly in patriarchal societies where conventional norms resist financial empowerment of women. It also highlights the cost implications of lending to women in such societies and how internationally-founded MFIs can overcome these challenges. (Nyarko., 2022)

Evidence from approximately 125 articles on the gender-based economic disparities in accessing credit for women-owned businesses. It reveals that while women-owned firms face similar constraints as their male counterparts, they also encounter unique challenges due to gender discrimination. These include risk aversion by banks, lack of collateral, and reduced accessibility to finance. The paper critiques the dual nature of gender discrimination in finance – both direct and indirect – and explores the varying perspectives in literature, including contradictory views on the existence of direct gender-based discrimination in loan processes. The review also discusses the impact of societal norms and cultural barriers on women's financial inclusivity, emphasizing the need for policy interventions to bridge these gender gaps. (Dash & Singh,.2021)

Critical role of finance in business success, highlighting the disadvantages women entrepreneurs face in accessing funding. It argues that gender ascriptions, deeply embedded in social constructs, impede women's ability to acquire necessary financial resources, thereby affecting their business performance. The paper emphasizes the role of gender in both formal and informal funding avenues, underscoring the additional hurdles women entrepreneurs must navigate due to societal gender biases. These biases not only limit women's access to social, cultural, human, and financial capital but also push them towards establishing firms in less profitable sectors, perpetuating negative stereotypes about women in self-employment. (Marlow &Patton,2021)

(Brock & Hass,.2023) investigates gender discrimination in entrepreneurial finance, particularly in lending. It brings loan officers to the lab to measure traits like implicit gender bias and risk preferences. The research indicates that loan officers' implicit gender bias and work experience significantly drive discriminatory guarantor requirements, outweighing the loan officers' gender. The experimental setup effectively isolates the credit market's supply side, avoiding biases in observational studies. It contributes significantly to understanding the drivers of discriminatory behavior, underrepresentation of women in entrepreneurship, and the role of social collateral in lending.

(Reddy & Gopalan,.2023) focuses on women-led businesses (WLBs) in emerging markets and their challenges in obtaining trade credit. It reveals that WLBs are less likely to secure inter-firm trade credit compared to male counterparts, although this bias lessens with access to bank credit. The study shows that bank credit acts as a signaling mechanism for WLBs, enhancing their ability to obtain trade credit. It also explores the relationship between trade and bank credit, highlighting their complementarity for WLBs. This research contributes to understanding gender bias in credit access and the dynamics of trade and bank credit in emerging markets.

The study addresses the underexplored area of gender discrimination in informal credit markets, focusing on Vietnamese SMEs. It finds that female-led firms face a lower propensity to borrow from informal sources and incur higher borrowing costs than male-run firms. However, social networks play a vital role in offsetting this discrimination, enhancing female-run SMEs' access to informal finance and reducing borrowing costs. The research uses a comprehensive dataset from the Vietnam Small and Medium Enterprise Survey, covering various aspects of informal finance and demonstrating the significant role of social networks in accessing informal credit for female entrepreneurs. (Bach *et.all,.2023).*

Study scrutinizes potential loan discrimination by CRA-rated banks in the US, using HMDA data. It finds statistical discrimination against Asian, Black, Hispanic, and women borrowers, challenging the effectiveness of CRA ratings in preventing bias. The findings raise questions about the suitability of models and data for analyzing lending discrimination. (Cyree & Winters,.2023)

(Asiedu et.all,.2012) Utilizing data from the Survey of Small Business Finances, this study probes racial, ethnic, and gender disparities in small business lending. It finds significant discrimination against minority and female-owned firms, evidenced by higher loan denial rates and interest charges, contributing to the understanding of systemic biases in credit markets.

- Likelihood of loan approval for women-owned businesses

According to a study by Biz2credit.com, which involved 27,000 women-owned small businesses in the US, "women business owners get nearly 50% less in funding than their male counterparts and it's getting worse." (Bizcredit, 2018)

A few of the studies that were found also made an effort to assess the causes of the lack of financing availability, which are essentially the results of a lack of financial services knowledge. 4 Journal of International Women's Studies, and their inability to own property as a result of insufficient records and documentation, which are necessary for borrowings, turnovers, and equity(Phillips, Moos & Nieman, 2014).

- Use of AI and machine learning in loan decisions

The rise of automated decision-making in AI due to computational and algorithmic advancements, especially in machine learning (ML) introduces an explainable AI system for automating loan underwriting, using a belief-rule-base (BRB) that integrates human knowledge and learns from historical data. This BRB system balances accuracy and explainability, providing clear explanations for loan decisions, which enhances understanding of the decision-making process and reasons for loan denial

- Presence of an international founder in microfinance institutions

Microfinance institutions' (MFIs) preference for women borrowers varies internationally and the MFI focus on women borrowers is generally attributed to two reasons: women borrowers are more trustworthy and have greater social impact. However, the role of social trust with regard to this gender preference has not been adequately investigated. We document that MFIs favor women more in low trust countries and in countries where social trust formation is primarily behavioral. We interpret these findings as consistent with gender targeting being used as a substitute for social trust. Our results should be of considerable interest to policy-makers, managers, and scholars. (Aggarwal,. 2015)

Hypothesis

H_1: The use of AI and machine learning in loan decisions will reinforce gender bias, reducing the likelihood of loan approval for women-owned businesses.

H_2: The negative impact of AI and machine learning on loan approval for women-owned businesses will be mitigated by the presence of an international founder in microfinance institutions.

Theoretical Framework

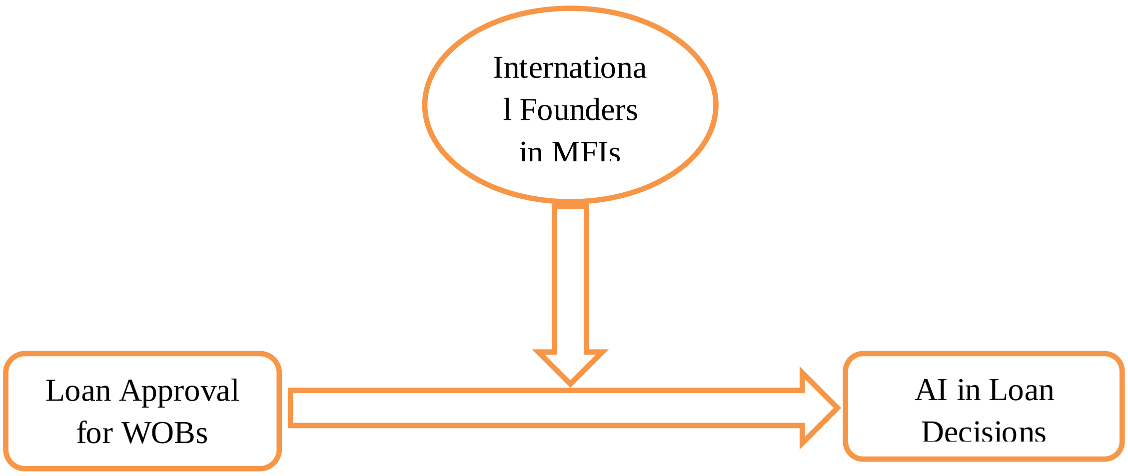

Figure 1: Conceptual Framework

This hypothesis suggests that AI and machine learning algorithms may be inherently biased against women, due to the data they are trained on and the way they are coded. As a result, the use of these technologies in loan decisions may lead to a disproportionate number of loan denials for women-owned businesses.

This hypothesis suggests that the use of AI and machine learning may not be inherently biased, but that the way in which these technologies are implemented and the institutional context in which they operate can have a significant impact on their fairness. Specifically, the presence of an international founder with a strong mission to promote gender equality may help to counteract the negative effects of AI and machine learning on loan approval for women-owned businesses.

These two hypotheses represent two different perspectives on the potential impact of AI and machine learning on gender discrimination in loan accessibility. Further research is needed to determine which of these hypotheses is correct. However, both hypotheses raise important questions about the potential for these technologies to either exacerbate or mitigate existing biases.

The independent variable is expected to have a negative relationship with the dependent variable. This means that as the use of AI and machine learning in loan decisions increases, the likelihood of loan approval for women-owned businesses is expected to decrease. This is because AI and machine learning algorithms may be inherently biased against women, due to the data they are trained on and the way they are coded.

The moderator is expected to moderate the negative relationship between the independent and dependent variables. This means that the presence of an international founder in a microfinance institution is expected to mitigate the negative impact of AI and machine learning on loan approval for women-owned businesses. This is because the presence of an international founder may help to counteract the negative effects of AI and machine learning on loan approval for women-owned businesses.

In other words, the moderator is expected to change the strength or direction of the relationship between the independent and dependent variables. In this case, the moderator is expected to make the negative relationship between the independent and dependent variables less pronounced.

In the context of this study, the institutional logics perspective suggests that the use of AI and machine learning in loan decisions is shaped by the prevailing norms and values of the financial industry. These norms and values may include a preference for traditional lending practices and a skepticism of new technologies. The institutional work theory suggests that individuals and organizations within the financial industry are constantly engaging in efforts to shape the way in which AI and machine learning are used in loan decisions. These efforts may include developing new algorithms, training data sets, and designing policies.

The presence of an international founder in microfinance institutions can disrupt the prevailing norms and values of the financial industry by bringing in a new perspective on lending practices and the use of technology. This new perspective can lead to changes in the way in which AI and machine learning are used in loan decisions, which may in turn mitigate the negative impact of these technologies on women-owned businesses.

Methodology

The following approach will be used to look into how gender discrimination in financial institutions affects the availability of loans for female entrepreneurs and how the type of lending institution plays a moderating role in this process:

We'll use a quantitative research design. 300 participants will be distributed a questionnaire. This strategy works well for statistical analysis-based testing of the suggested hypotheses. A structured questionnaire will be used to gather the primary data. The purpose of this questionnaire is to gather information about instances of gender discrimination, loan availability, and the kinds of lending institutions that are involved. The study will employ a stratified sampling technique to ensure representation from both traditional banking and microfinance sectors. The target population will consist of female entrepreneurs who have endeavored to obtain business loans within the last 24 months. To reach a larger audience, collaborations with regional business associations and microfinance organizations will be pursued. The questionnaire will be disseminated online through professional networks, forums for women entrepreneurs, and social media platforms aimed at business communities. To ensure that the questionnaire is understandable, relevant, and clear, a small group of female entrepreneurs will participate in a pilot test. Statistical software will be used to analyze the gathered data. We'll use methods such as multiple regression analysis to look at the connections between the moderating, dependent, and independent variables.

We'll use moderation analysis to investigate how lending institution type affects the connection between loan availability and gender discrimination.

Confidentiality and anonymity of participants will be respected. Participants will be informed of the goal of the study and their right to withdraw at any time, and informed consent will be obtained. Using this methodology, the study seeks to determine how much gender discrimination occurs in loan processes, quantitatively, and what role various kinds of lending institutions may play in this dynamic. The attendees, who are mostly female business owners who have recently gone through the loan process, will offer insightful commentary on their personal experiences, which will help to clarify the financial difficulties that women in business face.

Conclusion

This research aims to address the pervasive challenges faced by women entrepreneurs in accessing crucial funds for their business operations, exacerbated by various constraints such as inadequate infrastructure, complex technologies, convoluted procedures, and limited secure financing options. The study identifies critical research gaps, including the potential algorithmic biases in automated loan decisions and the impact of non-traditional lending models like microfinance on gender discrimination. Additionally, it highlights the need to explore intersectionality in loan discrimination and the chronic effects of such discrimination on women's career advancement and financial well-being.

The significance of the study lies in its potential to expose latent biases in automated loan decision-making systems, offer insights into the effectiveness of non-traditional lending models, contribute to a deeper understanding of intersectional aspects in loan discrimination, and draw attention to the long-term effects on women's financial security. The research aligns with the broader goal of creating a fair financial environment that fosters the prosperity of women-owned businesses.

The conceptual framework and hypotheses introduce a comprehensive approach, incorporating the use of AI and machine learning in loan decisions and the moderating role of an international founder in microfinance institutions. These hypotheses pose crucial questions about the potential biases inherent in technology and the mitigating impact of institutional contexts on gender discrimination in loan accessibility.

Theoretical underpinnings draw on the institutional logics perspective and institutional work theory, providing a framework for understanding the shaping of AI and machine learning in loan decisions by prevailing norms and values. The presence of an international founder is seen as a disruptor to these norms, potentially mitigating negative impacts on women-owned businesses.

The research methodology adopts a quantitative approach, employing a structured questionnaire to gather primary data. Stratified sampling ensures representation from both traditional banking and microfinance sectors, with data collected through collaborations with regional business associations and microfinance organizations. Ethical considerations prioritize participant confidentiality, anonymity, and informed consent.

In conclusion, this research aspires to contribute significantly to understanding and resolving the intricate obstacles faced by women in obtaining loans, particularly those influenced by gender-based discrimination. By examining the intersection of technology, lending practices, and institutional contexts, the study aims to provide valuable insights that can inform policy interventions, promote financial inclusion, and contribute to the financial empowerment of female entrepreneurs.

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Impact of Green Marketing On Environmental Effect with Moderating Role of Value Creation.

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Abstract:

This research explores the collision of green marketing on environmental outcomes, considering conspicuous of value creation. This study explores how business practices impact the environment by delving into the subtle changes in value created as stewards. This research aims to understand the potential for better business practices and the environment by examining the interaction between green business strategies and the value they create. The outcome of this study provides theoretical and managerial implications. The main focus of this paper is to consolidate findings on green marketing through value creation and environmental impact.

Keywords: Sustainability, Green Marketing, Environmental Effect, Value Creation, CSR.

Introduction:

As more and more companies accomplish the priority of sustainable operations, green marketing has become more important than the impact on surrounding. This presentation examines fundamental collision of green businesses on surrounding, as well as the strategies that businesses can use to reduce these impacts, as well as the vital control that the audience has over the cost of production. As more and more companies incorporate ecological responsibility into their business strategies, understanding the relationship between green activities and the value they create is vital for achieving positive environmental change. Even knowledge about the impact of green activities has come a long way. Research looks at how green business strategies benefit the environment, but rarely examines how environmental, social, and economic improvements are related and how they mitigate these impacts. This distinction needs to be maintained to understand how successful organizations manage ecological responsibility and the value they provide to their stakeholders. Research on the interaction between the green economy, environmental impact, and the role of value creation will benefit both research and business. Companies, governments, and society must understand green economy effect on the environment, with particular emphasis on the central role of value creation. First, this study reveals how environmentally friendly businesses support economic development and affect the ecological footprint of all businesses. Explaining the responsibility for creating value can also help organizations develop programs to address three pillars: social, environmental, and economic. To promote corporate responsibility and match marketing strategies with more general sustainable development objectives, this information is essential. Furthermore using these data, governments can create incentives and rules that effectively promote green marketing initiatives while guaranteeing significant value generation. When consumer decisions align with environmental stewardship, society gains from a more accountable and transparent business environment. In the end, researching how green marketing, environmental effect, and value creation interact not only increases knowledge in academia but also offers practical advice for building a more ethical and sustainable.

Literature Review

Green Marketing

Green marketing has grown significantly since the 2010s and has gained enough consumer confidence. The sustainable economy deserves to be studied because of its impact on business on the natural environment [Riva, F.; Magrissos, S.; 2021]. The green economy has grown tremendously in the last two decades, and awareness of the green economy has similarly increased in many countries and issues. [Kotler 2011], Green entrepreneurs search to alter the economy. There is also some freedom in the use of this word. Instead, terms such as "environment," "ecological," or "ecological" business may be used [Nadanyiova, M.; Gayanova, L.; Mayerova, J. 2020]. [Dangelico and Vocalelli 2017] see the green economy like an action to ensure that the exchange of goods does not hurt. However, point of view become standardized over the decades, researchers still see different green business concepts more or less common [Majeed, MU. Aslam, S.; Murtaza, S.A.; Atilla, S.; Molnar, E. 2022]. Despite the use of terminology and accepted methods, sustainability is an important concept that aims to make the company's activities compatible with the globe. Sustainability should be included in the marketing of various activities and standards. [Polonsky 2008] states sustainability is a process that creates multiple ideas to engage environmentally conscious customers. [Cherian and Jacob 2012], organizations raise customer awareness and exhibit them that the company is committed to helping solve problems. Sustainable marketing is also seen as a way to reduce the business's environmental impact (Martins, 2022). Green business design is divided into three broad concepts (Eneizan et al.: 2016). These include focusing on meeting the needs of consumers and consumers through green products and services, using the product mix at sustainable place to meet the requirements of customers, and integrating green marketing into organization. .Green business is an emerging business that includes many activities and activities such as fair trade practices, product development, production processes and product and packaging environment (Mishra and Sharma, 2012). Sustainable place includes multiple tasks, such as production processes, changes, packaging changes, and advertising changes. People often think about sustainable marketing and advertise environmental features into their items. Research also shows that green marketing has absolute effect on buying [Ansar, N. 2013]. Notwithstanding green economy becomes an essential topic for many years. Among all previous studies green product attitudes and behaviors are still limited. Additionally, as part of the green market, some eco-labels and consumer advocacy may influence consumers' voluntary to consume money on green products [Van Harreveld, F.; Nolen, H.U.; Schneider, I.K. 2015 Monet, MA; Baker, D.D. 1992, Enriquez, I.; Sadowski, P. 1996]. Additionally, green marketing can support good impact on green marketing on consumer behavior towards sustainable food. Chai, J. 2022].

Environmental Effect

Green marketing practiced a unique conspicuous in meeting the desires of consumers. It gives companies the responsibility to maintain long-term benefits for the social and environmental benefits that can be achieved through a green economy. The study aims to find out how consumers understand the green market and whether green products are beneficial to their environment and meet their needs, and to raise people's awareness about green products and green businesses. Consuming sustainable products on daily basis is an excellent example of environmental behavior that reduces and solves many environment threats today and has become popular among organizations in previous decades [Gonçalves, HM, 2016; Urban, J.; 2019. Previous researchers [Hartmann, P., 2006; Yadav, R.; 2016] building a sustainability has been primarily explained in multiple countries. However, there is little effort on green behavior. Deep analysis allows us to evaluate the presence of many reviews [Groening, C.; Sarkis, J.; Zhu Qi, 2018]. There is also some freedom in the use of this word. Instead, conditions like "environment," "ecological," business may be used [Nadanyiova, M.; Gayanova, L.; Mayerova, J. 2020]. Information will be essential to encourage behavioral change in people to engage in environmental behavior [Önel, N., 2016]. According to (Polonsky 1994), mishap is unpredictable, all activities that aim to create and facilitate interaction with human needs, thus meeting wants and needs, are defined as a green economy. In a green economy, all other aspects of the business are taken care of while protecting the environment. (Sharma, Iyer, Mehrotra, and Krihnan 2010) they are stated that environmentally friendly products can be designed and produced using recycled materials or production technologies to reduce consumption. To reduce the consumption of carbonators, companies must choose cleaner vehicles or seek alternative energy sources (Polonsky, 1995). Consumer experience will affect his eating habits, behavior, and thoughts. Consumers who have positive attitudes towards the environment will encourage positive environmental behavior. Environmental awareness is a motivational activity because consumers are already aware of the environment, and consumers' perceived value derives from external stimuli (behavior mold green). Consumers are better served if they are driven by green business behavior (external) and environmental awareness (internal). Research shows that nearly 90% of consumers think brand transparency is essential when making purchasing decisions (Forbes, 2019). Likewise, consumers saw that the companies responsible for the world crisis were committing a vast fraud. Societies do not trust on firms that invest in environmental protection (Wang et al., 2020). Consumers are increasingly confused regarding the reliability of organizations CSR which reduces their assurance and hinders their ability to make purchasing decisions (Topal et al., 2020; Thøgersen, 2021).

Value Creation

"Processes and activities that form the basis for the integration of resources and the inclusion of responsibilities of different actors in ecosystem services" (Lusch and Nambisan, 2015). Grönroos (2011) focuses on different value creation processes, arguing that organizations are responsible for production processes that involve value creation, or in Grönroos terms, price support. Commercial organizations use a digital twin to generate internal results is to increase productivity, detect errors, support preventative maintenance, and staff training. Gemini has a business for creation of internal value processes. In nineties, image of value creation has expanded, gained importance for companies, and has been accepted as an important factor in finding value. Create a competitive advantage (Prebensen and Xie, 2017). Therefore, "creating the best value for customers is or should be the main goal of any hotel company" (Gonz_alez-Mansilla et al., 2019, p. 51). Accordingly, another concept that has become an important part of research on consumer behavior: strategic marketing, "the process of interaction between the business and customers to create value". All organizational activities directly or indirectly affect the natural environment, consciously or unconsciously (Etzion, 2007). Therefore, every organization should be concerned about how it causes the world's borders to be violated. However, these major problems related to ecological problems offer a great opportunity for eco-businesses to create and capture value by creating appropriate business models. New initiatives address important social and environmental problems that people face, such as the world's boundaries, and create "good" results by focusing on what can be effective in solving these problems (Dyllick and Muff, 2016, p. 166 Page). These new businesses are companies committed to “true sustainability” in their productive work (Dyllick and Muff, 2016, p. 162). “Some companies are developing ways to provide additional benefits and benefits.” The environment benefits but combines the benefits with quality work and emotional appeal. Selling to green consumers is similar to selling to consumers who are only interested in green product. Still the social benefit is significant in terms of time and space. Additionally, the ability to purchase expensive brands is often associated with income. But this means that sales and image, from a perspective that goes beyond the benefits of a good environment, can allow companies to expand the market and achieve more sales. Even services researchers have focused on the connection between security and development. Incorporate sustainability into ecosystem services [Barile et al., 2020]. Therefore, this article aims to investigate how companies can improve their cost-effectiveness processes while integrating sustainability into the cost-effectiveness process. In addition, experience becomes an important factor in mental health outcomes, especially in environmental issues and green purchasing, as people always consider nature to heal the body and mind [Hwang, J.; Choi, J. 2017]. People with a high level of positive knowledge will have more knowledge about nature conservation [Bögeholz, S. 2006]. Therefore, natural conditions that will create environmental awareness and happiness in mind will acts like a protector which strengthen the effect of consumer values and behavior towards sustainable purchasing.

1. THEORETICAL FRAMEWORK / MODEL

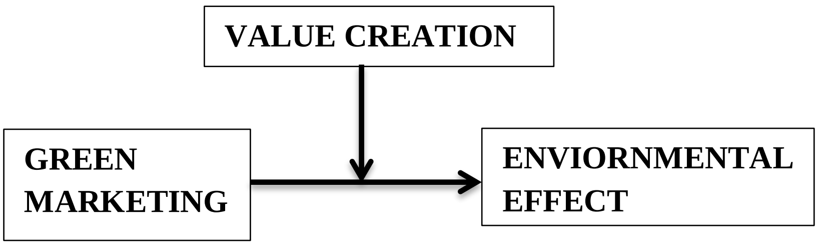

Figure 1: Conceptual Framework

2. RESEARCH HYPOTHESIS

2.1. GREEN MARKETING & ENVIRONMENTAL EFFECT

When companies actively promote environmental friendly products and sustainable practices, they create a more environmentally conscious consumer base, which in turn influences consumption patterns and promotes a green sustainable economy. As a result, there is a positive correlation between the growth of sustainable marketing practices and a reduction in the environmental impact. Sustainable marketing activities' efficacy is strongly impacted by the environmental backdrop, which includes elements like increased environmental concerns and heightened knowledge of climate change. In the current eco-aware world, companies that adopt and support sustainable practices stand to gain more positive customer feedback and better results from their green marketing initiatives.

H1: *Green marketing has a direct relationship with the environmental effect.*

2.2. Value Creation Moderates the Relation Between Green Marketing & Environmental Effect

Businesses that successfully communicate and deliver value through their environmentally friendly practices can enhance the positive environmental effects, according to the moderation effect of value creation and connection between green marketing and environmental impact. Value creation enhances the ability of the green economy to support a better environmental impact and uses value creation as a catalyst.

H2: *Value creation has a direct relation with green marketing and environmental effect*

3. Method

A mixed method can be used to measure the scenario along with its cost-effectiveness. Consumers' perceptions of environmental awareness, green marketing strategies, and perceived benefits can be determined through comprehensive research. Use statistical tools to analyze your data to find correlations and correlations. Focus groups and interviews are effective methods which investigate on consumer sentiment and the factors that influence their environmental choices. Investigate how benefits relate to the relationship between green business and environmental impact. To find subtle patterns in big data, advanced analytical techniques such as machine learning algorithms aid on the evolution of green marketing in its environmental impact and cost creation.

4. Conclusion

Green marketing is an environmental friendly behavior for organization CSR and consumer. By emphasizing environmental friendliness and sustainable products, the carbon footprint is reduced, and resource conservation can be encouraged. Customers are essential to businesses that not only promote environmental responsibility but also provide great value through innovative products and services, positively influencing the value of positive impacts. Ultimately, the integrating value creation and green marketing can lead to a more efficient and profitable business.

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Big Data Analytics And Firm Performance: Moderation and Mediation Model.

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“Big Data Analytics and firm performance: moderation and Mediation model”.

- **Purpose:** this study will examine the mediating role of decision making quality on the casual chain linking Big Data Analytics and firm performance in the fashion industry (retailer and whole seller). It will also have examined the decision making quality improve the firm performance and moderating effect of people Business Intelligence tool fit on firm performance that was almost ignored in previous studies.
- **Design/methodology/approach:** The target population consisted of managerial employees (designer IT experts and managerial executives) in fashion industry. Data will be collected using a survey questionnaire from 800 respondents (350 from retailers and 450 from whole sellers) in fashion industry from Pakistan will be subjected to the PLS-SEM for analysis.
- **Findings:** The empirical result will show that big data analytics will have a positive impact on firm performance, decision making quality mediate the relationship and positive moderating effect of People BI Tool fit. Moreover, it will also improve that the big data analytics played a key role to improve the decision making quality (effectiveness and efficiency), which positively contributed towards firm performance in fashion industry.
- **Practical implications:** This study will provides guidelines required by fashion industry to strengthen their decision making quality & big data analytics by moderating effect of People BI tool fit towards firm performance high or increase.
- **Originality/value:** The proposed model will provide an insights look at dynamic capabilities theory in the domain of big data analytics to tackle the firm issues in fashion industry. The current study is the novel addition in the literature and it identified that big data analytics are envisioned to be a game changer player in decision making quality and improve firm performance in fashion industry.

Keywords: Big Data Analytics, Decision Making Quality (Decision making effectiveness + decision making efficiency), Firm performance, People -business intelligence tool fit (PBI).

BRIEFLY:

"Impact of Big Data Analytics on Firm Performance through mediation analysis (decision making quality) and moderation effect is People - BI tool fit".

Variables:

Big Data Analytics – (Independent variable)

Decision making quality - (Mediating variable)

Firm performance - (Dependent Variable)

People BI tool fit - (Moderating variable)

CONCEPTUAL DEFINITION OF THE VARIABLES:

"Big data" indicates to large structured and unstructured data sets that require new forms of processing capability to make better decision making. Examples include, sales data, process operating data and other information captured by sensors, web server logs, Internet clickstream data, social media activity reports, mobile-phone call records, etc.

"Big data analytics" is the procedure of examining big data using advanced technologies. These include data management (e.g., massively parallel processing databases), open-source programming (e.g., Hadoop, MapReduce), statistical analysis (e.g., sentiment analysis, time-series analysis), visualization tools that help structure and connect data to uncover hidden patterns, anomalies, unknown correlations, and other actionable insights, and in-memory computing (IMC) (e.g., SAP's HANA). Mainly grounded in data mining and statistical analysis, BDA can be defined as:

"Technologies (for example, database and data mining tools) & techniques (for example, analytical methods) that a firm can employ to analyze large-scale, complex or complicated data for various applications intended to augment firm performance across various dimensions" (Chen et al., 2012).

DECISION MAKING QUALITY:

Decision-making quality refers to the correctness and accuracy of decisions, which is assessed by decision effectiveness and decision efficiency in the procedure of decision making (Aydinera et al., 2019; Ghasemaghaei, 2019). In line with Shamim et al. (2019), decision effectiveness concentrates on the accuracy, precision, and reliability of decision results, whereas decision efficiency examines the time, cost, and other aspects of the resources involved. Big data is occurring at all stages of the industrial chain, which has transformed the way that firms make decisions, able for firms to quickly identify opportunities and problems, shorten the process of decision making, and improve decision-making quality (Chae et al., 2014; Pham and Stack, 2018). According to this formation, efficient decisions can help firms control costs, ensure product quality, and improve customer satisfaction. Therefore, this study aim to examine the mediating role of decision making quality between big data analytics and firm performance.

Firm Performance:

Firm Performance is the strength to which a firm has better performance relative to its challengers or competitor. Different dimension of firm performance involve revenue, cost of operations, profitability, customer experience, time to market and innovation (MIT-CISR 2013).

People BI tool fit:

BI tools are designed to boost decision-makers' ability (Wamba et al., 2017), high worker-technology (person-technology) fit can amplify the effect of BI capability on decision-making comprehensiveness and quality. Skillful workers (i.e. those with high fit) will leverage the benefit of the BI tools and capability, while those with low fit may opt to bypass the system by generating less intelligent solutions to avoid the hassle, which affects business outcomes (Ghasemaghaei et al., 2017).

According to the fit perspective, the fit between people and elements of the environment improves organizational outcomes (Kristof-Brown et al., 2005). The person-technology fit perspective posits that there should be a best fit between workers' skills and job requirements (Edwards, 1991; Yuce et al., 2019). Ebrahimi et al. (2016) added that workers who possess adequate skills to consummate their job requirements (i.e. use of analytical tools) are more likely to perform better and/or attain improved work processes. This paper will focus on people-business intelligence tools fit (people-BI tools fits). In line with our assertion, high worker-technology (person-technology) fit ensures the full leverage of data analytics tools for rapid and in-depth comprehension of market and customer dynamics (Ghasemaghaei et al., 2017).

Hypothesis: (Conceptual)

Based on existing literature review the proposed hypothesized hypotheses will be as under:

H1: Big data analytics will impact firm's decision making quality.

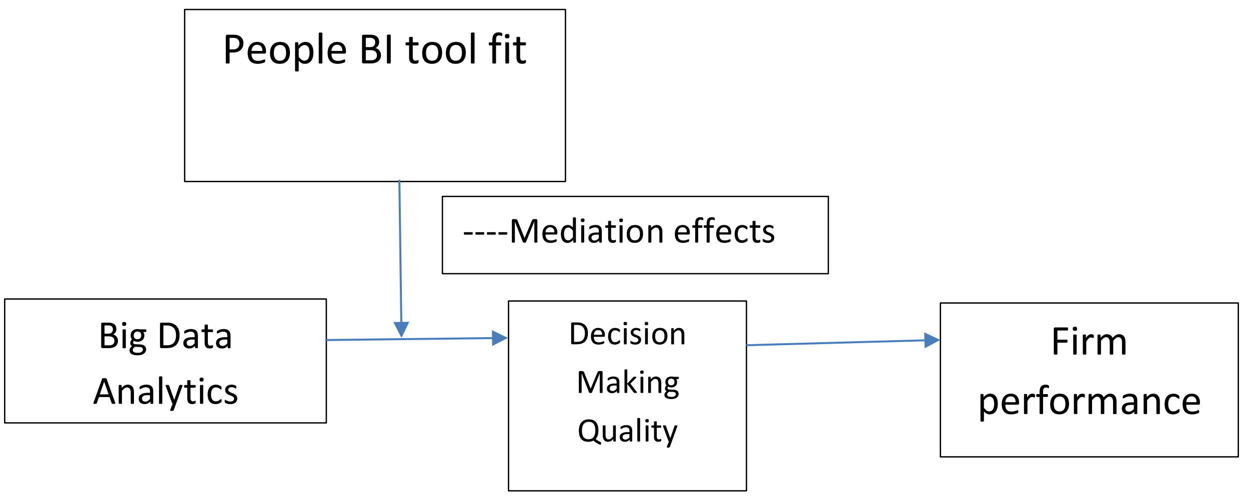
H2: Firm's decision making quality will impact on firm performance.

H3: Firm's decision making quality will mediate the relationship between big data analytics and firm performance.

H4: People –BI tools fit moderate the effect of big data analytics on decision making quality, such that the effect is stronger with high people –BI tool fit.

(Based on the proposed hypothesized hypotheses, the research model in below figure will be proposed)

Conceptual Framework



Design/Methodology/Approach:

The target population will be consist of managerial employees (designer IT experts and managerial executives) in fashion industry from Pakistan. Data will be collected using a survey questionnaire from 800 respondents (350 from retailers and 450 from whole sellers) in fashion industry will subjected to the PLS-SEM for analysis.

The purpose of this study will to explore the impact of big data analytics on decision-making quality through people-BI tool fit data. Our results will show that big data analytics will have impacts on decision making quality and firm performance and moderating effect on decision making quality and firm performance.

The objective is our study will examine how big data analytics can create impact on decision make quality and how decision making quality lead to firm performance. A research model is propose and will be empirically tested. The results will provide for both decision making quality and firm performance. Furthermore, the creation of decision making quality will lead to firm performance by moderation effect of people-BI tool fit.

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The Adoption of Blockchain Technology on Supply Chain Finance to Better Organizational Performance; "Pakistan Industrial Sector Context."

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Abstract:

Purpose; The rising need for cross-industry finance has emerged as a significant roadblock to the company's expansion. This study tries to overcome this hurdle by demonstrating how blockchain technology may enhance supply chain finance and technology trust, increasing organizational performance. The current study also examines the possibility of using trade digitalization as a moderating factor in the link between supply chain finance and organizational performance.

Design/Methodology/Approach: A thorough literature review on blockchain technology, supply chain finance, trust, digitization in trade finance, and organizational performance was carried out to provide the conceptual foundation for this study. Three hundred eighty-nine supply chain professionals from the industrial sector in Pakistan contributed the sample data to validate the conceptual model. Structure Equation Modeling was utilized to evaluate the suggested conceptual framework using Smart PLS, and confirmatory factor analysis was carried out to guarantee the measures' validity.

Findings; The results of this study imply that Supply Chain Finance may be improved using Blockchain Technology, leading to improved Organizational Performance. Additionally, the trust that blockchain technology generates enhances organizational effectiveness. Further, trade digitization strengthens the link between corporate performance and supply chain finance. To forecast organizational performance, the current study substantially defines the technology adoption model and technological readiness index using blockchain technology, supply chain finance, trust, and digitization in trade finance.

Research limitations/implications; None of the respondents had experience with Blockchain technology up to this point. Their response is based on their knowledge of supply chains and blockchains from publicly accessible sources. Different supply networks demand various strategic choices and information needs. The current analysis, however, supposes that all supply chain needs are equivalent. Although there is currently no legal framework for Blockchain technology, the research assumes that government regulations on the technology are advantageous. The present study's findings suggest that companies should actively work with IT companies to develop supply chain solutions based on Blockchain and spread knowledge of the technology. Managers, IT

companies, and academics should collaborate to research, create a regulatory framework for Blockchain technology, and then advocate it to decision-makers.

Originality/value; This study fills a vacuum in the supply chain management literature that had not been addressed before. There have been numerous studies on the effects of IT on critical supply chain parameters. Still, none have addressed how disruptive technologies like blockchain will affect Supply Chain Finance, Trust, and Organizational Performance while identifying the role of trade digitization as a moderating variable in the context of Pakistan's industrial sector using the Technology Adoption Model and technology readiness index theory.

Keywords; Blockchain Technology, Supply Chain Finance, Trust, Digitization in Trade Finance, and Organizational Performance

1. Introduction

Technological disruptions increase market efficiency in many businesses, not just the supply chain (Craighead et al., 2021). Increased customer demand, a restricted manufacturing cycle, and multinational operations make modern supply chains more dynamic than traditional ones. Retailers have limited inventories (Csatari-Sarkany, 2021). Current market conditions make accurate demand prediction, production forecasting, and planning difficult (Pereira, 2009). COVID-19 has prompted scholars to study supply chain management (Belhadi et al., 2021). Scholars and practitioners have urged enhanced supply chain management to deal with COVID-19 (Queiroz et al., 2021). Large global supply chains, such as those in textiles and services, have been harmed by their substantial dependence on China and other nations as supply chain partners (Kumar & Kumar Singh, 2021). Information technology was embraced worldwide to improve organizational performance via supply chain management. However, many undeveloped nations, like Pakistan, still face issues owing to a lack of resources and understanding of current technologies. COVID-19, which has spread to practically every nation, has led to social isolation, travel bans, facility limits, and local lockdowns, all of which enhance the risk of global supply chain disruptions (Singh et al., 2021). Pakistan's industrial enterprises and government agencies are disrupted by not implementing the newest information base technology in their supply chain management (Sheel & Nath, 2019). Modern technology may increase supply chain transparency. Everything has a storied past (Tapscott & Tapscott, 2017). Blockchain Technology is disrupting logistics and supply chain management. This technology gained attention because of its relationship to Bitcoin and ability to build a transparent record of transaction data. Now that supply chain managers recognize the advantages of this new technology, they can boost openness (Francisco & Swanson, 2018). This technology is relevant because consumers want supply chain transparency. This past is somewhat buried. When harmful activities are exposed, they can cause embarrassment and financial ruin. Recent instances include workers' rights in industry and unethical rainforest use. Blockchain technology might boost supply chain transparency, but existing understanding limits academic and management adoption (Camerinelli, 2016). Blockchain is a "state-of-the-art" worldwide, decentralized technology that protects transactions and data. It's a shared, open, distributed ledger used to store/record data and transactions over a peer-to-peer network and backed by digital currency (Dutta et al., 2020). Due to its unique characteristics, Blockchain Technology is primarily employed in supply chain management. Integration is not just a commercial procedure but also coordinated operations across supply chain players, which would not be feasible without the latest inter-organizational data system (Williamson et al., 2004). Blockchain is an internet-linked technology that improves supply chain visibility and accuracy (Pilkington, 2016). Blockchain

Technology gives participants fast, accurate record information (Davidson et al., 2016). Blockchain Technology is one of the newest internet-based applications in the supply chain. Traditional financial systems use a consolidated ledger with one authority point. Blockchain enables a growing digital archive of records. Not all business systems are synced. Therefore, supply chain participants must organize. Such tight integration cannot be achieved without a current inter-organizational information system, and Blockchain Technology may be an exciting way to help organizational groupings (Williamson et al., 2004). Blockchain Technology stores transactional data in blocks that parties may share. We may link blocks in chronological order (Underwood, 2016). Organizational Performance is attaining the aims and objectives for which the firm was formed (Ahmad & Karadas, 2021). Organizational performance is a complex topic that involves production, economics, and promotion. Due to uncertainty and a competitive market, organizations face many risks starting, maintaining, and improving company performance (Halim et al., 2017). The researcher defines organizational performance as how well a company's production, store, promotion, and economic goals are met (Almajali, 2021). Organizational Performance is how well a firm accomplishes its financial and market-oriented goals (Belay, 2018). Long-term Supply Chain Management objectives include improving market share and earnings for all supply chain players. Short-term goals include boosting productivity, inventory, and cycle time (Narasimhan et al., 2008). The Blockchain supply chain is cheaper, lowering data loss and boosting participants' trust (Peters & Panayi, 2016). Trust is the most popular term in sharing economy discussions, and Blockchain guarantees it (Hawlitschek et al., 2018). Trust is a key determinant in organizational performance because it represents a person's willingness to be exposed. Due to double record keeping in a duplicate entry system, supply chain participants have trust issues (Ammous, 2016). Blockchain may assist with trust and transactions (Davidson et al., 2016). The professor says Blockchain may consolidate all supply chain operations and serve as a single source of information for participants (Korpela et al., 2017). Blockchain reduces information loss and fraud among traders (Reddy, 2019). Blockchain's transparency in trading partner transactions inspires confidence. Various studies relate vulnerability to higher performance (Colquitt et al., 2007; De Jong et al., 2016). Supply chain management is crucial to competitiveness. Excellent supply chain management is vital for a company's competitive edge (Christopher, 2012). Studies have shown that competitive advantage in the supply chain improves organizational performance. In this research, we'll use Blockchain Technology to address this challenge by enhancing supply chain outputs and Organizational Performance. According to the author (Yadav, 2019), digitalization is a technique to make information systems, business operations, offers, and performances digital utilizing information technology. Because digitization increases an organization's output, it affects an economy's exchange value. Digitalization changes corporate priorities for competitiveness and organizational value (Ritter & Pedersen, 2020). The digitalization of supply chain management has enhanced warehousing and manufacturing processes (Gupta et al., 2020). Trade digitalization helps firms overcome uncertainty and gives entrepreneurs decision-making power (Gautam et al., 2021). Digitizing trade helps us achieve cost-effective operations and reliable information about the firm (Ali et al., 2018). Information technology affects both developing and mature country industrial and service industries. Supply chain digitization may solve these issues. Traditional manufacturing is being replaced by eco-friendly production (Ranganathan et al., 2011). The researcher (Farooq & O'Brien, 2012) says conventional manufacturers are searching for innovative IT solutions to increase company performance and supply chain coordination. Blockchain may increase supply chain transactional efficiency (Tapscott & Tapscott, 2017). Blockchain may improve 33% of supply chain processes (Camerinelli, 2016). Blockchain has various practical challenges, including a lack of an organized network to grow its size, staff training, governance, privacy, and a high installation cost. This technology hasn't shown its worth in any field outside banking, so many are apprehensive about adopting it (Koteska et al., 2017). Managers don't understand how Blockchain may provide their supply chain and sector with a competitive edge. Many Blockchain-based apps might become popular (Huckle et al., 2016). Lack of Blockchain awareness also affects adoption rates (Mthethwa et al., 2016). Many Blockchain-based apps might become popular (Huckle et al., 2016). Lack of Blockchain awareness also affects adoption rates (Mthethwa et al., 2016). Most Blockchain writing is conceptual, without actual data (Ying et al., 2018). The COVID-19 pandemic affected population health, economic activity, and global supply lines worldwide. Lockdowns have disrupted physical demand and supply for many commodities and financial training throughout supply chains (Moretto & Caniato, 2021). This research link Blockchain to supply chain factors to enhance supply chain performance, which improves organizational performance. Supply Chain Finance reduces finance costs and improves market performance for buyers and sellers in dispersed transactions. Globalization has enhanced organizational efficiency via supply chain management. Supply Chain Finance must assist supply chain management. In the digital era, the supply chain executive must optimize cash flow (Caniato et al., 2016). Supply Chain Finance is a developing sector of financial services for the supply chain management. Supply Chain Finance analyses, plans, and manages supply chain members' capital sources to enhance working capital (More & Basu, 2013). Because firms have few options for meeting their regular financial requirements, Supply Chain Finance is essential for their success (Lekkakos & Serrano, 2016).

1.1 Study Importance

Companies must employ technology-based finance approaches to attain their goals in today's globalized environment. This research will assist firms since Blockchain technology is crucial to Organizational Performance. Adopting Blockchain technology maintains and improves supply chain funding, leading to improved supply chain operations, which enhances organizational performance. Blockchain technology allows enterprises to efficiently and securely record commodities, resources, and other information as they travel across supply chain networks, boosting traceability beyond the other firms' partners (Xiong et al., 2021). Blockchain creates a supply chain finance platform to improve data sharing. Blockchain's technological characteristics enable audit, management, and minimizing supply chain finance risk (Du et al., 2020). Several supply chains have data sharing and trust issues, research shows. Since then, organizations have used Blockchain technology to improve data interchange and efficiency (Peterson & Baur, 2018). Lack of awareness and desire to use modern technologies reduces corporate productivity and performance. Blockchain technology can assist achieve and enhancing supply chain financing, which will boost the company's reputation and success. The Pakistani corporation doubts this performance-improving technology. This study will penetrate and incorporate revolutionary strategies like Blockchain into enterprises to deal with globalization and digitalization.

1.2 Scope

This research analyses supply chain management using Blockchain to improve organizational performance. Blockchain Technology minimizes manufacturing organizations' verification costs and quality problems while providing real-time transparency. Blockchain Technology is also used in composite supply chains. Blockchain Technology's ownership transfer feature identifies materials' origins, reducing verification costs and ensuring composite material quality throughout the supply chain. Blockchain technology can authenticate composite materials' genuine status and quality for safety. In this research, we used Blockchain Technology to examine the influence of Supply Chain Finance on Organizational Performance, with Digitization in Trade Finance as a moderator.

1.3 Issues

Supply chain management is vital to the global economy, but Pakistan's industry has struggled due to a lack of new policies and government vision (Ali et al., 2020). Technological advancements are needed to increase organizational performance (Maiti & Kayal, 2017). Due to covid-19's global reach and unanticipated longevity, operations and supply chain management have confronted significant challenges (Ivanov, 2020). Various organizations can't boost Organizational Performance without a competitive edge. Pakistani groups always struggle with financing. For a firm to function effectively, controlling finances is a challenging task. Pakistani organizations lack knowledge of innovative technology (Huckle et al., 2016). Organizations encounter finance and trade issues locally and globally. It's unknown whether incorporating current methodologies (Blockchain Technology and Digitization in trade finance) is vital for effective organizational performance. Organizations aren't upgrading supply chain finance, procedures, and strategies to boost trade and achieve a competitive advantage for efficiency and performance. Social media services help people. Pakistan's public sector uses social media less than many other developing nations. This research uses a modified version of the unified theory of acceptance and use of technology demonstration to explore public sector technology adoption in Pakistan. Blockchain technology in Pakistan affects usability, value, social effect, innovation issues, a lack of training and human resources, information security, and trust. Why are so many technologies lagging? This question is key to understanding economic growth and development. Empirical research is complex, especially among industrial organizations. It's hard to directly examine enterprises' technology usage and rare to get precise estimates of adoption costs and benefits or what firms know about technology. Differentiating between low adoption rates causes is complex.

1.4 Research Gap

Under Covid-19, enterprises must establish transparent supply chains to better detect and analyze supply chain risks across nations and sectors, prepare and take steps like building alternate supply channels, and limit the pandemic's harmful effects (Xiong et al., 2021). Blockchain Technology may increase supply chain transactional efficiency (Tapscott & Tapscott, 2017). According to one estimate, blockchain can improve 33% of supply chain processes (Camerinelli, 2016). Blockchain has various practical challenges, including a lack of an organized ecosystem to extend its size, employee training, governance, privacy, and a high installation cost. This technology hasn't proven itself in any field outside banking, so many are wary of using it (Koteska et al., 2017). Technological disruptions are vital for boosting Organizational Performance in all sectors, and the supply chain plays a key role (Craighead et al., 2017). According to earlier research, textiles significantly contribute to global GDP and employment. In addition, combining supply chain elements with a unified country to set objectives has been challenging for industries. Distributed suppliers reduce transparency, particularly at lower levels. Underdeveloped nations still use conventional supply chain management approaches; hence research is sparse (Baig et al., 2020). Modern supply chains are increasingly complicated. In this research, Blockchain Technology is used to examine the influence of supply chain finance with Digitalization in Trade Finance on organization performance. Organizations can't function alone in today's international, competitive business climate (Kamble et al., 2019). Collaboration with suppliers, manufacturers, and consumers is crucial. Upstream and downstream patterns increase competitive performance (Ahmed et al., 2020). We also verify supply chain members' technology trust in Punjab, Pakistan. Managers don't understand how Blockchain might improve supply chain operations and performance. Many Blockchain-based apps might become popular (Huckle et al., 2016). Lack of Blockchain awareness also affects adoption rates (Mthethwa, 2016). Most Blockchain writing is conceptual, without actual data (Ying et al., 2018). This study links Blockchain Technology with Supply Chain Finance to boost organizational performance. Digitalization in Trade Finance modifies supply chain finance and organizational performance. We want to incorporate and penetrate Blockchain technology into Pakistan's industrial sector.

1.5 Research Questions

This study helps analyze Blockchain Technology's impact on Supply Chain Finance, which improves organizational performance with digitalization in trade finance.

This research answers the questions below.

- ✓ Does Blockchain improve Supply Chain Financing's performance?
- ✓ Does Blockchain technology affect organizational trust?
- ✓ Does digitization in Trade Finance improve organizational performance and supply chain finance?

1.6 Study Objective

This research has the following objectives.

- ✓ This study examines the implications of Blockchain Technology adoption on supply chain finance to improve organizational performance in Pakistan industrial sector firms.
- ✓ The second objective of this research is to determine whether using Blockchain Technology may build trust among supply chain stakeholders to improve Pakistan industrial sector companies' performance.
- ✓ The third objective is to determine whether digitalization in trade finance may enhance or weaken supply chain financing, leading to more excellent performance in Pakistan's industrial sector.

2. Literature Review

2.1 Blockchain Technology

Blockchain Technology (BCT) is the newest technology that "allows partners to conduct business openly and maintain a distributed and tamper-proof digital record of transactions without a central authority" (Kumar et al., 2020). Blockchain technology may increase supply chain transparency, say experts and practitioners (Wamba et al., 2020; Schmidt & Wagner, 2019; Guo et al., 2020; Sunny et al., 2020). Traceability emphasizes real-time data monitoring of supply chain activities, whereas transparency focuses on user data in supply chain operations (Hastig & Sodhi, 2020; Kumar et al., 2020). By delivering correct transactional data within supply chain networks, such as raw material origins, shipments, inventory levels, commodities received, purchase orders, and invoicing (Cole et al., 2019), Blockchain Technology increases supply chain parameters transparency (Sander et al., 2018). Sonoco, the world's top maker of temperature-controlled packaging for pharmaceutical distribution, utilizes Blockchain Technology to track a package's entire journey, connect it with data from other sources, and share it with supply chain partners (Vivekanadam, 2020). Blockchain Technology may increase supply chain traceability by enabling organizations to monitor all transactional data flows produced in supply chain activities (Sunny et al., 2020; Sander et al., 2018). Ali Baba and JD.com use Blockchain Technology to monitor products in real-time (Ali et al., 2020). Researchers are studying the factors that influence Blockchain Technology adoption in supply chains and its consequences (Zhou et al., 2020; Bai et al., 2020; Kouhizadeh et al., 2021; Queiroz et al., 2019; Wamba & Queiroz, 2020; Rahmanzadeh et al., 2020; Cole et al., 2019; Schmidt & Wagner, 2019; Dolgui et al., 2020; Walsh et al., 2020; Bai & Sarkis, 2020; Martinez et al., 2019). Queiroz et al. (2021), suggested that the growing economy, facilitating conditions, effort expectancy, Trust, and social influence are the most critical enablers of Blockchain Technology adoption in supply chain parameters. Kouhizadeh et al. (2021) used the decision-making trial and evaluation laboratory measure to expose key supply chain and technological hurdles that disable Blockchain Technology adoption. Wamb & Queiroz (2020) suggested a multi-structural model of Blockchain Technology adoption (routinization phases, intention, and adoption), illustrating how adoption facilitators and obstacles changed across states and countries. Researchers have looked at the pros and cons of Blockchain Technology adoption (Perera et al., 2020). Previous studies have looked at how Blockchain Technology can improve supply chain parameters and contribute to various indicators of performance at the organization and supply chain parameters, such as supply chain sustainability, new product development speed, secure financing, ordering time, process efficiency, inventory and transaction costs, and product safety (Wamba & Queiroz, 2020; Martinez et al., 2019; Saberi et al., 2019; Queiroz et al., 2019; Cole et al., 2019; Rahmanzadeh et al., 2020; Dolgui et al., 2020; Schmidt & Wagner, 2019). On the other hand, research has shown the disadvantages of Blockchain Technology adoption, such as sustainability issues due to high energy usage, scalability issues due to limited potential to handle vast quantities of transaction information and data in a short period, increased risks due to significant resource investments, and challenges convincing and encouraging supply chain participants to adopt Blockchain technology networks (Zhou et al., 2020; Bai & Sarkis, 2020; Walsh et al., 2020; Kouhizadeh et al., 2021). The COVID-19 pandemic has also produced widespread and severe supply chain disruptions affecting physical and financial resources throughout organizations' supply chain ecosystems (El Baz & Ruel, 2021; Ketchen & Craighead, 2020; Remko, 2020). First, decreased delivery, labor constraints, and production shutdowns hinder suppliers' capacity to meet customer requests and provide critical raw materials owing to employee health concerns and other laws (Singh et al., 2021). Our research differs (Lim et al., 2021). We explore how Blockchain Technology may enhance Supply Chain Finance, helping firms increase performance and counteract COVID-19. The technology adoption and readiness model theories complement our research assumptions (Choi, 2020).

2.2 Supply Chain Finance

Supply Chain Finance (SCF) is "optimal planning, management, and controlling of supply chain cash flows" to "allow efficient supply chain material movements" (Ma et al., 2020). Supply Chain Finance is founded on the idea that cooperation among supply chain players is crucial for financial flow management (Chen et al., 2020). Others have advocated that Supply Chain Finance programming be regarded as "using the supply chain to finance the organization and the organization to fund the supply chain" (Lahkani et al., 2020). Supply Chain Finance coordinates cash flows among supply chain organizations to improve financial performance (Carnovale et al., 2019). Limited Supply Chain Finance study relates a firm's network structure to financial performance and expands Supply Chain Finance to the network (Carnovale & Yeniyurt, 2015). Supply Chain Finance optimizes the supply chain's financial structure and cash flow (Gomm, 2010). Supply Chain Finance is an integrated method that enables insight and control over cash-related supply chain operations (Jia et al., 2020). Supply Chain Finance may be new to the purchasing business and early-adopting suppliers, but it has become a standard foundation for buyer-supplier interactions (Choi, 2020). At the reusing stage, late-adopting suppliers that join the buying firm's previously established Supply Chain Finance platform may be unaware of the Supply Chain Finance innovation (Grosse-Ruyken et al., 2011). In recent years, supply chain finance has hampered organizational performance (Caniato et al., 2016). Improve supply chain finance to boost organizational performance (Ni et al., 2020). Supply chain finance is a new way to address an organization's financial demands and improve performance (Stemmler, 2002). Supply chain finance is a strategy for completing organizational procedures to improve organizational performance (Zhao & Huchzermeier, 2018). (Moretto & Caniato, 2021). Digitization may ensure supply chain financing in trade finance. Studies show that supply chain finance improves organizational performance by enhancing customer loyalty and competitive advantage (Christopher & Holweg., 2011; Pagell, 2004; Baier et al., 2008; Wong et al., 2012). Strong ties with supply chain partners may enhance operation productivity, keep the supply chain moving smoothly, and cut expenditures. Lower costs and increased productivity will reflect the product's quality and low price, helping the organization's financial performance (Wuttke et al., 2013). Supply chain finance benefits manufacturers, third-party suppliers, and overall profit. Second, Supply Chain Finance can improve organizational financial condition results in two ways: first, by helping upstream partners minimize payment terms issues and strengthen supplier relationships, which reduces stock-out issues and increases sales volume; and second, by allowing organizational finance to earn financial services interest and transactions (Chen et al., 2019). Supply Chain Finance optimizes inter-company finance and integrates consumer, supplier, and service provider financing to maximize value for all participants (Pfohl & Gomm, 2009). Supplier-issued trade credit is precious capital. In the UK, 80% of business-to-business transactions use trade credit (Olan et al., 2021). Even firms with great credit choose trade credits over bank loans to grow their network. This supply chain approach is unsatisfactory if suppliers have worse credit ratings and pay higher interest rates than their customers. Supply Chain Finance is an interesting solution to this problem (Wuttke et al., 2019). According to More & Basu (2013), Supply Chain Finance is a tool that creates value for supply chain stakeholders by planning, steering and controlling the flow of financial resources on an inter-organizational level. Supply Chain Finance integrates cash flows into the physical supply chain, making it a supply chain management approach (Huff & Rogers, 2015). Supply Chain Finance is "financially-oriented" and "supply chain-oriented" (Gong, 2018). Supply chain management involves many SMEs, unlike conventional finance. SBCF helps SMEs obtain financing depending on their creditworthiness (Zhu et al., 2019). Supply Chain Finance adoption choices are utilized by looking at buyers' optimum timing and payment selections. Supply Chain Finance allows buyers to have longer payment terms and suppliers easier access to finance, improving supply chain performance (Nguema et al., 2021). Enterprises advertise their Supply Chain Finance solutions by highlighting that Supply Chain Finance facilitates the provision of finance to supply chain members while evaluating the entire supply chain's operating state and transaction history (He & Tang, 2012). Supply Chain Finance is vital for managing credit issues by improving the organization's financial performance and decreasing supply chain disruption risk. Supply Chain Finance reduces a company's supply chain costs, especially capital (Nguema et al., 2021). Many lenders and FIs have lately implemented "Supply Chain Finance (SCF)," which helps enterprises optimize their working capital to boost operational and financial performance. Supply Chain Finance is gaining in popularity to increase loan availability (Wang et al., 2013).

2.3 Digitization in Trade Finance

Digitizing Trade Finance (TDF) involves digitally shaping firm strategy to optimize organizational performance (Auboin, 2021). Digitalization in Trade Finance is excellent for storing and exchanging warehousing and logistics data, increasing organizational performance (Gautam et al., 2017). (Saengchai, & Jermsittiparsert, 2019). According to researchers (Kindstrom & Kowalkowski, 2014), Digitalization in Trade Finance in business helps build cost-effective operations and gives correct information about an organization's entering and outgoing transactions, resulting in efficient organizational performance. Digitalization in Trade Finance affects Supply Chain Finance, helping companies enhance performance. Digitization may cut operational expenses and increase business transaction visibility (Lusch et al., 2010). n. Supply chain financing reduces the risk for enterprises (Ali et al., 2018). Two parties must trust each other to sign a simple contract. Due to decentralization, self-sufficiency, and application autonomy, tiny contracts are sometimes made digitally, which fosters trust. Digitalization in Trade Finance has created and managed intelligent contracts. Blockchain Technology is employed in producing digital contracts (Swan, 2015). Digitalization in Trade Finance aids the car industry, according to Kshetri (2018). Digitalization in Trade Finance gives precise information about possible partners and their financial status. It helps companies reduce risks and build trust with supply chain partners (Tapscott & Tapscott, 2017). The study (Greenstein et al., 2013) found that digitizing trade finance may increase product integration in the global market and trustworthy information about business transactions, which would boost the company's performance. Digitalization in Trade Finance helps sustain strong partner ties and boosts organizational performance (Brynjolfsson & McAfee, 2011).

2.4 Trust

Trust is essential in business. According to research, trust levels impact corporate behaviour and interaction (Michalski et al., 2019). "Willingness to be vulnerable" (Mayer et al., 1995), "willingness to depend on" (McAllister, 1995), and "confident, optimistic expectations" are popular Trust definitions (Lewicki et al., 1998). A greater trust improves collaboration (Koohang et al., 2017). In Supply Chain Management, teamwork and shared effort need trust (Morgan & Hunt, 1994). Inter-organizational Trust, agency Trust, and inter-entity Trust are three forms of Trust in supply chain management (Ramirez et al., 2020). Manu (2014) defined trust in developing supply chain management into three categories: relationship, competence, and system. Resource exchanges and opportunity sharing from past partnerships or encounters build trust (Gulati & Nickerson, 2008). This trust exists before the project collaboration relationship and is more objective at the organizational level, free of personal experience limits (Qian, & Papadonikolaki, 2020). Initial trust is the ability to satisfy demands without previous experience or accurate and relevant information. Trust is essential for persons with little or no computer skills (Gao & Waechter, 2017). Trust is the most-used term in sharing economy debates and a Blockchain promise (Hawlitschek et al., 2018). It's a complicated, complex research subject that is explored across disciplines. "The desire to accept insecurity based on optimistic expectations" is a typical Trust definition (Rousseau et al., 1998). Trust is a party's willingness to be susceptible to another's actions in the hope that the other will execute a critical step for the Trustor, regardless of the Trustor's capacity to monitor or control the other party (Mayer et al., 1995). Trust is the readiness to be vulnerable in the face of positive expectations about another's actions or intentions (Mora-Monge et al., 2019). In a complex transaction, trust is the Trustor's impression of the Trustee's goodness and dependability (Paliszkiewicz & Koohang, 2013). When a person lacks faith in an organization, he must spend more time and energy watching others safeguard his interests. When organizational members trust each other, a person might pay more in occupations that benefit him and his firm. In a corporation without trust, oversight expenses rise (Paliszkiewicz et al., 2014). Higher levels of trust should lead to good attitudes, spontaneous cooperation, and higher organizational performance. The author discovered that Trust influences group assessments of distributive and procedural fairness and turnover intention (Zanini & Migueles, 2013).

2.5 Organizational Performance

Organizational Performance (OP) measures a company's market-oriented and financial goals (Ganesh & Nambirajan, 2013). Organizations aim to improve performance in a highly changeable environment (Sutduean et al., 2019). Organizational Performance is how an organization accomplishes financial and market-oriented objectives. The short-term purpose of supply chain management (SCM) is to minimize cycle time and inventory while enhancing organizational productivity (Tarigan et al., 2021). Long-term goals include increasing earnings and market share (Sahoo & Vijayvargy, 2020). Businesses use financial metrics to measure performance (Holmberg, 2000). Short-term aims for supply chain management include boosting productivity and reducing inventory and cycle time. Long-term goals include increasing market share and profitability for all supply chain players (Sukati et al., 2012). Financial measurements compare organizations' performance throughout time (Hong et al., 2021). Supply chain management should increase organizational performance over time (Kumar et al., 2020). Organizational Performance is an organization's ability to meet market-oriented and financial goals (Li et al., 2006). Organizational Performance refers to a company's ability to achieve its founding goals and objectives (Ahmad & Karadas, 2021). Organizational performance is a complex topic that involves production, economics, and promotion. Companies face many risks in starting, maintaining, and improving their performance due to market unpredictability and competition (Halim et al., 2017). Organizational performance is meeting a company's production, retail, promotion, and economic goals (Almajali, 2021). Organizational Performance is a company's ability to accomplish market-oriented and financial goals (Belay, 2018). Long-term SCM objectives include growing market share and earnings for all supply chain players. Short-term goals include boosting productivity, inventory, and cycle time (Narasimhan & Tan, 2008). "Organization performance" applies to both results and staffing. It might be a person, team, organization, or process (Shahzad et al., 2020). Small business owners examine their company's performance financially (Ranasinghe et al., 2019; Shahzad et al., 2020). An inclusive perspective of organizational performance delivers value to customers and partners, which supports sustainability and boosts administrative competencies and efficiency, which improves performance (Kumar et al., 2020). In this research, Organizational Performance is measured by employee satisfaction, financial performance, customer pleasure, growth, internal or operational performance, and learning (Pambreni et al., 2019). According to the researcher (Nguema et al., 2021), Organization Performance may be higher with the support of the supply chain by allowing longer payment terms and offering better receivables facilities to their suppliers. Businesses utilize SCF to expand payment alternatives. Supply Chain Finance may boost organizational performance with extended payment periods and better receivables (Bi & Nguema, 2021). Organizational Performance in the public sector is whether an agency executes administrative and operational responsibilities to support its purpose and creates the actions and outputs needed by its mission or mandate. Organizational Performance may be assessed based on workers' assessments of a public organization's internal and external performance in terms of efficiency, effectiveness, and fairness, which is difficult to quantify as a concept (Asencio, 2016). Organizational Performance has several operationalizations. Financial and market-oriented Organizational Performance is a distant result of factors like the economy. Service quality and attendance are connected to staff interactions and attitudes (Park & Shaw, 2013).

2.6 Blockchain Technology Adoption

Blockchain Technology (BCT) was created in 2008 to underpin Bitcoin. Bitcoins were first unpopular and questioned by many (Min, 2019). In 2013, Bitcoin's value rose from 13.96 USD to 979.45 USD, a 6900% increase in less than a year. Since then, academics and corporations have asked what makes this money exceptional and how to exploit its technology. Blockchain Technology may enhance supply chain management, say some (Batwa, A. & Norrman, A., 2020). Blockchain promotes digital technology. Bitcoin's decentralization features stability, secrecy, non-tampering, and anonymity. Blockchain technology is expanding. Supply Chain Finance is a financing concept in which banks connect upstream and downstream industries to supply scalable financial products and services (Du et al., 2020). According to research, Supply Chain Finance is backed by cutting-edge technology such as Blockchain Technology, which gives organizations a competitive advantage. Competitive advantage significantly affects organizational performance. When firms employ Blockchain Technology to manage their supply chains, their performance increases due to the trust aspect Blockchain Technology delivers (Sheel & Nath, 2019). Maersk and Walmart have implemented Blockchain Technology alongside IBM to gain the advantages of this innovative technology (Azzi et al., 2017). (Kshetri, 2018) Blockchain Technology in logistics improves and tracks firm transactions. Blockchain Technology adoption and implementation in supply chains are still in the early phases (Nowiski & Kozma, 2017). Blockchain Technology is a lowering technology that improves company efficiency. Blockchain Technology makes audits and monitoring more efficient and helps supply chain management organizations meet risk standards (Du et al., 2020). Organizations must work more closely together as the global economy grows to increase process and supply chain efficiency (Soosay & Hyland, 2015). Blockchain Technology's supply chain applications include intelligent contracts, product traceability, enforcement tracking, stock control, transaction and settlement, and information immutability. Partnership growth increased market, economic, and environmental performance. Blockchain affects cooperation efficiency (Alazab et al., 2021). Blockchain might disrupt supply chain design, operations, and management. Blockchain's capacity to secure information's trustworthiness, traceability, and authenticity, together with intelligent contractual agreements for a Trustless environment, indicates a comprehensive redesign of supply chains and supply chain management (Saberi et al., 2019). Blockchain uses cryptography to verify ledger transactions. In a business situation where no one organization has control, this distributed method handles concerns of transparency and accountability between people and institutions whose interests aren't necessarily aligned. All parties' data may be updated in real-time, removing the need for time-consuming and error-prone reconciliation. Each network member gets a better, more timely perspective of network activity. It might be a source of extensive data valuable to organizations and supply chains. Thus, supply chain management and Blockchain Technology are studying it (Cole et al., 2019).

2.7 Hypothesis Development

2.7.1 Supply Chain Finance and Organizational Performance

Supply chain financing is a practical approach for addressing current credit difficulties and enhancing financial performance, substantially influencing organizational performance (Ali et al., 2020). Theoretically, Supply Chain Finance adoption may strengthen working capital, minimize supply risk, and improve organizational performance (Johnson & Templar, 2011). Supply Chain Finance executives make choices that affect the firm's financial outcomes depending on its resources. Executives or entrepreneurs in Supply Chain Finance connect supply chain choices with financial objectives to maximize corporate resources. Organizations constantly need funds to meet daily operational needs, which affects company performance owing to limited operating history, lack of financial paperwork, and significant default risks (Gunasekaran & McGaughey, 2004). Supply Chain Finance improves an organization's financial performance and reduces supply chain interruption's financial and operational risk (Nguema et al., 2002).

The following hypotheses were offered.

H1: By integrating Blockchain technology, Supply Chain Finance improves organizational performance.

2.7.2 Trust among Supply Chain Members through Blockchain Technology

Trust means being vulnerable to someone (Mayer et al., 1995). Since the 1500s, accounting has employed double entry. Due to double record-keeping, supply chain participants have trust issues (Ammous, 2016). Blockchain may assist with trust and transactions (Davidson et al., 2016). Blockchain may unify all supply chain operations and serve as a single information source (Korpela et al., 2017). Blockchain reduces information distortion and dishonesty among trade participants. Blockchain promotes trust by introducing transparency in trades. Many research has connected accepting perceived weaknesses to organizational performance (De Jong et al., 2016).

Based on the following debate, Blockchain will promote trust and organizational performance.

H2: By adopting Blockchain technology, the Organization leads to better Performance through Trust.

2.7.3 Digitization in Trade Finance and Organizational Performance

According to Johnson & Bharadwaj (2005), digitization uses information technology to digitize information processes, business operations, offers, and participants. Due to the fast growth of technology, organizations are already employing well-managed and transparent online digital platforms that enable all supply chain partners to access business orders (Fairchild, 2005). When compared to paper-based trading, Trade Digitization is much cheaper (Perego & Salgaro, 2010). As Caniato et al. (2016) discovered, organizations that utilize more trade digitalization are more likely to adopt innovative finance solutions (Supply Chain Finance) to boost organizational performance. Digitization makes Supply Chain Finance more efficient and adaptable to increase company performance.

As a consequence, we hypothesize:

H3: Digitization in Trade Finance positively affects Organizational Performance.

2.7.4 Digitization in Trade Finance and Supply Chain Finance

Digitalization in Trade Finance affects Supply Chain Finance, helping organizations enhance performance. Digitization of supply chain financing and trade financing may reduce operational expenses and increase transaction visibility, improving organizational performance. Supply chain financing reduces business risk (Ali et al., 2018). Digitization costs less than paper-based commerce (Perego & Salgaro, 2010). Companies with more trade digitalization are more likely to adopt new Supply Chain Finance solutions to increase performance. Digitization makes Supply Chain Finance more efficient and adaptable than in old ways (Caniato et al., 2016).

So, we hypothesize.

H4: Digitization in Trade Finance moderates between Supply Chain Finance and Organizational Performance.

2.8 Theory

The literature suggests that Blockchain Technology might become Industry 5.0. With Blockchain upsetting the financial sector, supply chains will soon follow suit. The applicability of Blockchain Technology in supply networks was surveyed by 'Chain-Business Insights' of supply chain practitioners. Austin's study led him to these conclusions: Forty-five percent of respondents have a weak comprehension of Blockchain Technology. 80% of respondents think Blockchain will be used to monitor supply chain items. 49% said Blockchain improves supply chain visibility. According to the poll, 42.5% of respondents anticipate their organization will use Blockchain next year. 27.5% of respondents believe lack of knowledge is the most prominent Blockchain adoption hurdle. Some organizations have already launched pilot projects incorporating Blockchain Technology into their supply networks. To understand adoption, a deeper investigation is needed. Blockchain adoption model research is scarce. This study aims to build and validate a Blockchain Technology adoption model. Below are the theoretical grounds for our research model.

2.8.1 Technology Adoption Models (TAM)

Technological advances are vital in business. Tech helps spread knowledge. Technology has little value until it's accepted and used (Oye et al., 2014). Adoption refers to individual adoption; dissemination refers to mass adoption. The adoption of technology will spread (Sharma & Mishra 2014). It's vital to understand technology adoption. Technology adoption is the stage of using technology by a person or organization (Carr, 1999). Technology adoption is a group's desire to employ technology to its advantage (Samaradiwakaran & Gunawardena, 2014). Several studies show that technology adoption is a complex process combining user personality and attitude (Venkatesh et al., 2012), social influence (Ajzen & Fishbein, 1980), trust (Gefen et al., 2003), and enabling factors (Thompson et al., 1991). The above model demonstrates that technology adoption relies on employee behavior, attitude, and trust, which implies that the model supports strong employee trust and believes that new technologies may enhance supply chain and organizational performance since adopting new technology is complex.

2.9 Framework and Hypothesis

The conceptual framework describes research organization or execution. This framework discusses variables, their connections, and the untested hypothesis. The following part of the paper explains data analysis in detail. This research uses organization performance as a dependent variable, digitization in trade finance as a moderator, and Supply Chain Finance and Trust as independent variables. It discusses the adoption of Blockchain Technology in supply chain Finance. Figure 2.1 shows the conceptual framework.

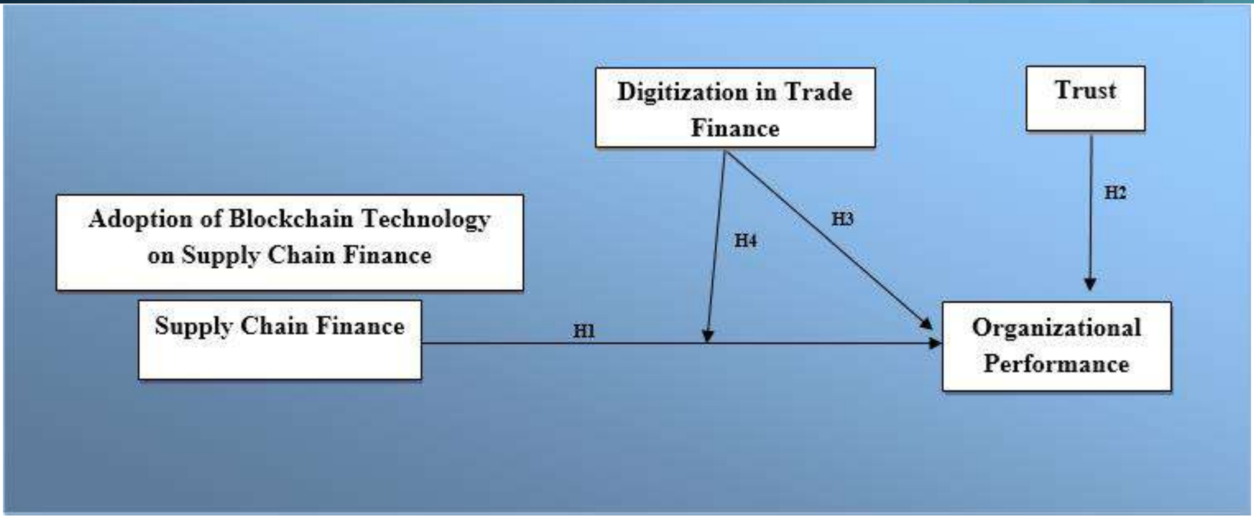

Figure 2.1 Conceptual Framework

2.9.1 Study Hypothesis

H1: By integrating Blockchain technology, Supply Chain Finance improves organizational performance.

H2: By adopting Blockchain technology, the Organization leads to better Performance through Trust.

H3: Digitization in Trade Finance positively affects Organizational Performance.

H4: Digitization in Trade Finance moderates between Supply Chain Finance and Organizational Performance.

3. Methodology

3.1 Research Approach

We employ closed-ended questionnaires for our applied quantitative research. The quantitative analysis starts with testing general to particular hypotheses, then developing questions and hypotheses (Gay & Airasian 2000; Johnson, 2001). Validity and reliability are essential to quantitative research design (Creswell, 2013). Deductive reasoning elaborates hypotheses after testing theory, and the results show the acceptance and rejection of all such hypotheses after testing theory and analysis. Hypothesis acceptance, not rejection, must legitimize theory (Hempel, 1966). The preceding comments imply that this investigation was quantitative.

3.2 Research Technique

Explanatory research identifies the construct's causes and consequences. It helps with problem-solving. Explanatory research is causal research. In this research, Supply Chain Finance and Trust by adopting Blockchain technology are independent factors, and Organizational Performance is the dependent variable. Digitization in Trade Finance is employed as a moderating variable between Supply chain finance and Organizational Performance. The descriptive study is quantitative. In this research, we analyzed how the adoption of Blockchain Technology in supply chain finance influenced organizational performance with the moderating effect of Digitization in Trade Finance in the industrial sector of Punjab, Pakistan.

3.3 Research Design

Study design outlines how you conduct your research and the procedure employed to answer research questions (Kumar, 2005). It outlines the techniques and processes for gathering and interpreting data. Data gathering, sample selection, instrumentation, operationalization, and result analysis are possible (Thyer, 1993; Zikmund, 2002). This used the survey method to measure respondents' views on the constructs. Using a questionnaire, this approach collects data from a specified sample and is considered the best for research (Cooper & Emory, 1995). Below are the study's research design Constructs.

3.4 Research Type

The present research is co-relational and non-contrived, using data collected in a natural setting. Due to scheduling constraints, the current research employed cross-sectional data collection. Applied research includes experimental, case, and cross-sectional studies. Applied research uses well-known theories and concepts to solve problems. "Basic research" refers to applied research. This study helps with current events. Our study type is applied research in which we eliminate supply chain finance problems caused by lack of technology, digitization awareness, and conventional supply chain practice.

3.4.1 Unit of Analysis

The unit of analysis refers to the "degree of an aggregate of the data produced during the succeeding data analysis stage" (Sekaran, 2006). Individuals, small groups, organizations, industries, or divisions may be analyzed depending on the study's aims. In this study, supply chain personnel and participants in Punjab, Pakistan's industrial sector, were employed as a unit of analysis.

3.4.2 Population Description

"Population" is "a collection of related creatures" (Zikmund, 2003). This research comprised upstream and downstream people in Punjab, Pakistan's industrial sector. Punjab has 512 industrial units, including 328 textiles, 92 engineering, and 92 chemical and food processing industries. Other enterprises include knitting, carpets and rugs, Nawar and lace, printing, and medicine. Our target population is Punjab, Pakistan's industrial sector, where most industries are located. The industrial sector was picked because it serves the country's economic needs and generates income for economic growth.

3.5 Sample Description

A research sample collects a more significant population's people, items, or goods. The sample should reflect the population so we may generalize study results to the whole population. Our sample is Punjab Pakistan's industrial supply chain participants. A sampling strategy selects participants from a large group. Upper-level, middle-level, and entry-level supply chain workers in different functional departments in any organization must represent the applicable department's members.

3.6 Sample Technique

Purpose sampling is a non-probability method in which researchers choose population members based on their judgment. Purposive sampling is judgmental, targeted, or subjective. Purposive sampling selects a sample based on population features and research goals (Crossman, 2017). This study employed non-probability approaches. Sampling collects replies from a large group.

3.7 Sample Size

In empirical research, a representative statistical sample requires a viable technique for estimating sample size. Krejcie and Morgan (1970) devised a table to estimate the sample size population. In the current study, population size is unknown, and sample size computation of unknown population size is provided in the Krejcie and Morgan table. According to Krejcie and Morgan's table, an acceptable sample size for an unknown population is 379. Our sample size is 379, given the following.

3.8 Measurement Scale

Rensis Likert's 1930 Likert Scale is a popular research instrument (Cooper & Emory, 1995; Fink, 1995). The 7-point scale ranged from 1 (Strongly Disagree) to 7 (Strongly Agree) to rate participants' agreement with each statement/item (Strongly Agree).

3.9 Research Instrumentation

This research phase focused on the variables' instrumentation. A questionnaire collected the data. The survey includes 36 items/questions assessing variables and biographical information. The survey included six sections: (Section-A through Section-F). Section-A includes respondents' gender, age, qualifications, job experience, and job description for supply chain participants. Section B covers Supply Chain Finance (Independent Variable). Supply Chain Finance is adapted from Zhang, 2015. Risk prevention system, capital flow coordination, total supply chain efficiency, high-risk prevention capabilities, technology for its application, flawless organizational structure, and firm efficiency via Blockchain technology adoption. Digitization in Trade Finance is measured in Section C. (Moderating Variable). Digitization in Trade Finance is adapted (Choi, 2013). Interactive technologies, digital technology training, the future of digital commerce, valuable new sources, engaging audiences, crucial for a regular job, work upgrading, technical expertise, excellent marketing, publicity, and distribution are all elements. Section-D features nine Technology Trust items (Independent Variable). Technology Trust was adapted from (Patterson et al., 2003; Pilkington, 2016; Kshetri, 2018). Reliable transactions, improved visibility, transparency, traceability, offering tamper-proof data, exchanging information of mutual interest, stressing integrated information systems, technical success, seller-buyer connections, and often interacting via technology are all important. Section E measures organizational performance with four questions (dependent Variable). The organizational Performance scale was adapted (Devaraj et al., 2007; Droge et al., 2000; Yang et al., 2014). Blockchain technology reduces transaction costs, enhances services, and accelerates supply chain processes. Appendix A contains the final survey questions.

3.10 Questionnaire/Survey Pre-Codification

Last is the survey questionnaire (Appendix A). Table 3.2 pre-coded all constructions and elements. SPSS and Smart PLS statistical software was utilized for data input.

Table 3.1 Construct Instrumentation

Variables	No. of items	Construct	References
Supply Chain Finance (SCF)	8	Adapt	(Zhang, 2015)
Digitization in Trade Finance (DTF)	10	Adapt	(Choi, 2013)
Trust (T)	9	Adapt	(Patterson et al., 2003; Pilkington, 2016; Kshetri, 2018)
Organizational Performance (OP)	4	Adapt	(Devaraj et al., 2007; Droge et al., 2000; Yang et al., 2014)

3.11 Pilot Group Testing

Before conducting a comprehensive survey, the researcher must do a pilot study to assess the instrument's validity and reliability. Before moving on to the following research step, the instrument's reliability and validity (whether accepted or adapted) must be examined and highlighted. Improved reliability and validity ratings strengthen the researcher's confidence since they mirror the community under study. This allows the researcher to see how effectively the variables measure what they're supposed to (Cooper & Schindler, 2006; Gravetter & Forzano, 2012; Cooper & Emory, 1995). Recent research begins with a pilot study assessing instrument validity and reliability. Copper & Schindler (2000) advised a pilot sample size of 25-100. In the current study, the pilot group testing was done by distributing the questionnaire to 50 sample population respondents to examine the psychometric features of the scales and evaluate their reliability and validity. Based on the data gathered (pilot research), an SPSS statistics package data sheet was generated to examine the instruments' appropriateness for the primary inquiry. We also investigated reliability and validity. The Cronbach's alpha of the pilot group surveys was 0.908, indicating that the survey scale was trustworthy.

3.12 Data collection method

Based on pilot study results and suggestions, the research instrument was refined and ready for a larger sample size. We'll utilize a quantitative approach to gather data in a cross-sectional time frame. Managers and supply chain management staff in southern industrial sectors in Punjab, Pakistan, fill out questionnaires. The study's purpose required data from respondents. Data was obtained online and offline. Online data gathering methods will be utilized to fill out the questionnaire. Google forms generated an online edition. Respondents were led to online surveys. The Covid-19 outbreak prompted online survey collection since marketplaces had a limited time to operate. Google forms were used to gather surveys. The data collection was from May to August 2021. Four hundred fifty questionnaires were issued, 400 were returned, and 379 were finalized

(77%). The Krejcie and Morgan table suggests a sample size of 379 for an unknown population. Twenty-one survey questionnaires were removed due to missing values and outliers.

3.13 Research Tools and Analysis Techniques

This research is centered on quantitative data. Hence smart PLS and SPSS utilized to evaluate questionnaires and surveys. SPSS and Smart PLS were used to analyze questionnaire data. They'll be analyzed differently. SPSS reports demographics, descriptive statistics (mean, standard deviation, skewness, kurtosis), and the Pearson Correlation test analyzes data distribution and normalcy. Smart PLS is a GUI program for variance-based SEM with PLS route modeling. PLS-PM (partial least squares path modeling) is a structural equation modeling method that estimates complicated cause-effect relationships in path models using latent variables. The program computes traditional outcomes evaluation criteria (e.g., reflective and formative measurement models, structural models, and goodness of fit). It supports additional statistical studies besides constructing route models with latent variables using the PLS-SEM method (e.g., confirmatory tetrad analysis, importance-performance map analysis, segmentation, multi-group). Statistical Packages of Social Sciences (SPSS) and Primary lateral sclerosis (PLS) are used worldwide for quantitative interpretation and data investigation (Hair et al., 2006; Pallant & Manual, 2010).

4. Analysis and Discussion

The present study was completed by employing descriptive and inferential statistics for analysis. To examine the aggregation of demographical data, SPSS software was engaged, and Smart PLS software was used to evaluate structural equation models. The structural equation model comprises two more stages. The first part includes assessing and adjusting the measurement model's applicability, while the second phase requires analyzing the structural model. Our study demanded a short explanation of survey demographics, response rate, and descriptive data.

4.1 Demographics

In demographics, SPSS software checks the sample's gender, age, qualifications, experience, and job description. As shown in Table 4.1 below, the percentage of males is 96.04%, and the rate of females is 3.95%. The responses that are in the majority lie between the age group of employees 18-25 years, which is 64.90%, and the least of responses come from the Age group above 40, which is 0.26%. The responses collected from the age groups between 26-30 years, 31-35 years, and 36-40 years are 22.42%, 6.06%, and 6.33%, respectively. The responses of Intermediates qualified employees are in the majority, 39.84%, and the least comes from MPhil eligible employees, only 1.58%. The responses from Matric, Graduation, and master' qualified employees are 24.01%, 30.07%, and 4.48%, respectively. Further, the responses collected from 1-3 years experienced employees are in the majority, which is 37.46% and the least comes from the over ten years experienced employees, which is 1.84%. The responses collected from less than one year, 4-6 years, and 7–9 years experienced employees are 35.88%, 15.83%, and 8.97%, respectively. Furthermore, the responses collected from middle-level supply chain members are in the majority, 58.31%, and the minor responses come from upper-level supply chain members, 6.59%. The responses that are collected from entry-level supply chain members are 35.09%.

Table 4.1 Demographics

Demographics		
GENDER	**Frequency**	**Percent %**
Male	364	96.04
Female	15	3.95
Total	**379**	**100**
AGE		
18-25	246	64.90
26-30	85	22.42
31-35	23	6.06
36-40	24	6.33
Above 40	1	0.26
Total	**379**	**100**
QUALIFICATION		
Matric	91	24.01
Intermediate	151	39.84
Graduation	114	30.07
Masters	17	4.48
MPhil.	6	1.58
Total	**379**	**100**
EXPERIENCE		
Less than one year	136	35.88
1-3 years	142	37.46
4-6 years	60	15.83
7-9 years	34	8.97
Over ten years	7	1.84
Total	**379**	**100**
DESCRIPTION		
Entry-level Supply chain Member	133	35.09
Middle-level Supply chain Member	221	58.31
Upper-level Supply chain Member	25	6.59
Total	**379**	**100**

4.2 Normality and data screening

SPSS diffract analysis normalizes research data. Data screening fixes mistakes. Fixing errors boosts "signal" and reduces "noise." Normality tests assess whether a data collection is well-modeled by a normal distribution and if a random variable is typically distributed. Several ways determine data normality and screening.

4.2.1 Examining Data

The researcher must analyze Hair et al. (2006) data before doing a Smart PLS multivariate analysis. He said many researchers don't filter data. Missing values, outliers, and normality are analyzed. Screening these possibilities is essential since most statistical approaches/tests need this assumption first. Valid inferences or conclusions need data without outliers or uneven distribution. Outliers may cause errors, estimate distortions, and reduce the statistical approach's power, leading to poor results. The present study employed generalized structured construct analysis in Smart PLS to examine the data.

4.2.2 Missing Values, Outliers, and Normality

SPSS was used to investigate missing data and associated patterns, and less than 5% were ignored (Tabachnick & Fidell, 2001). Data interpretation and screening need missing value analysis. Overlying this construct impacts results and generalizability. This study used Little's MCAR and Frequency tests to examine the pattern and showed that missing values are independent. SPSS replaced missing series means. Outliers affect SEM. Thus, they were examined. This study produced a Z-score for each variable with no excessive standard deviation. All variables have z-scores < 3.29, according to Tabachnick & Fidell (1996). Checked for input errors. Skewness and kurtosis were also used to normalize data. Skewness and kurtosis describe asymmetry and Ness peak. The perfect normal distribution has zero skewness and kurtosis. Normality and other assumptions provide sample reliability and validity in parametric analysis. All values in **table 4.8** were within range (Tabachnick & Fidell's, 2001). If three is reached, results are poor (Kline, 2005). Correlation coefficients measure data normality (Hair et al., 2006; Pallant, 2007).

4.3 Response

Workers in the industrial supply chain in Punjab, Pakistan, are the focus of our research. Survey questionnaires were delivered to businesses in the industrial parks of Punjab. Out of 450 surveys, 400 were gathered, and 21 were removed because the responses were incomplete or incorrect. An 84.22% response rate was found in the final 379 surveys.

Table 4.2 Characteristics of the Sample

Characteristics of sample	Quantity	Percentage
Distributed Questionnaire	450	100%
Collect Responses	400	88.89%
After Elimination (Final Sample)	379	84.22%

4.4 Descriptive Statistics

The mean distance between data values and set averages is computed using this criterion. The data points are mainly near the mean when the standard deviation is low. A significant standard deviation means the data points cover a broader range of values. Table 4.7 demonstrates that the standard deviation is minimal, indicating that the data for the supplied constructs is close to the mean value.

Table 4.3 Descriptive Statistics

Constructs	N	Mean	Std.
Supply Chain Finance	379	4.2307	1.27366
Trust	379	5.1094	1.34961
Digitization in Trade Finance	379	5.5481	1.2173
Organizational Performance	379	4.2378	1.31234

4.4.1 Skewness and Kurtosis

The condition of the data in its original form is crucial when it comes to data analysis. Data normality was confirmed using calculations for Data Skewness (Distribution Symmetry) and Kurtosis Distribution (Flatness). The results of Tabachnick's (2007) research point to a range of -2 to +2 for the mathematical values of data skewness (Distribution Symmetry) and kurtosis distribution (Flatness). Data Skewness (Distribution Symmetry) and Kurtosis Distribution (Flatness) for all variables are within the range of -2 to +2, as shown in Table 4.8.

Table 4.4 Skewness and Kurtosis

Constructs	Skewness	Kurtosis
Supply Chain Finance	-0.869	0.432
Trust	-0.941	-0.445
Digitization in Trade Finance	-0.468	-0.196
Organizational Performance	-0.615	0.223

4.4.2 Correlation

Correlation demonstrates the relative importance of the two variables. There is a negative or positive correlation coefficient. Bidirectional correlation is the relationship between two free variables when one free variable changes. The differences between the variables are shown in Table 4.9. Because the p-value is less than 0.05, all variables are highly significant and strongly connected.

Table 4.5 Correlations Matrix

Variables	Method	SCF	T	DTF	OP
SCF	Pearson Correlation	1	.720**	.434**	.787**
T	Pearson Correlation	.720**	1	.810**	.827**
DTF	Pearson Correlation	.434**	.810**	1	.791**
OP	Pearson Correlation	.787**	.827**	.791**	1

4.5 Smart PLS Algorithm (Structured Equation Modeling)

The PLS route modeling approach was created by Wold (1992), and it is essentially a sequence of regressions given as weight vectors (Henseler et al., 2009). The weight vectors generated during convergence satisfy fixed point equations.

Table 4.6 Validity and Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Digitization in Trade Finance	**0.736**	**0.645**	**0.803**	**0.576**
Organizational Performance	**0.903**	**0.907**	**0.925**	**0.673**
Supply Chain Finance	**0.914**	**0.916**	**0.933**	**0.700**
Trust	**0.899**	**0.900**	**0.925**	**0.713**

4.5.1 Validity and Reliability

Cronbach's Alpha must be over a threshold of 0.7. (Peterson, 1994). All of the variable values in table 4.12 are more than 0.7. The relevance of the variables under study, such as Digitization in Trade Finance, Organizational Performance, Supply Chain Finance, and Trust, with respective values of 0.736, 0.903, 0.914, and 0.899, demonstrate sufficient internal consistency. The Cronbach's Alpha scores for all the variables show that the scales for all the constructions are quite dependable. The composite dependability coefficient must be above 0.7 as the threshold range (Black et al., 2016). All of the variable values are more than 0.7. The significance of the variables under study exhibits sufficient internal consistency, with values for Trust, Organizational Performance, Supply Chain Finance, and Digitization in Trade Finance, respectively, being 0.803, 0.925, 0.933, and 0.925. Additionally, the Average Extracted Variance (AVE) criterion range has to be greater than 0.50. (Huang et al., 2013; Hair et al., 2014). Each variable's value is more than 0.5. The significance of the variables under study exhibits acceptable internal consistency; for example, the values for Trust, Organizational Performance, Supply Chain Finance, and Digitization in Trade Finance are 0.576, 0.673, 0.700, and 0.713, respectively.

4.5.2 Discriminant Validity

The validity of variables is examined using discriminant validity, where each variable's structure must vary from that of the others. Two tests—the Fornell-Larcker test (Hair et al., 2011; Hair et al., 2014) and the Heterotrait-Monotrait Ratio (HTMT)—are used to prevent discriminant validity (Henseler et al., 2015).

4.5.2.1 Fornell-Larcker Test

The Fornell-Larcker test requires that the square root of the average extracted variance value be greater than the correlation between all variables to determine the discriminant validity. Table 4.13 displays the significance of each result according to the Fornell-Larcker test's discriminating validity requirement.

Table 4.7 Fornell-Larcker Criterion

	Digitization in Trade Finance	Organizational Performance	Supply Chain Finance	Trust
Digitization in Trade Finance	0.759			
Organizational Performance	0.616	0.821		
Supply Chain Finance	0.475	0.701	0.837	
Trust	0.648	0.841	0.656	0.844

4.5.2.2 Heterotrait-Monotrait Ratio (HTMT)

HTML is used to check and estimate construct correlation. Variables can be distinguished from other variables when their value is less than one (Hamid et al., 2017). All of the variable values in table 4.14 are less than one, demonstrating the discriminate validity of our study.

Table 4.8 Heterotrait-Monotrait Ratio (HTMT)

	Digitization in Trade Finance	Organizational Performance	Supply Chain Finance	Trust
Digitization in Trade Finance				
Organizational Performance	0.800			
Supply Chain Finance	0.616	0.766		
Trust	0.851	0.930	0.721	

4.5.3 Structural Model

The PLS structural equation model has two sub-models: scaling and structural. Measurement models represent the observed data variables. The structural model shows how variables are related over the long term. The nexus between constructs are depicted in Figure 4.6. Factor loadings represent the values between a construct's arrows and its determinant. The value between the hands of one construct and the next is known as the path coefficient. The value of the Coefficient of Determination is displayed in the blue shaded circle of Organizational Performance (R2). Each outer loading value is described individually after the structure model.

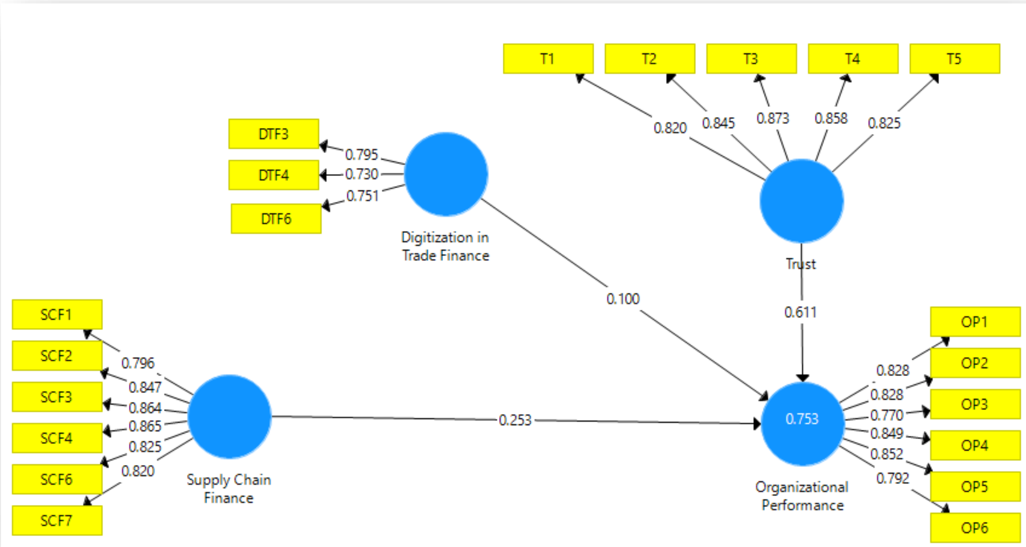

Figure 4.1 Structural Modeling

4.5.4 Outer Loadings

Variability is defined in terms of a given factor via factor loadings. To the degree that the factor is loaded, the variable has been removed from the factor. This study showed that a loading factor of 0.5 and higher was appropriate (Hadi et al., 2016). Table 4.15 and picture 4.6 demonstrate that all loading variables met the requirements and were below the cutoff.

Table 4.9 Outer loadings

	Digitization in Trade Finance	Organizational Performance	Supply Chain Finance	Trust
DTF3	0.795			
DTF4	0.730			
DTF6	0.751			
OP1		0.828		
OP2		0.828		
OP3		0.770		
OP4		0.849		
OP5		0.852		
OP6		0.792		
SCF1			0.796	
SCF2			0.847	
SCF3			0.864	
SCF4			0.865	
SCF6			0.825	
SCF7			0.820	
T1				0.820
T2				0.845
T3				0.873
T4				0.858
T5				0.825

4.5.5 Collinearity Statistics (VIF)

Collinearity statistics offer us information regarding strong correlations among predictor variables. Generally, a value larger than 0.7 among predictor variables offers an absolute correlation coefficient and reveals the existence of collinearity. Small VIF values imply a low correlation among variables under ideal circumstances; VIF is the reciprocal of the tolerance value. VIF<3. If the number is smaller than 10, however, it is fine. Variance Inflation Factor (VIF) denotes multicollinearity. Table 4.16 demonstrates that all VIF values of outer loading factors are under threshold level and exhibit Collinearity.

Table 4.10 Outer VIF Values

	VIF

DTF3	1.230
DTF4	1.227
DTF6	1.306
OP1	2.389
OP2	2.482
OP3	1.938
OP4	2.609
OP5	2.668
OP6	2.017
SCF1	2.433
SCF2	2.902
SCF3	3.381
SCF4	3.234
SCF6	2.284
SCF7	2.225
T1	2.292
T2	2.384
T3	2.757
T4	2.560
T5	2.199

4.5.6 Model Fit

Table 4.17 measures model fit, SRMR, D ULS, D G, Chi-square, and NFI. Saturated model and estimated model values are obtained. For excellent model fitness, the value of SRMR should be less than 0.08 (Hu & Bentler, 1999), and our obtained values are under the threshold level, which shows that our model is a good fit (Henseler et al., 2014). (Henseler et al., 2014).

Table 4.11 Fit Summary

	Saturated Model	Estimated Model
SRMR	0.056	0.056
d_ULS	0.664	0.664
d_G	0.346	0.346
Chi-Square	761.295	761.295
NFI	0.858	0.858

4.5.7 R-Square (R^2)

The R-square value indicates the variance level explained by external variables. This is how well the regression model fits the data that have been observed. When R2 is 0.25, 0.50, or 0.75 or higher, there is either minor, moderate, or significant variation in the data (Hair et al., 2014). This implies that the model is quite adequately stated. Table 4.20 shows a variation of 75.3% that is significant (0.753); our model more effectively explains dependent variables, leaving the remaining variation of 24.7% unaccounted for. Adjusted R-Squared, on the other hand, is a version of R-Squared that enables the adjustment of non-critical regression model Constructs. The lower adjusted R-squared suggests that the model's value is unaffected by the additional input variables compared to the model with more input variables. Table 4.20's R2-adjusted value of 75.1% shows that input variables greatly influence the models.

Table 4.12 R^2 and R^2 – Adjusted

Variable	R Square	R Square Adjusted
Organizational Performance	0.753	0.751

4.5.8 F-Square (F^2)

The F-square measures the variance to explain the model factors. The effect size is significant when the F-square value is greater than 0.35, medium when the F-square value is more significant than 0.15, and small when the F-square value is more significant than 0.02. (Cohen & Penyelidikan, 2006; Hemphill, 2003; Ferguson, 2016). According to Table 4.21, the impact of digitization on trade finance and supply chain finance on organizational performance is minimal. Trust has a significant effect on an organization's performance.

Table 4.13 F-Square

	Digitization in Trade Finance	**Organizational Performance**	**Supply Chain Finance**	**Trust**
Digitization in Trade Finance		**0.023**		
Organizational Performance				
Supply Chain Finance		**0.146**		
Trust		**0.638**		

4.6 Hypotheses Testing

The direct hypothesis of this investigation is considerably accepted, as shown in Table 4.22 since the P and T values are at their threshold levels. Since all beta values are positive, all independent factors positively influence the dependent variable, supporting all hypotheses. The two variables oscillate around the mean according to the standard deviation value. The T-value and P-value of the variables, which indicate whether or not hypotheses are accepted or rejected, are described in the statistical analysis. The P-value must be less than 0.05, and the T-significance value's threshold must be above 1.96. The significance of each variable is shown in Table 4.18. The Supply Chain Finance and Trust p-value and T-value were of utmost importance. The parameter from estimating the model on your first dataset and a typical PLS method estimation is the original sample estimate in path analysis. The sample means estimate is the average of all the estimates derived from your dataset's subsamples throughout the bootstrapping procedure. Additionally, beta values depict the independent variable's modifications to the dependent variable. The beta value shows a positive or negative change in the dependent variable, which ranges from -1 to +1. According to the standard deviation value, all variables are close to their means. Table 4.19 demonstrates that all beta values are positive, indicating that all independent factors cause the dependent variable to change positively and that the standard deviation findings align with our expected outcomes.

Table 4.14 Hypotheses Testing

Hypothesis	Direct Relation	O	M	β	STDEV	T Statistic	P Values	Results
H1	**Supply chain Finance -> Organizational Performance**	0.253	0.254	0.253	0.056	4.512	0.000	Accepted
H2	**Trust -> Organizational Performance**	0.611	0.612	0.611	0.053	11.509	0.000	Accepted
H3	**Digitization in Trade Finance -> Organizational Performance**	0.100	0.097	0.100	0.036	2.794	0.005	Accepted

4.7 Path Diagram after Moderation

The nexus between constructions are represented in picture 4.7. Path diagram after moderation is represented by the values between a construct's arrows and its determinant. The route coefficient is the value between the hands of one build to the next. The blue shaded circle of Organizational Performance displays the value of the Coefficient of Determination (R2) (R2). Figure 4.7 illustrates that Digitization in Trade Finance is a moderating variable that moderates Supply Chain Finance and Organizational Performance (Moderating impact 1). (Moderating effect 1).

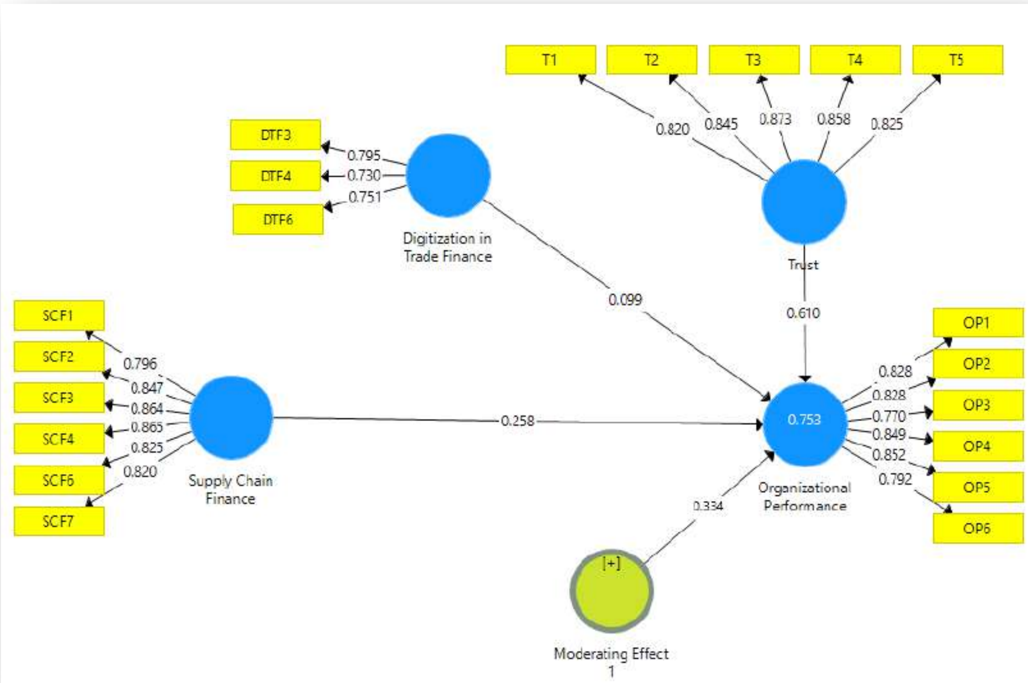

Figure 4.2 Structure Equation Modeling (with Moderation)

4.8 Moderation Analysis

When the connection between two variables is not constant but relies on the value of the third variable, the situation is said to be moderate. Another name for it is a moderator variable. The moderator variable may alter the direction and intensity of the association between the model's variables (Hair et al., 2017; Hair et al., 2010; Henseler et al., 2017; Gardner et al., 2017; Baron & Kenny, 1986). Because P and T values are at their threshold levels, Table 4.23 demonstrates that the study's moderation basis hypothesis is accepted. All beta values are positive, indicating that the moderating factor, digitization in trade finance, substantially modifies the relationship between the Constructs favorably.

Table 4.15 Path Coefficient Moderation

Hypothesis		Original Sample (O)	Sample Mean (M)	β	Standard Deviation (STDEV)	T Statistics	P Values	Results
H5	**Moderating Effect 1 -> Organizational Performance**	0.334	0.323	0.334	0.330	2.425	0.041	Accepted

4.9 Results Hypothesis

H1: By integrating Blockchain technology, Supply Chain Finance improves organizational performance.

Table 4.22 shows that Supply Chain Finance (β 0.253, t 4.512, p 0.00) positively affects Organizational Performance (H1 accepted). Our model explained 75.3% of the criterion variable's variation using predictors, according to R2 (i.e., Organizational Performance). Supply Chain Finance is a creative and speedy financial solution offered by financial institutions and service providers to enterprises to optimize working capital while minimizing capital expenses and risk by embracing Blockchain Technology (Lamoureux & Evans, 2011; Pfohl & Gomm, 2009). Financial indicators are crucial for evaluating a company's operational performance. Supply chain performance reflects numerous financial and nonfinancial aspects. Suppose the industrial sector of Punjab uses Supply Chain Finance as a lifting capital to boost their business projects effectively. In that case, they must apply Blockchain Technology to their Supply Chain Finance to raise Organizational Performance. Our findings agree with Ali et al. (2018), who found that Supply Chain Finance positively affects organizational performance. Previous research supports our hypothesis.

H2: By adopting Blockchain technology, the Organization leads to better Performance through Trust.

Trust (β 0.611, t 11.509, p 0.00) strongly affects organizational performance (table 4.22). (H2 accepted). Our model explained 75.3% of the criterion variable's variation using predictors, according to R2 (i.e., Organizational Performance). Blockchain Technology may improve trust and transaction efficiency (Davidson et al., 2016). Blockchain Technology may integrate into all supply chain operations and serve as a single information source (Korpela et al., 2017). Blockchain Technology reduces information distortion and trade dishonesty (Bettis & Mahajan, 1985). Blockchain Technology increases trade partner transparency and trust. Accepting vulnerability improves organizational performance, say several studies (Colquitt et al., 2007; Jong et al., 2016; Dirks & Ferrin, 2002). The preceding debate concludes that Blockchain Technology improves trust, improving organizational performance. Sheel & Nath (2019) also found that trust positively affects organizational performance. Previous research supports our hypothesis.

H3: Digitization in Trade Finance positively affects Organizational Performance.

Digitization in Trade Finance (β 0.100, t 2.794, p 0.005) favorably influences organizational performance (H3 accepted). Our model explained 75.3% of the criterion variable's variation using predictors, according to R2 (i.e., Organizational Performance). Digitizing trade costs less than paper-based trading (Perego & Salgaro, 2010). Caniato et al. (2016) revealed that enterprises with more trade digitalization adopt new finance solutions to boost their performance. Our results demonstrate that if the industrial sector of Punjab accepts Digitization in Trade Finance as a lifting capital to increase their business projects effectively, they must include Digitization in Trade Finance to raise their Organizational Performance. Our findings are comparable to Caniato et al. (2016), who also found that digitization in trade finance improves organizational performance. Previous research supports our hypothesis.

H4: Digitization in Trade Finance moderates between Supply Chain Finance and Organizational Performance.

Digitization in Trade Finance moderates significantly between Supply Chain Finance and organizational performance (β 0.334, t 2.425, p 0.041) (table 4.23). (H4 accepted). Our model explained 76.6% of the criterion variable's variation using predictors, according to R2 (i.e., Organizational Performance). Businesses utilize many automation techniques to save money (AlMashari, 2001). Digital supply chain (DSC) professionals want to improve their organization's performance (Caniato et al., 2019). Businesses spend heavily on digital supply chain (DSC) versions to automate supply chain activities. Digitization employs information technology to digitalize information processes, corporate operations, offers, and players. Due to the fast progress of technology, funding must be digital to acquire data transparency and improve organizational performance. Digitization makes Supply Chain Finance more efficient and agile to increase business performance than conventional finance approaches. Due to digitization, more innovative finance solutions (SCF) are used. Digitization in Trade Finance moderates Supply Chain Finance and Organizational Performance. Previous research supports our hypothesis.

4.10 Finding and Discussion

Four hypotheses were developed based on the study questions and objectives after a literature assessment. Then, each hypothesis's study findings and conclusions are discussed, as well as their congruence with current research.

- This study examines the implications of Blockchain Technology adoption on supply chain finance to improve organizational performance in Pakistan industrial sector firms.

If organizational owners or executives employ one-time Supply Chain Finance using Blockchain Technology to raise working capital to manage company finances, they may anticipate a 25%-fold gain in Organizational Performance. Our suggested paradigm is thus acceptable (H1). Blockchain Technology affects Supply Chain Finance and Organizational Performance as planned. Song et al. 2018 and Lekkakos & Serrano (2016) reported comparable findings. He says innovative ways boost industrial Organizational Performance. Blockchain Technology is transformative. Records management, governmental asset management, financial institution record implementation, capital asset clearing, and settlements may benefit from Blockchain Technology. Adopting a Blockchain-enabled supply chain enables organizations to construct a real-time, decentralized ledger of transactions and interactions for all network members. Blockchain Technology in Supply Chain Finance improves openness and accountability by introducing record-keeping services. It's a single data source for all supply chain jobs. Blockchain Technology helps firms produce accurate demand estimates, plan and deploy capital, and minimize product carrying costs by providing activity logs; it also provides financing institutions a transparent perspective of their investments. This may assist stakeholders in decreasing risk at a lower price than with more excellent capabilities and 3rd party backups. First, hypothesis H1 is accepted, which suggests that Blockchain Technology adoption in supply chain finance improves organizational performance in Pakistan industrial sector organizations.

- The second objective of this research is to determine whether using Blockchain Technology may build trust among supply chain stakeholders to improve Pakistan industrial sector companies' performance.

H2 illustrates that if employees/owners of organizations trust Blockchain Technology, it functions as working capital to help them operate their enterprises more effectively, boosting Organizational Performance by 61%. Findings suggest that Blockchain Technology's trust boosts organizational performance. Executives believe Blockchain Technology improves transaction dependability and transparency, inventory item tracking, data recording, and accessibility. Blockchain technology characteristics enable organizational performance (Peters et al., 2016). The organizations instantly communicate sensitive data and designs using Blockchain Technology, which connects the supply chain, reduces product development time, and improves demand and inventory projections. Blockchain Technology helps firms' decision-making and capacity to respond to market requirements. Blockchain Technology enhances organizational processes by enabling trade partners to review each other's transactions, allowing them to align with market demand. Trading players may use Blockchain Technology to respond to market needs (Dolgui et al., 2020). Blockchain Technology collects, analyzes, and distributes data with traders. Sheel & Nath (2019) also found that trust positively affects organizational performance. The second purpose of this study is realized as hypothesis H2 is accepted, which indicates trust is developed by implementing Blockchain Technology among supply chain participants to enhance organizational performance in Pakistan industrial sector organizations.

- The third objective is to determine whether digitalization in trade finance may enhance or weaken supply chain financing, leading to more excellent performance in Pakistan's industrial sector.

Digitization in Trade Finance affects organizational performance similarly (H3 accepted). Suppose corporate managers embrace Digitization in Trade Finance or coordinate their operations with a digitized program to increase the transparency and flexibility of the trade cycle at one time. In that case, Organizational Performance will improve by 10%. Increased trade digitization is excellent for Organizational Performance in today's evolved and contemporary corporate environment. These results confirm Stemmler's (2018) study, which indicated that digitization saves organizations money on transportation and information exchange and affects the whole supply chain. Digitization in Trade Finance may help organizations enhance their operations and commercial performance, resulting in supply chain management and convenient access to supply chain transactions. According to the data, organizations with greater trade digitalization are more likely to sustain or improve their organizational performance. As projected, digitization in Trade Finance moderates Supply Chain Finance and Organizational Performance (H4 accepted). Supply Chain Finance's digitization is expected to boost organizational performance by 33% through digital transformation. Digitization in Trade Finance has moderated Supply Chain Finance and Organizational Performance. Supply Chain Finance improves organizational performance owing to its unique finance solutions to manage corporate working capital for effectively executing daily company activities, as proven by the outcomes. Digitization in Trade Finance is a vital activity affecting Supply Chain Finance and Organizational Performance. Maiti & Kayal (2017) and Gautam et al. corroborate these results (2017). Maiti & Kayal (2017) found that digitization improves organizational performance and reduces financial concerns. Gautam et al. (2017) noted that digitization of corporate operations transformed supply chain management and enabled organizations to view their business transactions over digital devices for better forecasting and sustainability of the current business model to Improve Organizational Performance. The final purpose of this study is realized as hypotheses H3 and H4 are accepted, which suggests that Digitization in Trade Finance may boost Supply Chain Finance, leading to more excellent Organizational Performance in Pakistan's industrial sector organizations.

5. Conclusion, Research Implications & Recommendations

5.1 Theoretical implication

Every firm needs Blockchain Technology. Thus, Blockchain Technology research is required. The current was built on Supply Chain Finance and Trust in Organizational Performance by using Digitization in Trade Finance as a moderator by adopting Blockchain Technology. The provided approach suits well and encourages researchers to develop breakthrough technology. First, this study empirically develops the hitherto undiscovered link between Supply Chain Finance, Trust, Digitization in Trade Finance, and Organizational Performance via the adoption of Blockchain Technology. This is the first research to analyze the influence of Supply Chain Finance, Trust, and Digitalization in Trade Finance on Organizational Performance from the standpoint of TAM theory. The latest study contributes to our knowledge of how Supply Chain Finance, Trust, and Digitization in Trade Finance boost organizational working capital, increasing organizational performance. Second, the study expands TAM and TRI theory by proving that Supply Chain Finance is a company's most important financial resource for satisfying its financing requirements and executing daily business operations efficiently with Blockchain technology. The current study suggests that Supply Chain Management literature may assist us in comprehending Supply Chain Finance and Organizational Performance. The accepted conceptual model also helps us understand how well-managed Supply Chain Finance and trade digitization boosts organizational performance by implementing Blockchain Technology in supply chain finance. Trust is crucial for business partner cooperation (Wu et al., 2014). Trust is two-sided. First, supply chain trust is needed for successful collaboration—organizations exchange company data with partners. Organizations collaborate to improve performance and bear risks. Second, trust in Blockchain Technology enhances data transparency. It offers security among collaborating partners, which allows them to finance jointly utilizing Blockchain Technology to acquire tremendous organizational success and wealth, leading to higher Organizational Performance. By introducing Digitization in Trade Finance as a moderator, we advance our understanding of Organizational Performance and Supply Chain Finance. Digitalization in Trade Finance promotes organizational performance and the relationship between Supply Chain Finance and organizational performance at the macro and local levels (low and high). The supply chain uses IoT, AI, and significant data analysis. Blockchain Technology improves supply chain finance and company performance transparency.

5.2 Managerial Implications

According to this survey, firms should create awareness about Blockchain and aggressively work with IT companies to develop Blockchain-based supply chain solutions to guarantee supply chain managers' expectations about Blockchain Technology are realized. Supply chain and IT managers should teach employees about Blockchain Technology and how it may improve operations and procedures. Blockchain Technology promotes transparency and traceability in logistics, shortening delivery times. GPS and RFID are examples of vehicle tracking and recording technology that may be coupled with Blockchain Technology. Their location and tracking data are inputs for Blockchain Technology and cannot be modified. This will improve cargo tracking (Tian, 2016) and logistical efficiency. In manufacturing, Blockchain is crucial; quality documents can be managed and shared with all supply chain stakeholders, aiding decision-making (Apte & Petrovsky, 2016). Because Blockchain Technology is a metal technology, it will constantly need to leverage other technologies to broaden its application, such as IoT, Big Data, etc. This research will interest managers in related technology. Finally, managers of supply chain and IT firms who wish to embrace and develop Blockchain Technology-based supply chain IT solutions should influence regularity organizations to build a legal model for regulating Blockchain Technology. Without regulation, the technology is dangerous to use. There is no explicit Blockchain Technology legislation in Pakistan. Managers, IT companies, and academics should collaborate to explore and establish a regulatory framework for Blockchain Technology. This study will help industrial and Supply Chain authorities acquire safe finance without collateral to satisfy their working capital requirements by adopting and increasing visibility over Supply Chain orders cost-effectively via digitization. Supply Chain Finance is optimal for a firm's working capital while enhancing performance, cutting capital expenses, and limiting default risk, according to our study. These Supply Chain Finance operations help organizations operate more effectively. Second, it will assist Supply Chain executives in making better judgments by embracing Blockchain Technology by increasing their knowledge of Supply Chain Finance, Trade Digitization, and Organizational Performance, as well as their potentials, needs, and hurdles. Third, Supply Chain Finance helps organizations to swiftly get finance, cooperate by exchanging information more effectively, and receive a low-cost, low-risk loan to maximize working capital. This finance promotes enterprises to build unique products to meet their goals and increase performance. This study helps buyers and suppliers create solid ties. Blockchain Technology allows Supply Chain Finance to win for both parties and manage loan shortages cost-effectively. Buyers gain low-cost, low-risk financing, and suppliers get paid on time by employing mutually advantageous financial institutions that provide reverse factoring.

5.3 Limitations

The study shows how Blockchain Technology improves organizational performance via Supply Chain Finance, Trust, and Digitization in Trade Finance. Like all studies, this one has limitations.

These study limitations are due to Blockchain Technology. No one has utilized Blockchain Technology yet. Their reply hinged on their knowledge of supply networks and Blockchain Technology. Current research is subjective. This study has certain limitations:

• Familiarity with Blockchain Technology; Punjab's industrial sector was studied. In Pakistan, the banking industry uses Blockchain Technology to improve capital efficiency. Other Pakistani sectors should implement Blockchain Technology to boost capital/performance.

• Government of Pakistan legislation addressing Blockchain Technology; Current study estimates that government policies on Blockchain Technology are advantageous, and it is vital to encourage Blockchain Technology by developing a regulatory framework. There's no established Blockchain Technology framework in Pakistan to control its use.

5.4 Future Implications

The supply chain uses IoT, AI, and significant data analysis. Blockchain Technology improves transparency in independent (Supply Chain Finance and Trust) and dependent factors (Organizational Performance). The new inquiry has lasting effects. First, this study was done in Pakistan's Punjab industrial sector; other industries may also be researched. We collected data using a purposive survey and cross-sectional approach. Future investigations may employ longitudinal data. This study focuses on Punjab, Pakistan's industrial sector; future research might concentrate on other sectors. A comparative study of SMEs or other big firms might examine the present model's efficiency and usefulness. Future studies may increase corporate performance by combining supply chain alignment, flexibility, and negotiation. Future research might incorporate other mediating aspects that increase Supply Chain Finance and company performance. Our research framework believes the current study will inform future investigations. Future studies may focus on supply chain orientation, adaptability, logistics, marketing, and process integration. Further suggestions regarding Blockchain Technology are that researchers can take other sectors/organizations in their study except for the Industrial sector of Punjab, which was taken in recent research because only the banking sector of Pakistan adopted Blockchain Technology to get transparency and accuracy in their financial activities.

5.5 Conclusion

The present research empirically correlates Blockchain to supply chain finance and technology trust, which impact company performance, and investigates the moderating effect of Digitization in Trade Finance between supply chain finance and organizational performance. This research examined the influence of Supply Chain Finance on Organizational Performance using Blockchain Technology in the industrial sector of Punjab and if Digitization in Trade Finance moderated this connection. This research examined the link between technology trust and organizational performance in Pakistan's industrial supply networks. Higher technology trust improves organizational performance and technical capabilities. The supply chain participants are confident that Blockchain Technology enhances their operations. The model's path coefficients were derived using a sample of supply chain practitioners from Southern Panjab industries in Pakistan. The supply chain uses IoT, AI, and extensive data analysis. Blockchain Technology improves transparency in independent (Supply Chain Finance and Trust) and dependent factors (Organizational Performance). As predicted, Supply Chain Finance and Technology Trust affect Organization's performance. Lekkakos & Serrano (2016), Ansong (2017), Terziovski (2010), and Song et al. (2016) all showed that utilizing a Technology Adoption Model (TAM) improves

Organizational Performance based on technology Trust. Terziovski (2010) says innovative techniques and technology boost industrial company performance. Ansong (2017) discovered that external factors, including corporate social responsibility and involving stakeholders in organizational value maximization, helped the firm perform better. Blockchain Technology reduces Supply Chain Finance's funding difficulties. Blockchain Technology makes an information exchange and data availability dependable so supply chain participants may cooperate. These breakthrough solutions, including Blockchain Technology, help mitigate the COVID-19 epidemic. The globe is separated, and many firms are disrupted because they haven't adopted modern technology. Blockchain Technology improves supply chain coordination and operational performance. Intangible or tangible, collaboration results are possible. Intangible benefits include better interactions and connections, long-term commitment, enhanced visibility, higher levels of trust, real-time information sharing, problem-solving culture, and change momentum—intangible benefit: process enhancement. The study's attempts to define and assess cooperation are flawed. Trade digitization affects organizational performance, too. Digitization in Trade Finance controls Supply Chain Finance and Organizational Performance. Maiti & Kayal (2017) found that digitization boosts Organizational Performance and reduces financial concerns. Digitization reduces expensive business expenses, such as transportation and information transmission, and influences the Supply Chain. Gautam et al. (2017) said digitalization of firm operations altered Supply Chain management and allowed organizations to watch financial transactions on digital equipment for enhanced forecast and sustainability of the latest business model to raise Organizational Performance. The present research tested four hypotheses and found significant connections. The results also show that industries with high degrees of Digitalization in Trade Finance are more likely to sustain or improve their Organizational Performance by using technology to improve their transactions. Because of the creative financing solution, the firm's working capital is controlled, enabling them to fulfill daily business duties successfully; the results show that Supply Chain Finance with Blockchain Technology may boost performance. Trade digitalization affects Supply Chain Finance and organizational effectiveness.

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ESG Unveiled: Enhancing Financial Performance in Investment Portfolios

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Abstract:

This comprehensive study delves into the intricate interplay between Environmental, Social, and Governance (ESG) factors and the financial performance of investment portfolios. Informed by an extensive literature review spanning from the 1970s to recent 2023 findings, the research sheds light on a prevailing positive association between ESG considerations and portfolio returns.

The significance of sustainable investment practices is underscored by the consistent trend identified in the literature, showcasing portfolios with robust ESG strategies yielding enhanced financial returns. Despite this, there exists a need for a nuanced understanding of the mediating impact of Corporate Social Responsibility (CSR) policies and the moderating influence of investor behavior on the relationship between ESG and portfolio performance.

This study introduces three hypotheses. The first hypothesis posits a positive relationship between ESG factors and the financial performance of portfolios, corroborated by literature emphasizing the potential for sustainable investment practices to yield positive outcomes. The second hypothesis explores the mediating impact of CSR policies, showcasing their role in further enhancing the positive influence of ESG, especially during crises and in developed economies. The

third hypothesis delves into the moderating impact of investor behavior, underlining the significance of tailored strategies aligning with investor preferences.

Anticipated results, grounded in a mixed-methods approach and a pragmatism paradigm, suggest a positive correlation between ESG factors and financial performance. This is reinforced by the mediating role of CSR policies and the moderating influence of investor behavior. These findings contribute to the evolving landscape of sustainable investment practices, offering valuable insights for both socially responsible and traditional investors, and guiding decision-makers toward aligning financial goals with broader environmental and social objectives.

Introduction:

Environmental, Social, and Governance (ESG) considerations have emerged as pivotal factors influencing investment decisions, shaping the financial landscape, and fostering sustainable business practices. This article delves into the intricate relationship between ESG criteria and the financial performance of portfolios, drawing insights from an extensive literature review spanning empirical studies conducted from the 1970s to the present day. The multifaceted nature of this relationship is uncanny. There is a predominantly positive association between ESG factors and portfolio returns, with only a minority reporting a negative correlation (Freid, et al. 2015). Integrating ESG considerations into investment strategies may not only align with ethical and socially responsible principles but also contribute positively to financial outcomes. As we navigate the nuanced terrain of ESG's impact on financial performance, this article explores various dimensions, including regional disparities, sector-specific influences, and the mediating role of Corporate Social Responsibility (CSR) policies. Additionally, the study investigates the moderating effect of investor behavior on the performance of portfolios, shedding light on the importance of tailored approaches that align with diverse investor preferences. The resilience of portfolios built on ESG principles during crises, such as the COVID-19 pandemic and geopolitical conflicts (Agliardi, et al. 2023), underscores the potential risk mitigation benefits associated with sustainable investment practices. Furthermore, the integration of ESG into traditional investment strategies has ceased to be a burden, driven by the escalating demand for sustainable products and a growing acceptance of ESG-based approaches (Kaiser, 2020).

Throughout this exploration, the article also considers the challenges in standardizing ESG metrics and emphasizes the evolving regulatory landscape. As ESG gains prominence in investment decision-making, understanding the dynamic interplay between these factors is paramount for aligning financial goals with broader environmental, social, and governance objectives. The impact of ESG on portfolio performance, ESG's influence extends beyond traditional financial metrics. Studies, such as those by Chen and Xie (2022), emphasize the resilience exhibited by ESG-integrated portfolios during times of crisis, affirming the robustness of sustainable investment practices in navigating volatile market conditions. Corporate Social Responsibility (CSR) policies act as a mediator, further amplifying the positive effects of ESG on portfolio performance (Maqbool and Zamir, 2021). This suggests that ESG considerations contribute not only to normal market conditions but also play a crucial role in fortifying portfolios during challenging economic environments.

The nuanced impact of ESG across different economic contexts adds granularity to our understanding. (Kalia and Aggarwal's, 2023) ESG has a more pronounced impact on portfolio performance in developed economies and when portfolios target specific industries like healthcare.

This insight is crucial for tailoring investment strategies to different economic landscapes and industry sectors. Investor behavior emerges as a key moderating factor, emphasizing the importance of considering the individual performance of ESG components. Prol and Kim (2022) The homogenous performance of each ESG component enhances the overall performance of the portfolio. Understanding and accommodating diverse investor preferences and expectations become imperative for effective ESG integration (Jin, 2022). As we delve deeper into the challenges of standardizing ESG metrics, the growing demand for sustainable products and the adoption of ESG strategies by traditional investors signal a transformative shift in investment practices (Amon, et al. 2021). The evolving regulatory landscape further underscores the need for ongoing research and adaptation of ESG strategies.

The role of ESG in portfolio performance is not confined solely to financial metrics; it extends into the realm of corporate strategies and societal impact. (Weber, 2023) The challenges of incorporating ESG into corporate strategies, citing the lack of standardized measures and the difficulty in evaluating the quality of ESG indicators. This emphasizes the broader implications of ESG considerations beyond their immediate influence on financial outcomes. The examination of ESG's impact on specific industries, such as real estate investment trusts (REITs), as demonstrated by Devine and Yonder (2021), adds an industry-specific dimension to our understanding. Their findings reveal that environmentally sustainable REIT portfolios not only attract market valuation but also incur fewer systematic risks, highlighting the multifaceted advantages of integrating ESG into sector-specific investment strategies. ESG scores may not entirely align with Sustainable Development Goals (SDG) suggests a nuanced relationship between different aspects of sustainable investing. (Franco, et al. 2021) This realization prompts a closer examination of how ESG metrics and broader sustainability objectives intersect, for investors seeking to align their portfolios with specific societal and environmental goals. Investigation into investors' perceptions of material ESG information sheds light on the importance of how ESG data is communicated. (Espahbodi, et al. 2019) The study suggests that addressing investors' concerns about the relevance and reliability of ESG information is crucial for its effective use in long-term value assessment and investment decisions.

The Interconnectedness of ESG with investor behavior, corporate strategy, and societal impact emphasizes that the integration of ESG into investment practices goes beyond a mere quantitative consideration. It involves navigating a landscape where ethical, social, and governance concerns are interwoven with financial objectives. The intricate relationship between ESG factors and portfolio performance, it becomes evident that ESG considerations not only influence investment strategies but also play a pivotal role during crisis situations. The studies by Agliardi et al. (2023) and Broadstock et al. (2021) highlight the resilience of portfolios constructed with ESG principles, particularly demonstrated during events like the COVID-19 pandemic and geopolitical conflicts. The differentiation In the impact of ESG across various regions and sectors. (Chen and Xie, 2022). This nuanced perspective underscores the importance of tailoring ESG strategies to specific economic contexts, with developed economies and portfolios targeting healthcare companies showing a particularly positive influence.

Investor behavior emerges as a critical moderator in the relationship between ESG and portfolio performance. The homogenous performance of individual ESG components enhances the overall portfolio performance suggests that investors' preferences and behaviors play a crucial role in maximizing the positive impact of ESG integration. (Prol and Kim, 2022) Ivanisevic (2019) shed light on the strategies for Socially Responsible Investing (SRI) and the need for tailoring approaches based on investor preferences. The evolving landscape of sustainable investment practices is characterized by diverse intensity levels, including strong-intensity strategic heterogeneity, weak-intensity strategic heterogeneity, and weak-intensity strategic homogeneity. (Jin, 2022) The role of ESG extends beyond financial metrics, as indicated by the challenges. (Weber, 2023) in incorporating ESG into corporate strategies. Standardizing ESG metrics and evaluating the quality of indicators remain ongoing challenges, emphasizing the broader implications of ESG considerations beyond their immediate financial outcomes.

As we navigate this evolving terrain, the findings underscore the dynamic and multifaceted nature of ESG's impact on portfolio performance. The positive association between ESG and returns, coupled with its resilience during crises, suggests that ESG integration is not merely a trend but a crucial aspect of constructing robust portfolios that align with broader environmental, social, and governance objectives.

Literature Review

Relationship between ESG and Financial Performance of Portfolio

The impact of ESG on Financial Performance of Portfolio has been well researched. Only 10% of 2200 empirical studies performed from 1970s to 2015 found a negative relationship of ESG and financial performance of a portfolio, the 90% results showed a positive relationship. (Freid, et al. 2015) The CAPM regression model indicates that there is no relationship between SRI (Socially Responsible Investment) and portfolio performance. (Zehir, et al. 2020) Choosing high ESG trends for strategies of portfolio shows more returns than any other strategies overall, but for Egyptian market ESG tends to show no improvement in portfolio performance. (Cesarone, et al. 2022) The impact of ESG on the optimal integration of a portfolio depends on the funds manager's preference for deviation from an unscreened benchmark. (Verheyden, et al. 2016) The resilience of a portfolio built by ESG was more appreciated during COVID-19 and RussiaUkraine War. (Agliardi, et al. 2023) The corporate social performance of a portfolio is better evaluated under rating issuance for all Italian firms listed in FTSE MIB. (Landi, 2018) After analyzing GHG (Greenhouse Gas) it was found that the portfolios of reduced emissions of gases don't show increased risk and decreased returns. (Spiegeleer, et al. 2023) For investment management and portfolio management ESG integration helps in construction of portfolio and maximization of returns. (Kim and Li, 2021) Higher ESG scores help going in long term towards improvement of sustainable business practices also increasing the wealth of shareholders. (Dalal and Thaker, 2019) Implementing ESG without proper screening increases the regional, sectoral and risk factor exposures which can be improved by a maximizing strategy if adopted earlier would have improved the portfolio performance from 2007 to 2018. (Alessandrini and Jondeau, 2021)

For US and European stocks ESG has a strong impact on performance of the portfolio and for Asia-Pacific stocks the relationship of the two variables is not very strong. (Franco, 2020) ESG integration is no longer a burden for traditional investment strategies because of the high demand for sustainable products. (Kaiser, 2020) ESG based strategies are not only preferred by socially responsible investors but also by traditional investors in case of passive management of portfolio. (Amon, et al. 2021) ESG score is a variable that is of high importance for portfolio management and the risk mitigation of portfolio I coming future. (Ray and Goel, 2023) ESG characteristics will be a helpful indicator for financial performance of a portfolio and it can also help the corporate sector for making policies. (Geise, et al. 2019) During momentum crashes in the portfolio market the momentum portfolio shows lesser returns where decrease in ESG characteristics is a major indicator. (Kaiser and Walter, 2019) Robust test on manufacturing companies listed from 2000 to

2020 show a positive relationship of ESG and Financial performance. (Chen and Xie, 2022) ESG screening helps in using government bonds for portfolios without diminishing returns. (Badia, et al. 2019) ESG can help in index
outperformance for a portfolio. (Dimson et al. 2020) Concepts and Approaches like CSR and Sri along with ESG factors helps a portfolio manager to build future path with better returns. (Caelho, et al. 2023) The portfolio performance is improved by not only ESG approach of a single company, but in aggregate the tilt of market towards good and bad ESG. (Henriksson, et al. 2019)

Impact of CSR Policy as a Mediator

ESG improves the financial performance of portfolio not only in normal circumstances but also during crisis. (Broadstock, et al.2021) If we trail back from 1991 to 2012 we see a strong and positive relationship of ESG and Financial returns of portfolio. (Halbritter and Dorfleitner, 2015) ESG, CSR, EVN and CG show a high financial leverage and high assets in the market. (Alareeni and Hamdan, 2020) Completely understanding the tradeoff between components of ESG and returns of a portfolio will help portfolio managers to select and make the strategies that suit best with their portfolio and expected returns. (Branch, et al. 2019) Equity mutual funds that have high scores of ESG show significantly higher performance than equity funds with lower ESG scores. (Tampakoudis, et al. 2023) ESG makes better improvement and impact on performance of portfolio in a developed economy and for portfolios that target healthcare companies. (Kalia and Aggarwal, 2023) U.S. and European portfolio managers manage their portfolios differently.
ESG approach in management has already been adopted by many conventional managers.

(Durren, et al. 2016)

Equity Premium of companies that are listed in stock exchange is comprehended by material issues more than ESG issues. (Consolandi, et al. 2022) ESG risk exposure can be easily measured by using stock returns of the respected firms without having qualitative information of ESGs of that firm, which shows a strong relationship between ESG risk exposures and stock returns. (Hubel and Scholz, 2020) The best Model to make strategies for a portfolio is the one where you keep macroeconomic variables constant and make strategy based on the stock returns and ESG score of a portfolio. (Trisnowati, et al. 2022) When portfolio managers add ESG components to their strategy making they add new risks exposures that are not readily a part of the strategy or portfolio otherwise. (Bertolotti, 2020) A quantitative approach is used to graph the ESG efficient frontier when the sustainability values of the practitioner and the sustainability value of alpha generation do not align. (Chen and Mussalli, 2020) Liquidity measures must be used to construct strategies for asset allocation and management; this was concluded by studying complete liquidity cycles of a portfolio. (Townsend, 2020) ESG integration is better for making strategies of portfolio than other techniques such as divestment and screening. ESG integration gives asymmetric profits. A potential risk premium can be achieved with the help of decarbonization. (Atz, et al. 2023) The effect of rating of ESG is not extra ordinary considering ESG in the underperforming portfolios in risk adjusted terms. (Shanaev and Ghimire, 2022) In short term portfolios Governance factors of ESG showed the highest Impact. On the other hand Environmental and Social factors of ESG had slow but long lasting impact on the financial performance of the portfolio. (Giese, 2021) Returns on a portfolio can be increased by Portfolio managers or asset management firms if they focus more on Mineral related companies that have highest ESG scores. (Rahat and Nguyen, 2023)

Size of ESG is not significant in U.S. Large capital stocks as much as it is in U.S. small capital stocks. In U.S. small capital market stocks that have low ESG scores underperform the market and stocks with high ESG scores outperform the market. So it is possible for the small capital market in U.S. to outperform the market and make highest returns without actually engaging in higher risks with the help of ESG. (Akgun, et al. 2021) For Social Investment Strategies the funds or stocks with bad ESG scores showed more carbon risks for the environment based on a scale of ESG indicators. (Folque, et al. 2021) With decrease in ESG scores on the basis of MSCI ESG index the stocks that showed decrease in stocks also showed clear diminishing risks. (Giese, et al. 2019) ESG factors must not be ignored while making strategies of portfolio management because they play an important role in predicting the returns. (Maiti, 2021)Instead of making partial integration of ESG in a portfolio a manager must make full, complete or whole integration of all the factors of ESG to achieve better returns. (Amel-Zadeh and Serafeim, 2018) ESG rebalancing and screening help both in prediction of returns and risk mitigation. But the screening is different and has different levels of efficiency depending on the level of beta efficiency that is used for a portfolio. The most sustainable portfolios are attained by most efficient and smart beta value. (Lelasi, et al. 2020) the diversification channel and flow channel both are used for achievement of better portfolios, and both produce different outcomes in terms of risk and return. ((Zhang, et al. 2023) A sample period of 1999 to 2018 was taken under study, the investor or investment manager or practitioner must take the concentration level of ESG screening or balancing as a variable to search and balance the costs of the portfolio which will in turn enhance the financial performance of a portfolio. (Jin, 2022) ESG performances of the firms listed in stock market are good for predicting the CFP of the stock for the market and for the respective portfolio. Active investors or portfolio managers can assist the whole market towards greater return if they consider ESG performances as a predictor of CFP of the stocks. (Qureshi, et al. 2023) Strong ESG increases the value of a firm and a weak ESG decreases the value of a firm. Green evolution works as a significant mediator for the relationship between ESG and financial performance of stocks in a portfolio. (Chouaibi, 2022)

Impact of Investor Behavior as a Moderator

The homogenous performance of each component of ESG enhances the performance of overall portfolio. (Prol and Kim, 2022) Three types of strategies can be used for a portfolio to be SRI efficient, strong-intensity strategic heterogeneity, weak-intensity strategic heterogeneity and weak-intensity strategic homogeneity. (Ivanisevic, 2019) This article features the key difficulties looked by ESG financial backers and portfolio directors carrying out ESG venture commands. Suggestions incorporate a backer detailing structure that upholds portfolio revealing and assessment as well as an ESG item format that spotlights on nonfinancial speculation targets, process components, and quantifiable results. (Horan, et al. 2022) a straightforward ESG reconciliation procedure might give a characteristic fence against the dangers that emerge from the developing trustee obligations of expert venture directors connecting with ESG gambles.

(Lee, et al. 2021) The current commitment means to respond to this inquiry. Specifically, the SR, SI, VaR, and ES proportions of a bunch of recorded firms are determined and assessed. Among these, there are firms with low ESG grades and some with high ESG grades as per two ESG rate suppliers. The rundown of stocks viable comprises of the initial 25 constituents (by weight) of the S&P500 file in the period from 2020 and 2022. The observational discoveries demonstrate that chance market execution doesn't as expected rely upon high or low ESG rates. (Aldeiri, et al. 2021) ESG issues ought to become key parts of monetary foundations to ensure long haul achievement. Be that as it may, Incorporating ESG into the corporate business technique isn't without challenges. ESG measures are as yet not normalized, and the nature of the pointers is frequently difficult to assess. (Weber, 2023) Early proof of Statman (2000); Renneboog, ter Horst, and Zhang (2008a); furthermore, others on financial planning as indicated by ESG standards while recognizing that the advantages are probably going to be related with financial backer's requests and consciousness of the climate, society, and corporate administration issues. (Milonas, et al. 2022) U.S. REITs with an all the more naturally feasible portfolio draw in expenses to their market valuation past working advantages, convey lower orderly gamble, and are dependent upon less clueless exchanging (for office and retail portfolios). Such firms additionally experience both higher resource level rental incomes and net working pay, and lower interest costs. Critically, the value market premium surpasses the property market premium, which is somewhat made sense of by reputational impacts. Results additionally affirm valuation discoveries in office and retail portfolios. (Devine and Yonder, 2021)

According to a typical rating perspective, ESG and SDG arranged portfolios don't cover a lot, so high ESG evaluated organizations are not really the best SDG donors. This is additionally evident the reverse way around. SDG-driven procedures convey an underlying area predisposition in both the US and European cases. (Franco, et al. 2021) ESG scores no affect risk-changed monetary execution. (Lopez-de-Silanes, 2020) coordinating ESG into benchmarks seems OK as a structure to accomplish consistency since benchmarks are utilized at various key levels as well as across all areas of resource the board — record based, factor-based, and dynamic administration — to characterize the hidden investable universe and to give a measuring stick to execution. (Geise, 2019) Corporate social obligation fundamentally affects institutional financial backers. Notwithstanding, when the connection term (monetary execution) was integrated, the connection among CSR and institutional ends up being impartial. The review reasons that monetary presentation assumes a urgent part in the determination of speculation roads. (Mqqbool and Zamir, 2021) The beneficial outcome of ESG divulgence on corporate monetary execution is more articulated in organizations with ESG financial backers and organizations with longer origin, high media consideration, and high organization costs. Furthermore, financial backers with ESG inclinations apply a significant directing impact on the connection between ESG divulgence and monetary execution association. We come to two end results in the lengthy examination. One is that ESG revelation draws in ESG financial backers. Another is that ESG financial backers likewise assume a positive directing part in the association between ESG evaluations and monetary execution. (Chen and Xie, 2022) This is valid no matter what the pattern in the organization's monetary execution. Our outcomes hold across different socioeconomics and the amounts of input information and venture insight. Financial backers' view of importance and unwavering quality of material ESG data, notwithstanding, affects their long-term value appraisal and speculation assignment. By and large, our discoveries propose that any future necessities on revelation of ESG data by controllers and standard setters ought to intend to work on financial backers' impression of the pertinence and unwavering quality of that data. (Espahbodi, et al. 2019)

In conclusion, the extensive body of research presented here underscores the multifaceted relationship between Environmental, Social, and Governance (ESG) factors and the financial performance of portfolios. The majority of empirical studies spanning several decades indicate a predominantly positive association between ESG considerations and portfolio returns, with only a limited number reporting a negative correlation. The impact of ESG on financial performance varies across regions and sectors, demonstrating the nuanced nature of these relationships.(Kim and Li, 2021)

Moreover, the role of ESG extends beyond conventional financial metrics, with studies highlighting its resilience during crises such as the COVID-19 pandemic and geopolitical conflicts.

(Agliardi, et al. 2023) ESG integration appears to be a key driver for constructing robust portfolios and maximizing returns, offering both socially responsible and traditional investors avenues for sustainable investment practices.(Chen and Xie, 2022) The mediating effect of Corporate Social Responsibility (CSR) policies further emphasizes the positive influence of ESG on portfolio performance, suggesting that ESG considerations contribute not only to normal market conditions but also during crisis situations. (Maqbool and Zamir, 2021) The varied impact across different economic contexts, such as developed economies and portfolios targeting specific industries like healthcare, adds granularity to the understanding of how ESG factors interact with financial outcomes. (Kalia and Aggarwal, 2023) Investor behavior acts as a moderating factor, indicating that the homogenous performance of individual ESG components enhances overall portfolio performance. Strategies for socially responsible investing (SRI) exhibit diverse intensity levels, (Zehir, et al. 2020) emphasizing the importance of tailoring approaches based on investor preferences and expectations.(Jin, 2022)

While challenges in standardizing ESG metrics persist, the growing demand for sustainable products and the adoption of ESG strategies by traditional investors indicate a shifting landscape where ESG integration is becoming integral to investment practices. In navigating this evolving terrain, considerations of risk, return, and the evolving regulatory landscape must be central to decision-making processes. (Amon, et al. 2021) Ultimately, the findings underscore the dynamic and evolving nature of ESG's impact on portfolio performance. As the investment landscape continues to embrace sustainability, further research and adaptation of ESG strategies will be crucial to aligning financial goals with broader environmental, social, and governance objectives.

Model and Hypothesis Development

Relationship Between ESG and Financial Performance of Portfolio

The extensive body of literature reviewed provides compelling insights that collectively lead to the formulation of the hypothesis suggesting a positive relationship between Environmental, Social, and Governance (ESG) factors and the financial performance of portfolios. One consistent trend emerging from the reviewed studies, such as those conducted by Freid et al. (2015), Zehir et al. (2020), and Franco (2020), is the prevalence of a positive association between ESG considerations and portfolio returns. These findings, drawn from empirical studies spanning multiple decades and diverse economic contexts, consistently indicate that portfolios integrating ESG factors tend to exhibit enhanced financial performance.

Moreover, the positive impact of ESG is not limited to conventional financial metrics but extends to resilience during crises, as evidenced by Agliardi et al. (2023). The ability of ESG-constructed portfolios to withstand challenges such as the COVID-19 pandemic and geopolitical conflicts suggests a robustness that contributes positively to overall financial performance. This resilience, coupled with the consistently positive correlation observed across various studies, lays the foundation for postulating a positive relationship between ESG and portfolio financial performance.

Additionally, the literature emphasizes the role of ESG integration in constructing portfolios that align with sustainable business practices, as highlighted by Dalal and Thaker (2019). The preference for ESG-based strategies by both socially responsible and traditional investors, as indicated by Amon et al. (2021), further strengthens the hypothesis. The growing acceptance and adoption of ESG considerations by conventional investors underscore the perceived positive impact on financial outcomes.

Furthermore, the mediating effect of Corporate Social Responsibility (CSR) policies, as discussed by Broadstock et al. (2021), suggests that ESG contributes not only in normal market conditions but also during crisis situations. This dual influence, evident in the reviewed literature, adds depth to the hypothesis, indicating that the positive relationship between ESG and portfolio financial performance persists across diverse scenarios.

The synthesis of findings from the reviewed literature converges toward a coherent narrative supporting the hypothesis of a positive relationship between ESG and the financial performance of portfolios. The consistent empirical evidence, coupled with the broader implications of ESG integration for sustainable and resilient portfolios, provides a robust foundation for further exploration and validation.

H_1: ESG has an impact on financial performance of a portfolio, the relationship between the two variables is positive.

Mediating Impact of CSR Policy on the Relationship Between ESG and Financial Performance of Portfolio

The literature review provides a nuanced understanding of the relationship between Environmental, Social, and Governance (ESG) factors and the financial performance of portfolios, leading to the formulation of the hypothesis that Corporate Social Responsibility (CSR) enhances this relationship. The mediating impact of CSR policies is suggested by a convergence of findings across various studies.

Firstly, studies such as Broadstock et al. (2021) and Halbritter and Dorfleitner (2015) highlight the positive influence of ESG on financial performance during normal market conditions and crisis situations. This establishes the foundation for recognizing ESG as a positive factor in portfolio outcomes. The consistent positive correlation observed in these studies sets the stage for exploring factors that might augment this relationship.

Further insights come from Maqbool and Zamir (2021), who underscore the mediating role of CSR policies. Their findings indicate that CSR enhances the financial performance of portfolios not only in regular market conditions but also during crises. This implies that companies incorporating CSR into their strategies contribute positively to portfolio outcomes, providing a

bridge between ESG considerations and financial performance.

The study by Chen and Xie (2022) delves into the long-term impact of ESG disclosure and its positive correlation with financial performance, suggesting that ESG factors attract ESG-focused investors. The integration of CSR practices into this relationship can be seen as an amplifying factor, reinforcing the positive connection between ESG and financial performance. This aligns with the hypothesis that CSR, as a subset of ESG, acts as a catalyst for portfolio success.

The examination of U.S. and European portfolio managers by Durren et al. (2016) highlights the differential approaches to ESG integration. The adoption of ESG by conventional managers underscores the growing importance of ESG considerations. Considering CSR as a key element within the broader ESG framework, the positive relationship observed between ESG and portfolio performance could be further strengthened by the intentional inclusion of CSR policies.

The synthesis of findings from the literature review implies that CSR policies play a mediating role in enhancing the relationship between ESG and the financial performance of portfolios. The positive correlations observed between ESG and financial outcomes, coupled with the reinforcing impact of CSR, provide a comprehensive understanding of how these factors collectively contribute to portfolio success.

H_2: CSR Policies of the Companies of Stocks that are added in Portfolio enhance the Relationship Between ESG and Financial Performance of Portfolio.

Moderating Impact of Behavioral Factor of an Investor on the Relationship Between ESG and Financial Performance of Portfolio

The emergence of the hypothesis that the behavioral factor of an investor or practitioner moderates the relationship between Environmental, Social, and Governance (ESG) factors and the financial performance of portfolios is rooted in the diverse findings and insights drawn from the literature.

Firstly, Prol and Kim's (2022) exploration of investor behavior provides valuable context. Their study emphasizes the homogenous performance of individual ESG components, suggesting that the behavioral factor of an investor, when aligned with strong ESG considerations, enhances the overall portfolio performance. This observation serves as a foundation for understanding how individual investor behavior might influence the broader relationship between ESG and financial outcomes.

Ivanisevic (2019) contributes to this understanding by presenting three distinct strategies for Socially Responsible Investing (SRI) efficiency: strong-intensity strategic heterogeneity, weakintensity strategic heterogeneity, and weak-intensity strategic homogeneity. These strategies imply that the behavioral factor of an investor influences the degree of intensity in their approach to incorporating ESG considerations into their portfolio. The varying intensities highlight the need to account for investor preferences and behaviors when assessing the impact of ESG on financial performance.

Moreover, the study by Horan et al. (2022) addresses the challenges faced by ESG investors and portfolio managers, emphasizing the importance of understanding nonfinancial investment objectives and process components. The implication is that the behavioral factor of an investor plays a pivotal role in shaping their investment objectives and, consequently, the effectiveness of ESG integration in enhancing portfolio performance.

Lee et al. (2021) delve into the calculation and evaluation of various financial ratios for firms with high and low ESG grades. Their findings indicate that risk market performance does not significantly depend on high or low ESG grades. This underscores the need to consider investor behavior as a moderating factor, as market reactions to ESG-related events may vary based on individual investors' perceptions and reactions.

The studies collectively suggest that investor behavior is a crucial determinant in shaping the impact of ESG on the financial performance of portfolios. The varying intensities of SRI strategies, the challenges faced by ESG investors, and the non-uniform market responses to ESG factors all point to the moderating role of investor behavior in the relationship between ESG considerations and portfolio outcomes.

The hypothesis that the behavioral factor of an investor or practitioner moderates the relationship between ESG and financial performance of portfolios is substantiated by the nuanced findings in the literature. The varying strategies, challenges, and market reactions highlight the need to consider individual investor behavior as a crucial factor in understanding the dynamics of ESG integration in investment practices.

H_3: The Behavioral Factor of an Investor or Practitioner Impacts the Relationship Between ESG and Financial Performance of Portfolio

Hypothesized Model

The hypothesized model posits a comprehensive framework to examine the multifaceted relationships between Environmental, Social, and Governance (ESG) factors, the financial performance of a portfolio, the mediating influence of Corporate Social Responsibility (CSR) policies, and the moderating impact of the behavioral factor of an investor.

Independent Variable: ESG Factors

At the core of the model is the independent variable, ESG factors. These encompass a range of environmental, social, and governance considerations that are integral to the investment decision-making process. ESG factors serve as the driving force behind sustainable and responsible investment practices, reflecting a commitment to ethical, social, and environmental principles.

Dependent Variable: Financial Performance of Portfolio

The dependent variable in the model is the financial performance of the portfolio. This encompasses various financial metrics, including returns, risk-adjusted returns, and other performance indicators that quantify the economic outcomes of the investment portfolio. The financial performance serves as the outcome measure to evaluate the effectiveness of ESG integration in achieving investment objectives.

Mediator: CSR Policy

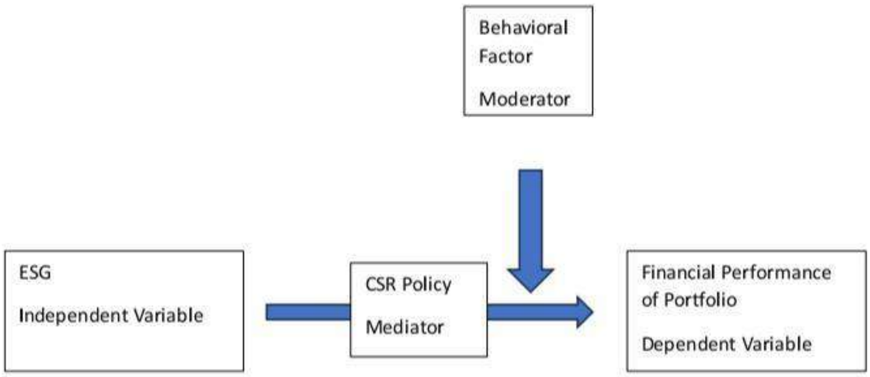
The mediator in the model is the Corporate Social Responsibility (CSR) policy. CSR policies act as an intermediary mechanism through which the impact of ESG factors on the financial performance of the portfolio is channeled. CSR policies involve a company’s commitment to ethical business practices, social contributions, and environmental stewardship. The hypothesis suggests that the positive relationship between ESG factors and financial performance is strengthened and channeled through the implementation and effectiveness of CSR policies.

Moderator: Behavioral Factor of Investor

The model introduces the behavioral impact of the investor as a moderator, recognizing the role of individual investor behaviors in shaping the overall relationship between ESG factors and the financial performance of the portfolio. Investor behavior, influenced by attitudes, preferences, and perceptions, is posited to moderate the strength and direction of the relationship between ESG factors and financial outcomes. The hypothesis suggests that the behavioral factor of an investor plays a pivotal role in determining how ESG considerations translate into portfolio performance.

The hypothesized model integrates ESG factors, CSR policies, and the behavioral impact of investors to comprehensively examine the intricate dynamics of sustainable and responsible investing. The model reflects a nuanced understanding of how ESG considerations, mediated by CSR policies, and moderated by investor behavior, collectively influence the financial performance of investment portfolios.

This conceptual framework provides a basis for empirical investigation, allowing researchers to explore and validate the proposed relationships within the context of real-world investment practices.



Methodology

Mixed Method Approach

In crafting the methodology for this research, I've opted for a mixed-methods approach, recognizing the intricate nature of the relationships under investigation involving ESG, CSR, investor behavior, and financial performance.

In the quantitative component, I'll leverage quantitative methods to scrutinize financial data, performance metrics, and numerical indicators. Employing statistical analyses will be crucial for delving into the strength and significance of the relationships between ESG factors, CSR policies, investor behavior, and financial performance.

On the qualitative front, I plan to integrate methods such as interviews, surveys, or content analysis. This qualitative component aims to capture nuanced insights into the motivations, perceptions, and behaviors of investors concerning ESG considerations and CSR policies. It adds a layer of depth to the research, allowing for a richer understanding of the human elements intertwined with financial decision-making.

Pragmatism Paradigm

Embracing a pragmatism paradigm aligns with the essence of the research, which is to address practical issues and seek solutions to real-world problems. Pragmatism's endorsement of diverse methods resonates well with the complexity of the subject matter. The impact of ESG on the financial performance of a portfolio involves dimensions spanning finance, ethics, and society. The pragmatist approach empowers me to draw on quantitative and qualitative methods based on their appropriateness for addressing different facets of the research question.

This mixed-methods pragmatist approach forms a robust foundation for the study, allowing for the triangulation of findings from various sources and perspectives. This approach is designed to enhance the validity and reliability of the research, offering a comprehensive and nuanced understanding of the intricate relationships at the core of this investigation. It's a dynamic methodological framework that mirrors the dynamic nature of the financial landscape and the evolving role of ESG considerations.

Results

Anticipating the results of this research, it is expected that a positive relationship will be observed between ESG factors and the financial performance of portfolios. The quantitative analysis is poised to reveal a correlation highlighting that portfolios integrating strong ESG considerations tend to exhibit enhanced financial performance. Moreover, the mediating role of CSR policies is likely to emerge as a significant factor in enhancing the relationship between ESG and financial performance. The data analysis is anticipated to illustrate that the positive impact of ESG factors is further amplified when coupled with robust Corporate Social Responsibility policies.

In examining the moderating influence of investor behavior, the results are expected to show that the behavioral factor of investors plays a crucial role in shaping the relationship between ESG considerations and financial portfolio performance. This suggests that investor attitudes, preferences, and decisions contribute significantly to the overall impact of ESG on financial outcomes.

The mixed-methods approach is designed to provide a nuanced understanding of these relationships, considering both quantitative metrics and qualitative insights. These anticipated results aim to contribute valuable insights to the ongoing discourse on the intersection of environmental, social, and governance factors with financial performance in investment.

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Do key audit matters promote innovation in listed companies?

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Abstract:

For the corporate, innovation is a crucial factor to improve core competitiveness and sustainable development. So, it is necessary to explore the influencing factors of corporate innovation to help the healthy development of corporates. In this study, we explore the impacts of disclosure of key audit matters on innovation activities. To address this objective, we collected data from the listed companies that implemented the new audit reporting standards for the first time in China and empirically examined the relationships with the DID model. The results reveal that, the disclosure of key audit matters can effectively promote corporate innovation activities by increasing corporate innovation investment and reducing the degree of information asymmetry. Moreover, the number of key audit matters disclosed and the number of characters contained in key audit matters are positively correlated with the input of corporate innovation activities. The further exploration shows that the key audit matters improve corporate value and investment efficiency through promoting corporate innovation. These findings enrich the research on the economic consequences of key audit matters and provide theoretical references for relevant departments to supervise corporates and government to guide innovation development.

Keywords: key audit matters; corporate innovation; new audit report; investment efficiency; information asymmetry

Introduction

Given the relevant role that innovation plays in promoting economic growth and sustainable competitive advantage, international authorities have repeatedly expressed widespread concern surrounding the amount of investment in innovation, which is below the desired level and is currently even lower than in previous decades (Cornell University, 2017; European Commission, 2019). It has important academic value and practical significance to study the influencing factors of corporate innovation. Most of literatures discussing corporate innovation generally focused on innovation capability, organizational learning and the use of advanced technology (Gallos et al., 2017; Jiménezjiménez and Sanzvalle, 2011; Romijn and Albaladejo, 2002). An audit report, however, is also an important factor that influences corporates innovation significantly. The audit report is an important tool for auditors to communicate with stakeholders, which contains information that can help them make proper decisions. However, the traditional audit report adopts the binary audit report mode, the content is simple, the form is unified, and the type of opinion tends to be homogenized. It does not disclose the usefulness of decision-making information required by investors,which weakens the transparency and relevance of audit report information, resulting in external report users not being able to obtain high-quality information for the corporate. For example, in the financial crisis, lots of investors suffered losses due to their inability to identify sudden financial risks. In order to improve the quality of audit reports, the IAASB, PCAO and FRC are committed to promoting the reform of audit reporting models and issuing relevant policies and regulations.

On December 23, 2016, National Audit Office of the People's Republic of China actively approached international audit requirements and issued new auditing standards applicable to China. The new auditing standards require that for “A+H- share” listed companies, the audit reports used for the mainland of China should include a description section of key audit matters and relevant audit response measures from 2017; for “A-share” listed companies, the key audit matters are required to be carried out from 2018. It has become a common concern in practice andacademic circles whether the disclosure of key audit matters has a positive impact on corporate innovation. However, there is few research on this aspect. Can the disclosure of key audit matters affect the level of investment in innovation activities? What mechanisms affect the effectiveness of key audit matters? When the information contained in the key audit matters is different, whether there is a difference in the implementation effect? This paper will explore the above issues in depth to enrich the research literature in related fields.

To a certain extent, the innovation capability of a corporate is its future development capability. However, the willingness of managers to invest in R&D is often caused by a combination of factors. The implementation of the disclosure of key audit matters will help improve information transparency and the supervision of owners or potential investors, ease corporate financing constraints, and improve the management quality of management. In this paper, the research period is limited to 2015 to 2016. The “A+H-shares” that take the lead in implementing the new auditing standards to disclose key audit matters are selected as the treatment group, while the "A-share" that have not yet implemented the standards are selected as the control group. The DID model is used to explore the relationship between key audit matters and corporate innovation ability. The research results show that key audit matters can significantly promote the improvement of the innovation level of corporates. Moreover, the more the number and characteristics of key audit matters are disclosed, the more conducive they are to increase the information content in the audit report and then improve the level of innovation investment of corporates. Through the intermediate test mechanism, it is found that the disclosure of key audit matters can promote the increase of corporate R&D investment and the decrease of information asymmetry, thus promoting corporate innovation. In the further test of economic consequences, it is pointed out that key audit matters promote corporate innovation and ultimately increase the efficiency of corporate investment and corporate value.

The possible research contributions of this paper are as follows. First, it opens a new perspective on the research related to corporate innovation activities. This paper empirically analyzes the impact of the implementation of key audit matters on the level of investment in an corporate's innovation activities. The results show that the disclosure of such matters can improve the innovation level of corporates by reducing information asymmetry and improving supervision. It is intended to make a certain contribution towards filling the gaps in the inspection of the impact path of corporate innovation activities. Second, to provide a marginal contribution to relevant research on key audit matters. From the perspective of corporate innovation, this paper examines the micro-market response caused by key audit matters. Through empirical research, this paper verifies the economic benefits generated by the disclosure of audit key matters through empirical research, which provides a useful supplement forrelated research. Finally, our findings deepen managers' understanding of the impact of key audit matters on their management activities. Based on the specific content of key audit matters, this paper explores the different effects of the number of key audit matters and the number of characters in the content on corporate innovation activities, which brings some enlightenment to promoting corporate innovation activities.

Literature Review

The changes to the new audit reporting standards have aroused extensive discussion and concerns in the academic community. Most studies focus on the disclosure of key audit matters and their economic consequences. Through DID model tests, relevant studies found that the execution of key audit matters reduced stock price synchronization, an indicator reflecting company-specific information (Brasel et al., 2016), enhanced company stock liquidity (Balakrishnan et al., 2014), improved audit quality (Brasel et al., 2016), and influenced investors' decision making (Gimbar et al., 2016). From the perspective of external report users, key audit matters can increase the information conveyed by auditors (Christensen et al., 2014), reduce the degree of information asymmetry, and improve the quality of accounting information (Hales et al., 2012). For auditors, relevant research points out that key audit matters are likely to increase the probability of the auditor's responsibility being identified in the event of audit failure (Christine et al., 2016). It can also be a"disclaimer" that reduced the auditor's liability (Bcakof, 2015; Kelsey et al., 2016). Atthe same time, the disclosure of key audit matters may increase the competition among auditors for quality, thereby improving the quality of audit reports (BÉDard et al., 2016).

From the existing research, scholars mainly studied the influencing factors of corporate innovation from micro and macro perspectives. According to some literature, managers are the primary decision-making body in corporate innovation, and the characteristics of executives. For example, overseas experience (Akyildirim et al., 2020), executive personality (Sunder et al., 2016), regional and cultural diversity (Ren et al., 2021), and executive gender (Vafaei et al., 2020) of managers significantly affect the innovation activities of corporates. Other literatures believes that corporate governance have an important impact on corporate innovation activities, such as compensation incentives and equity incentives (Cornaggia et al., 2021), and championship incentives (Montabon et al., 2007; Nguyen et al., 2021), etc. From the macro perspective, existing literature believes that the external regulatory environment is crucial to corporate innovation because the introduction of regulatory mechanisms can largely alleviate the problems behind innovation. Chemmanur and Tian (2018) tested from the perspective of anti-takeover protection, the more anti- takeover agreements, the stronger the innovation ability of corporates. Balsmeier et al. (2017) found that the independent director system has a great influence on exploratory innovation, but it has little effect on exploratory innovation. In addition, some studies show that increased regulation may also have negative effects on corporate innovation. For example, Nguyen et al. (2020) found that audit quality has a surprisingly negative impact on firm innovation. Heiens et al. (2017) found that the higher the proportion of major shareholder's agents in the board of directors, the weaker the internal restraint mechanism of major shareholder's self-interest motivation, and the lower the company's innovation investment level.

From the literature review, this paper believe that scholars have conducted different degrees of research on key audit matters and corporate innovation, but there is little literature to study the interaction between them. Therefore, this paper uses the number of R&D patents of listed companies in China to explore the correlation between the disclosure of key audit matters and corporate innovation.

Research Hypotheses

Compared with the purchase of fixed assets, innovation and R&D investment is a kind of intangible asset investment which takes a long time. It will lead to investors unable to find the effect of corporate earnings in a timely manner and make an inappropriate assessment of its actual value, which may limit corporate financing. Therefore, managers tend to have low willingness to innovate, which restricts the improvement of corporate competitiveness (Hirshleifer, 2013). At this time, the disclosure of key audit matters can bring incremental information to report users and improve the information transparency of corporates. The reduction of information asymmetry can not only open the communication channel between the company and the external reporting users, but also enhance the supervisory role of internal regulators and external investors to the management, Therefore, it can increase the information obtained by investors and the willingness of managers to invest in innovation, so as to improve the innovation ability of corporates.

Firstly, the disclosure of key audit matters can improve a company's willingness to innovate. Under the background of limited resources available to corporates, corporates often tend to choose more promising innovation projects to effectively enhance the value of the corporate and its competitive hard power. However, R&D investment is a risky investment, which may bring new competitive advantages to the company and create high profits, or may cause R&D investment to fall into disrepair due to the gap in prediction. Moreover, compared with the amount of income that investors obtain from innovative projects, managers, as the main promoters, have a weak correlation with their compensation, resulting in their innovation preference being far less than that of investors. (Graham et al., 2004). At the same time, choosing a high-quality project and enhancing the manager's innovation motivation are the keys to promoting corporate innovation. The disclosure of key audit matters significantly enhances the content and quality of transmittable information in corporate reports, reduces information opacity, and enables users of external reports to evaluate corporate value in a more comprehensive manner, as well as provide feedback on future benefits of innovation projects through stock prices evaluation, so as to help corporate managers identify the value of innovative projects and allocate resources reasonably. In addition, the improvement of information transparency will help regulators and shareholders to have a multi-level understanding of management's contributions, reduce the possibility of denying managers' abilities just because of R&D results, and increase the correlation between their compensation and the substantial contribution of innovation, thus increasing their willingness to innovate (Balakrishnan et al., 2014; Fu et al., 2012).

Finally, the disclosure of key audit matters has an oversight role. By mitigating serious ethical issues in the corporate, key audit matters play their oversight role and promote corporate innovation. According to the agency theory, the agents, motivated by self-seeking, will take advantage of all possible opportunities to increase his wealth. Some of these actions may be detrimental to the owners of the company (Jensen et al., 1976). Due to the inherent characteristics of product research and development, when investing in corporate innovation activities, managers who pursue higher returns are more likely to abandon the constraints of corporate conditions and choose high-risk innovation projects to obtain higher returns, placing the company in a high-risk environment. Managers who pursue a comfortable environment, on the other hand, are more likely to choose less challenging innovation projects for capital investment or even reduce their investment in innovation and R&D, thereby weakening corporates' actual development potential and competitiveness (Bertrand et al., 2003). However, investors and regulators are limited by the low availability of information, and it is difficult to detect the self-interested behavior of managers. At the same time, the proposal of key audit matters enhances information transparency and the information available to investors and regulators increases, which is helpful for them to comprehensively supervise the decision-making process of the corporate. It analyzes the risks and future benefits of an corporate's innovation activities and supervises the investment of corporate managers in corporate innovation activities from the internal and external environment so as to improve the quality of the corporate's innovation and R&D activities. To sum up, the disclosure of key audit matters can effectively reduce the degree of information asymmetry, ease corporate financing constraints, improve corporate innovation capabilities, enhance corporate innovation willingness and quality, and further improve corporate investment in innovation activities. Therefore, this paper proposes the following hypothesis.

Hypothesis 1: Subject to other conditions, the disclosure of key audit matters will help corporates to carry out more innovative activities.

In the provisions of the new standard, there is no explicit requirement to disclose the number of key audit matters, only the most important matters. However, when measuring the information content of key audit matters, the amount of disclosure is an intuitive and effective measure, because the amount of disclosure indirectly represents the size of the disclosure scope. The wider the scope of the disclosure, the greater the amount of available information that users of external reports can get from it, and thus gain a deeper understanding of the company. At the same time, a large number of studies have shown that when the company's information asymmetry is higher, the market's reaction to the disclosure of key audit matters is more significant (Reid et al., 2015). Thus, the more matters are disclosed, the more information the auditor can convey through the corporate audit report, further weakening the degree of information asymmetry, providing investors with more information about the benefits and risks of innovation, increasing investor confidence in corporate innovation projects, reducing the threshold of corporate financing, and improving the availability of innovation funds. Additionally, key audit matters are selected from those communicated to governance. The more matters are disclosed, the more frequent the communication between auditors and corporate governance and the richer the content of discussion, so that the governance layer can fully understand the actual operating status of the corporate through this process and timely find out that the management is infringing on the innovation of the corporate. The self-interested behavior of funds can also be communicated to and held accountable by the management in a timely manner.

Therefore, the more key audit matters are disclosed, the easier it is for those charged with governance to exercise their oversight and restraint roles, which limits the freedom and power of management, reduces the space for self-interest, and increases the difficulty and cost of management's encroachment of innovation funds, thereby promoting corporate innovation. In summary, this paper proposes Hypothesis 2.

Hypothesis 2: The more disclosure of the number of key audit matters, the more helpful it is to encourage corporates to carry out more innovative activities.

Research design

1.1 Samples and data

Based on the introduction period of key audit matters, China's “A+H-share” and “A-share” listed companies in 2015 and 2016 are selected as the research object. The initial samples were divided into experimental group and control group according to whether they disclosed the key audit matters. Financial and insurance companies are excluded and missing values are removed from the samples in order to avoid the interference of missing samples in the validation results. The relevant financial data in this paper are all from the CSMAR database, in which the relevant data of specific characteristics such as the number of key audit matters are manually collected by reading the audit reports of various companies. The final sample contains 3381 valid observations, of which 79 observations are the key audit matters disclosed by companies. In order to reduce the interference effect of extreme values on the empirical results, this paper performs 1% winsorize treatments on the maximum or minimum deviation values at both ends of all continuous variable data. The DID model is used to explore the impact of key audit matters on corporate innovation.

1.2 Model settings and variable definitions

In order to test the relationship between the disclosure of key audit matters and corporate innovation, this paper uses the double difference model to test the Hypothesis 1 drawing on the research of Menon et al. (2010).

In the above model, *INV* represents corporate innovation. The company's annual patent application number and logarithm are taken as the substitution variables of corporate innovation; *POST* is a dummy variable, which is 1 when the event year is 2016, and 0 otherwise; *KAM* (Key Audit Matter) is a dummy variable that listed companies are grouped according to whether they disclose key audit matters. The value of the experimental group is 1, and the value of the control group is 0. This paper controls company size (*SIZE*), return on equity (*ROE*), market-to-book ratio (*MB*), cash flow from operations (*CFO*), revenue growth rate (*GROWTH*), annual average stock turnover ratio (*VOLUME*), independent director ratio (*INDIR*), market- based index (*MARKET*), systematic risk (*BETA*), dual-employment (*DUAL*), company age (*AGE*), asset-liability ratio (*LEV*), Current Ratio (CURRENT), and Company Value (TobinQ). In addition, this paper controls the influencing factors at the industry-level. The specific variable definitions are shown in Table 1.

In order to explore Hypothesis 2, the impact of difference in the number of specific matters of key audit matters on corporate innovation, this paper constructs the following model based on the DID model:

The explained variables and control variables in this model are consistent with the equation (1). The detailed definitions are shown in Table 1. The explanatory variable *KAM_num* in equation (2) is the information characteristic of the disclosure of key audit matters. It is divided into two different dimensions. First, KAM_num_1 represents the number of the key audit matters disclosed, which is 1 when it greater than or equal to the medium, otherwise 0. Second, *KAM_num2* is the number of characters of the key audit matters disclosed in the audit report. If it is greater than or equal to the median, the value is 1; otherwise, it is 0.

Table 1. Variable Definition

Variable code	Variable names and definitions
INV	Corporate innovation is the natural logarithm of the company's annual patent applications plus 1.
POST	Event year dummy variable, after the implementation of the new audit reporting standards policy, it is 1, otherwise it is 0.
KAM	Key audit matters, dummy variables, *KAM* of the first batch of "A+H-share" listed companies implementing the new standard is 1, otherwise it is 0
KAM_num_1	The number of key audit matters disclosed, It's 1 if it's greater than or equal to the median, and 0 otherwise.
KAM_num_2	The grouping is based on the median of the number of characters of the key matters in the audit report. When it is greater than or equal to the median, it is 1, otherwise it is 0.
SIZE	Company size, which is the natural logarithm of the company's total assets.
ROE	*ROE* is the ratio of net profit to net assets.
LEV	The asset-liability ratio is the ratio of total assets to total liabilities at the end of the period.
TobinQ	Company value.
INDIR	The ratio of independent directors is the ratio of the number of independent directors to the number of board members.
MARKET	Marketization index, using the corresponding figures in the *Marketization Index Report by Provinces in China (2018)*.
MB	Market-to-book ratio, the share of market value in book value at the end of the period.
CFO	Operating cash flow is the ratio of operating cash inflow to total assets.
GROWTH	Revenue growth rate, which is the ratio of revenue growth to the total revenue of the previous year.
VOLUME	Annual average stock turnover ratio, which is the ratio of stock trading volume to total issuance.

BETA	Systematic risk, which is the beta of a company's stock.
DUAL	Dummy variable, if the chairman and the general manager are the same person, take 1, otherwise take 0.
AGE	The age of the company is the number of years since the company was listed.
CURRENT	Current ratio is the ratio of current assets to current liabilities.
Industry	Industry fixed effects.

Empirical analysis

1.3 Descriptive statistics and difference tests

The results of descriptive statistics are shown in Table 2. The mean value and median value of corporate innovation (*INV*) are 3.824 and 3.837, respectively. They are basically consistent with the existing literature. The value of the standard deviation is 1.538, which indicates that there is a big difference in corporate innovation among listed companies. After the tail reduction, the values of the mean and the standard deviation of the main variables in this paper are within a reasonable range.

Table 2 Descriptive statistics

Variable	*N*	*Mean*	*Sd*	*Min*	*P50*	*Max*
INV	3411	3.824	1.538	0.693	3.837	7.826
KAM	3381	0.033	0.178	0	0	1
KAM_num₁	79	0.177	0.384	0	0	1
KAM_num₂	79	0.544	0.501	0	1	1
SIZE	3381	21.984	1.138	19.943	21.975	25.936
ROE	3381	0.063	0.085	-0.343	0.069	0.301
LEV	3381	0.514	0.262	0.061	0.548	1.685
TobinQ	3381	3.556	2.489	0.263	3.175	13.725
INDIR	3381	0.376	0.05	0.333	0.375	0.571
MARKET	3381	8.438	1.542	3.49	9.35	9.78
MB	3381	4.66	2.327	1.785	4.289	15.407
CFO	3381	0.054	0.069	-0.158	0.054	0.295
GROWTH	3381	0.198	0.36	-0.445	0.183	2.117
VOLUME	3381	0.692	0.256	0.153	0.712	1
BETA	3381	1.219	0.148	0.69	1.254	1.608
DUAL	3381	0.312	0.429	0	0	1
AGE	3381	16.68	4.665	6	16.917	29
CURRENT	3381	2.696	2.328	0.4	2.14	14.959

A simple comparison is made among all variables of corporates on the condition of whether the key audit matters are disclosed. The results are shown in Table 3. According to the results, the mean logarithm of patents of corporates that have not disclosed key audit matters is 3.803, the mean logarithm of patents of corporates that have disclosed key audit matters is 4.484, and the mean difference between the two groups is 0.680. It indicates that the innovation level of corporates with key audit disclosure is significantly higher than that of those without disclosure. The conclusion preliminarily verifies Hypothesis 1.

Table 3 Differences test

Variables	*KAM=0*	*Mean₁*	*KAM=1*	*Mean₂*	*MeanDiff*
INV	3270	3.803	111	4.484	-0.680***
SIZE	3270	21.913	111	24.069	-2.156***
ROE	3270	0.064	111	0.044	0.019**
LEV	3270	0.511	111	0.601	-0.091***
TobinQ	3270	3.633	111	1.307	2.325***
INDIR	3270	0.376	111	0.382	-0.006
MARKET	3270	8.438	111	8.428	0.011
MB	3270	4.685	111	3.908	0.777***

CFO	3270	0.054	111	0.051	0.003
GROWTH	3270	0.202	111	0.07	0.133***
VOLUME	3270	0.685	111	0.91	-0.226***
BETA	3270	1.222	111	1.118	0.104***
DUAL	3270	0.319	111	0.128	0.190***
AGE	3270	16.569	111	19.951	-3.383***
CURRENT	3270	2.734	111	1.597	1.136***

Notes: *, **, *** are significantly correlated at the 10%, 5%, and 1% levels, respectively.

Regression results on key audit matters and corporate innovation

The full sample test results from 2015 to 2016 are shown in Table 4. The column (1) shows the regression results of disclosure of key audit matters on corporate innovation. It can be found that the coefficient of *KAM_POST* is 0.59, which is significant at the level of 5%. That indicates the disclosure of key audit matters in the audit report can promote corporate innovation, which verifies Hypothesis 1 of this paper. Columns (2) and (3) present the regression results of the impact of the number of disclosed key audit matters on firm innovation. The coefficients of KAM_num_1 and KAM_num_2 are 0.45 and 0.52, respectively, which are both significant at 5% level. This indicates that the number of key audit matters disclosed in the audit report and the amount of information conveyed by the auditors through the report can positively promote the effect of corporate innovation.

Table 4 Regression results of key audit matters and corporate innovation

	(1) *INV*	(2) *INV*	(3) *INV*
POST	-0.02		
	(-0.53)		
KAM	-0.30		
	(-1.28)		
KAM_POST	0.59**		
	(2.07)		
KA_Mnum1		0.45**	
		(2.04)	
KA_Mnum2			0.52**
			(2.22)
SIZE	0.46***	0.51*	0.40
	(11.36)	(1.99)	(1.64)
ROE	1.22***	-1.48	-2.06
	(3.19)	(-0.58)	(-0.70)
LEV	-0.28**	-0.35	0.47
	(-2.00)	(-0.16)	(0.20)
TobinQ	-0.00	0.86*	0.87
	(-0.01)	(1.67)	(1.60)
INDIR	0.72	6.26	4.08
	(1.31)	(1.42)	(0.87)

MARKET	0.05**	0.20	0.18
	(2.38)	(1.00)	(0.80)
MB	-0.02	0.50	0.27
	(-0.98)	(1.40)	(0.66)
CFO	0.06	6.01	5.74
	(0.13)	(1.23)	(1.11)
GROWTH	-0.04	0.84	0.88
	(-0.45)	(1.01)	(0.92)
VOLUME	-0.44***	3.71	4.53
	(-2.93)	(1.33)	(1.40)
BETA	-0.16	0.46	0.72
	(-0.80)	(0.32)	(0.44)
DUAL	0.05	-0.59	-0.52
	(0.65)	(-1.06)	(-0.72)
AGE	-0.01**	0.03	0.03
	(-2.16)	(0.36)	(0.28)
CURRENT	-0.04**	-0.22	-0.14
	(-2.50)	(-0.67)	(-0.40)
_cons	-6.74***	-19.73***	-17.06**
	(-6.79)	(-2.65)	(-2.27)
Indutry FE	Yes	Yes	Yes
N	3381	79	79
Adjusted R-squared	0.16	-0.05	0.01

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

Intermediate mechanisms and economic consequences test

1.4 Examination of intermediate mechanisms: innovation input and information asymmetry

In the above hypotheses, we believe that the disclosure of key audit matters can promote corporate innovation by increasing innovation input and reducing information asymmetry. To this end, we tested the effectiveness of these two action mechanisms. Firstly, the share of R&D investment in total assets at the end of the period (*RD*) is selected as a substitute variable for innovation investment. Secondly, referring to the research design of Kim and Zhang (2016), discretionary accruals (*Cscore*) are introduced as a measure of information asymmetry. The models are built as follows:

$$RD = \beta_0 + \beta_1 POST + \beta_2 KAM + \beta_3 KAM \times POST + Controls + Industry + \varepsilon \quad (3)$$

$$(4) \quad Cscore = \alpha_0 + \alpha_1 POST + \alpha_2 KAM + \alpha_3 KAM \times POST + Controls + Industry + \varepsilon$$

1.4.1 Innovation investment

Firstly, we attempt to examine whether key audit matters further influence firm innovation by influencing firm innovation investment. As described above, the disclosure of key audit matters can ease the financial constraints of corporates. Therefore, it can make up for the lack of R&D funds of the corporate so that the corporate can expand the scale of R&D, hire higher-level R&D employees, purchase more advanced fixed assets, and finally improve the scale economy of R&D activities. That makes up for the gap between corporate income and social income to a certain extent and creates richer external conditions for corporate innovation and R&D activities, which stimulates the enthusiasm of corporate independent R&D. Therefore, we test whether the disclosure of key audit matters can promote the increase of R&D investment through the DID model. Column (1) of Table 5 shows the empirical results. The coefficient of *KAM_POST* is 0.4, which indicates that the key audit matters promote the innovation level of corporates by significantly prompting the R&D investment of corporates.

1.4.2 Information asymmetry

PCAOB (2017) expected that, in the context of high information asymmetry, the disclosure of key audit matters can significantly promote the development of companies. Reid et al. (2015) further validated the finding by exploring market responses to key audit matters. As a result, we explore the correlation between disclosure of key audit matters and information asymmetry. The results are shown in column (1) of Table 5. The coefficient of *KAM_POST* is -0.01, which is significant at the 5% level. It shows that the disclosure of key audit matters can promote corporate innovation through weakening the degree of information asymmetry.

Table 5 Analysis of Intermediate Mechanisms: Innovation Investment and Information Asymmetry

	(1)	(2)
	RD	*Cscore*
POST	0.05*	-0.00***
	(1.71)	(-3.00)
KAM	-0.00	-0.01
	(-0.03)	(-1.46)
KAM_POST	0.40**	-0.01**
	(2.55)	(-2.42)
SIZE	-0.27***	0.00***
	(-6.73)	(2.72)
ROE	0.17	0.31***
	(0.41)	(26.66)
LEV	0.21	0.02***
	(1.33)	(3.33)
TobinQ	0.05**	0.00
	(2.19)	(1.39)
INDIR	0.23	-0.00
	(0.36)	(-0.19)
MARKET	0.12***	-0.00
	(5.85)	(-0.60)
MB	-0.05***	-0.00***
	(-3.36)	(-2.59)
CFO	0.41	-0.70***
	(0.85)	(-44.05)
GROWTH	-0.01	0.00
	(-0.26)	(1.29)
VOLUME	0.18	-0.02***
	(1.32)	(-5.83)
BETA	0.20	-0.01***

	(1.37)	(-2.91)
DUAL	0.03	0.00
	(0.53)	(0.06)
AGE	-0.02***	-0.00
	(-3.80)	(-0.63)
CURRENT	0.10***	0.00***
	(4.11)	(3.58)
_cons	6.16***	-0.01
	(5.96)	(-0.22)
Indutry FE	Yes	Yes
N	4504	4007
Adjusted R-squared	0.37	0.68

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

1.5 Economic consequences: investment efficiency and corporate value

The ultimate purpose of corporate innovation is to improve the economic benefits of corporates. So, it is necessary to discuss whether the disclosure of the key audit matters improve the economic consequences of the firm by promoting innovation. Under certain conditions, investment efficiency and firm value are positively correlated with firm innovation activities. On the one hand, innovation achievements represent the investment efficiency of the corporate; On the other hand, corporate innovation input can improve corporate value (Zhang and Zhang, 2022). Therefore, we examine the economic consequences of disclosure of key audit matters from the perspective of corporate investment efficiency and corporate value (*TobinQ*). Based on the above analysis, this paper constructs the DID models with investment efficiency and corporate value as the explained variables for further testing:

$$Invest = \beta_0 + \beta_1 INV + \beta_2 KAM + \beta_3 POST + \beta_4 KAM \times POST + \beta_5 POST \times INV + \beta_6 KAM \times POST \times INV + Controls + Industry + \varepsilon \quad (5)$$

$$TobinQ = \beta_0 + \beta_1 INV + \beta_2 KAM + \beta_3 POST + \beta_4 KAM \times POST + \beta_5 POST \times INV + \beta_6 KAM \times POST \times INV + Controls + Industry + \varepsilon \quad (6)$$

In equation (5), drawing on the research of Mcnichols (2008), this paper selects the absolute value of the residuals of the constructed investment variable model. The higher the value, the lower the overall investment efficiency of the corporate. Other key variables and control variables are the same as in the main test. The specific variable definitions are shown in Table 1. In the above model, we also controlled for industry-level factors.

The regression analysis results are shown in Table 6. *KAM_POST_INV* is the intersection of key audit matters disclosure and corporate innovation. In column (1), the correlation coefficients of *KAM_POST_INV* and investment efficiency (*Invest*) suggest that the disclosure of key audit matters significantly promote the corporate investment efficiency. In column (2), there are the test results of whether key audit matters increase corporate market value (*TobinQ*) by improving corporate innovation performance. The correlation coefficient between *KAM_POST_INV* and corporate market value (*TobinQ*) is 0.48, and the correlation is significantly positive at 5% level. This indicates that the key audit matters can improve the firm value by improving the firm's R&D performance.

Table 6 Economic Consequences: Investment Efficiency and Firm Value

	(1) *Invest*	(2) *TobinQ*
INV	-0.00	0.04
	(-1.06)	(1.03)
KAM	-0.02***	1.40
	(-2.89)	(1.48)
POST	-0.00	0.02
	(-0.22)	(0.12)
KAM_POST	0.01**	7.39***
	(2.27)	(7.11)
KAM_INV	0.00*	-0.25
	(1.73)	(-1.37)
POST_INV	0.00	-0.02
	(0.01)	(-0.38)
KAM_POST_INV	-0.00**	0.48**
	(-2.19)	(2.40)
SIZE	-0.00	-0.01
	(-0.94)	(-0.15)
ROE	0.00	0.57
	(0.62)	(0.94)
LEV	0.01***	0.10
	(2.85)	(0.50)
TobinQ		
INDIR	0.01	-0.86
	(0.79)	(-1.21)
MARKET	-0.00	-0.01
	(-0.21)	(-0.37)
MB	0.00	-0.01
	(0.34)	(-0.73)
CFO	0.03***	0.24
	(3.79)	(0.37)
GROWTH	-0.00	-0.05
	(-0.67)	(-0.38)

VOLUME	-0.00	-0.13
	(-0.95)	(-0.62)
BETA	0.00	-0.22
	(0.96)	(-0.76)
DUAL	0.00*	0.09
	(1.92)	(1.01)
AGE	-0.00	0.01*
	(-0.31)	(1.65)
CURRENT	0.00	-0.00
	(0.44)	(-0.26)
_cons	0.04**	4.28***
	(2.07)	(3.26)
Indutry FE	Yes	Yes
N	2446	3381
Adjusted R-squared	0.05	0.27

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

7 Robustness Test

7.1 Propensity score matching (PSM) test

In order to verify that the above regression results are not caused by other unobserved variables, PSM matching is performed on the samples with the above control variables in this paper. We obtain a new sample control group that discloses key audit matters. The interference of other factors on the empirical results and their randomness are reduced. As shown in Table 7, the coefficient value of *KAM_POST* is 1.18 and is significantly positive at the 1% statistical level. It suggests that thedisclosure of key audit matters helps to improve the innovation level of corporates. Although concerning the endogeneity, the results are consistent with the above conclusions. It shows that the conclusions of this paper are robust.

Table 7 Propensity Score Matching (PSM) Regression Results

		(1) *INV*	
	POST	-0.60**	(-1.99)
	KAM	-1.14***	(-3.07)
	KAM_POST	1.18***	(2.70)
	SIZE	0.79***	(5.36)
	ROE	-0.02	(-0.19)
	LEV	-1.02	(-1.11)
	TobinQ	0.09	(0.99)
	INDIR	-5.46**	(-2.28)
	MB	0.06	(0.62)
	MARKET	-0.02**	(-2.04)
	CFO	-2.73	(-1.37)
	GROWTH	0.59	(1.35)
	VOLUME	-1.16**	(-2.04)
	BETA	-0.81	(-0.96)
	DUAL	0.50	(1.27)
	AGE	0.02	(0.70)
	CURRENT	-0.25***	(-2.61)
	_cons	-10.10**	(-2.27)
	Indutry FE	Yes	
N		222	
	Adjusted R-squared	0.39	

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

7.2 Placebo Test

In order to exclude the influence of other unknown factors, the placebo test was performed. The sample observation interval for the implementation of key audit matters is changed to the fiscal year in which the new audit reporting standards are not implemented (that is, the time interval is changed from 2015-2016 to 2013-2014 for the main test). As shown in Table 8, the correlation coefficient of *KAM_POST* is not significant. It indicates that the implementation of key audit matters is the most important factor to promote the change of corporate innovation behavior, rather than the time trend.

Table 8 Placebo test regression results

		(1) *INV*	
	POST	0.36***	(7.49)
	KAM	0.42*	(1.79)
	KAM_POST	-0.02	(-0.09)
	SIZE	0.56***	(13.54)
	ROE	1.09***	(2.92)
	LEV	-0.14	(-0.75)
	TobinQ	0.05*	(1.76)
	INDIR	0.95	(1.54)
	MB	0.03	(1.47)
	MARKET	-0.01	(-0.32)
	CFO	0.92**	(2.01)
	GROWTH	0.20**	(1.98)
	VOLUME	0.09	(0.63)
	BETA	0.07	(0.37)
	DUAL	0.05	(0.77)
	AGE	-0.01**	(-1.97)
	CURRENT	-0.04***	(-3.54)
	_cons	-10.01***	(-10.60)
	Indutry FE	Yes	
N		2403	
	Adjusted R-squared	0.28	

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

7.3 Regression with expanded sample size

In order to avoid the contingency of the results due to the sample interval, the time period of the sample is lagged by two periods. We perform the regression tests again for the new time period. The results are shown in Table 9. The disclosure of key audit matters (*KAM_POST*) is still positively correlated with corporate innovation, which is consistent the main test. In addition, the coefficients of the number of key audit matters (KAM_num_1, KAM_num_2) further validate the empirical results of the main test.

Table 9 Regression results of two lag periods

	(1) *INV*	(2) *INV*	(3) *INV*
POST	0.16^{***}		
	(3.74)		
KAM	-0.36		

		(-1.64)		
KAM_POST		0.53*		
	(1.93)			
KAM_num1			0.46**	
			(2.48)	
KAMnum2				0.47**
				(2.30)
SIZE		0.49***	0.46**	0.50*
		(11.30)	(2.12)	(1.92)
ROE		1.96***	-1.95	-2.47
		(4.61)	(-1.11)	(-1.29)
LEV		-0.30*	1.14	0.75
		(-1.87)	(0.51)	(0.28)
TobinQ		0.03	0.96**	0.93**
		(1.55)	(2.61)	(2.16)
INDIR		0.94	-10.81**	-6.53
		(1.62)	(-2.13)	(-1.10)
MARKET		0.04*	0.09	0.24
		(1.83)	(0.45)	(0.96)
MB		-0.03	-0.07	0.02
		(-1.38)	(-0.38)	(0.09)
CFO		0.21	-5.12	-0.54
		(0.48)	(-0.81)	(-0.07)
GROWTH		-0.11	0.51	0.52
		(-1.20)	(0.75)	(0.75)
VOLUME		-0.30*	0.48	0.64
		(-1.77)	(0.29)	(0.32)
BETA		-0.04	0.31	1.53
		(-0.19)	(0.23)	(0.85)
DUAL		0.08	-0.94	-1.84
		(1.04)	(-0.60)	(-0.95)
AGE		-0.01	0.02	0.02
		(-1.13)	(0.27)	(0.32)
CURRENT		-0.05***	-0.25	-0.29
		(-3.52)	(-1.06)	(-1.09)
_cons		-7.90***	-6.27	-11.88
		(-7.36)	(-0.81)	(-1.28)
Indutry FE		Yes	Yes	Yes
N		3335	78	78
Adjusted R-squared		0.17	0.22	0.26

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

7.4 Adjust the degree of tailing of the variable

To avoid the difference of results caused by too many extreme values, the 2%tail reduction treatment is adopted to strengthen the treatment of extreme values. As shown in Table 10, the coefficient values of *KAM_POST*, *KAM_num*$_1$ and *KAM_num*$_2$ are 0.60, 0.48 and 0.55, respectively, which are all significant at 5% level. It indicates that the conclusion that the disclosure of key audit matters is conducive to prompting innovation activities of corporates is robust and reliable.

Table 10 results of 2% tailed regression

	(1) *INV*	(2) *INV*	(3) *INV*
POST	-0.03		
	(-0.62)		
KAM	-0.24		
	(-1.02)		
KAM_POST	0.60**		
	(2.12)		
KAMnum1		0.48**	
		(2.13)	
KAMnum2			0.55**
			(2.34)
SIZE	0.45***	0.62*	0.49
	(11.11)	(1.91)	(1.54)
ROE	1.58***	-2.47	-3.32
	(3.59)	(-0.78)	(-0.92)
LEV	-0.32**	1.14	1.92
	(-2.14)	(0.47)	(0.82)
TobinQ	0.00	1.02*	1.04*
	(0.12)	(1.80)	(1.78)
INDIR	0.79	4.40	1.15
	(1.33)	(0.66)	(0.18)
MARKET	0.05**	0.13	0.10
	(2.36)	(0.63)	(0.44)
MB	-0.02	0.56	0.28
	(-1.01)	(1.53)	(0.69)
CFO	-0.13	7.74	7.39
	(-0.30)	(1.41)	(1.31)
GROWTH	-0.05	1.00	1.03
	(-0.54)	(1.06)	(0.98)
VOLUME	-0.41***	4.89*	5.62*
	(-2.69)	(1.77)	(1.82)
BETA	-0.13	0.07	0.22
	(-0.60)	(0.05)	(0.15)
DUAL	0.04	-0.68	-0.59
	(0.61)	(-1.00)	(-0.73)
AGE	-0.02**	0.02	0.02
	(-2.41)	(0.19)	(0.16)
CURRENT	-0.04**	-0.07	0.01
	(-2.31)	(-0.20)	(0.03)
_cons	-6.75***	-22.85**	-18.63*
	(-6.60)	(-2.35)	(-1.91)
Indutry FE	Yes	Yes	Yes
N	3381	79	79

Adjusted R-squared	0.16	-0.06	0.01

Notes: Coefficient standard deviation in parentheses. All standard deviations of regression coefficients were processed by cluster at the company level. ***, ** and * indicate that the regression coefficient is significant at the level of 1%, 5% and 10%, respectively.

8 Conclusions and Implications

This paper selects non-financial listed companies in China from 2015 to 2016 as research samples to explore the correlation between key audit matters and corporate innovation. The research findings are as follows. Firstly, the disclosure of key audit matters can significantly enhance the level of corporate innovation investment. Moreover, the more the number of matters disclosed, the more obvious the effect of promoting the level of corporate innovation activity investment. Secondly, the intermediate mechanism test indicates that the disclosure of key audit matters improves corporate innovation by increasing innovation investment and reducing information asymmetry. Thirdly, the further study finds that key audit matters promote corporate innovation and thus increase corporate value as well as investment efficiency. In addition, to test the robustness of above conclusions, a variety of methods are used, including the propensity matching score method (PSM), changing the time interval, and changing the degree of tail shrinkage. The regression results show that the conclusion is robust.

The results of this paper enrich the current academic research on key audit matters in the level of corporate innovation activities. This paper affirms the implementation effect of the new audit report from the perspective of corporate innovation. The conclusions provide theoretical references for auditing standard makers, company executives and government to guide corporate innovation. Firstly, this paper provides theoretical support for improving auditing reporting standards. After the key audit matters focus on the major special risks of the corporate and highlight the risks faced by the corporate, the corporate should be required to reduce the template expression and improve the readability of the information in the new report. It is beneficial to enhance the use of external statements to obtain effective information and enhance their investment confidence. Secondly, for the manager of the company, they should fully cooperate with the auditor and conscientiously implement the relevant policies regarding the reconfiguration of the audit reporting model.

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Auditors’ Great Famine Experience and Stock Price Crash Risk

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Abstract:

This paper investigates the causality between auditors' Great Famine Experience and stock price crash risk. We use Chinese stock market data over the period 2007-2021. We find that the Great Famine Experience will affect stock price crash risk. Auditors who experienced the Great Famine in their childhood, will become more conservative. Our paper illustrates that auditors' Great Famine Experience will decrease stock price crash risk. Our results are more significant when the auditors are Big N audit firms (compared to non-Big N audit firms), partners, high-educated people, and industry experts. We also find gender differences, and female auditors are more easily affected by the experience.

Keywords: Great Famine Experience; stock price crash risk; auditor

1. Introduction

This study examines how auditors' the Great Famine experience impacts stock price crash risk. Specifically, we study whether auditors' early life experiences of major disasters will change their risk preference, thereby affecting the stock price crash risk of the companies they audit. To provide another external research perspective for stock price crash risk. This provides a novel view of stabilizing stock prices and corporate governance. In this paper, we document a negative relation between auditors' the Great Famine experience and stock price crash risk. Our findings also show that the results are driven by audit quality.

Stock price crash risk refers to the possibility of a sharp decline in stock price in the short term [1]. The stock price crash sends important economic information to external investors, and accounting standards play a crucial part in the process of stock price crash [2]. But we think accounting standards are only a standard. The auditors' childhood experience plays an imperative role in stock price crash risk. If the auditors publish a fasle audit report for their benefit to misunderstand investors, when terrible news accumulates to a certain degree, it bursts out one after another, causing the stock to plummet in the short term [3]. If the stock price crash, it will bring continuous adverse effects on the companies' operation and management[4]. In recent years, studies have also discussed the reason for stock price crash risk. Some literature points out social responsibility, government spending, CEO attributes (CEO gender, power, excess perk consumption, and overconfidence), and the extent to outside associations of the board of directors influence stock price crash risk [5-12]. But we find little literature study on the impact of auditors' experience on the companies' stock price crash risk.

In studying stock price crash risk, we focus on the early experience of external auditors. Many literatures points out childhood experience influences risk attitudes, personal emotions, moral sense, and value [13,14]. On this basis, most of the existing literature studies the impact of childhood experiences of executives on business management [15]. However, there is little literature on the auditors' early experience affects firms' behavior. Our paper is based on the early experience of auditors and studies whether auditors who have experienced early disaster experiences will change the auditors' risk preference and then change the companies' stock price crash risk.

Based on the existing literature, there are two inverse views on how early catastrophe experiences influence risk preference, affecting stock price crash risk. A group of scholars hold the opinion of risk aversion, and believe that individuals who have experienced natural disasters in the early-life will have higher risk perception ability, become more risk averse, and become more conservative in the face of risks [16-18]. Some literature shows that the board chairs and top executives who have experienced catastrophe in their early years are very conservative in the process of the companies' operation and management. The disclosure of financial information is more stable, and the possibility of issuing false financial reports is slight [15-19]. Therefore, people with early-life disaster experience tend to be conservative, reducing the likehood of making mistakes. If the auditors have experienced a disaster childhood, they will be risk averse when they grow up, and especially if they have a low possiblility of publishing falsified audit reports, finally, reducing stock price crash risk.

Other scholars hold a contrary opinion. Some think that people who have experienced disasters in their early life will become risking insensitive, become more risk tolerant and aggressive [20-22]. Therefore, when they make decisions, they will compare the current environment with previous disasters experience, which will enhance their confidence in facing risks [23-27]. So people with early-life disaster experiences tend to risking-loving, increasing the possibility of making mistakes. As auditors, when they have disaster experiences in their childhood, they can not feel the risk of crisis sensitively. So they maybe publish incorrect financial reports, send the wrong message to others, and finally cause the stock price crash risk.

We find that many literatures studies the impact of the early experience of top executives on the stock price crash risk, and little literatures studies the impact of auditors who have experienced a disaster on the stock price crash risk of firms [28-32]. We think that the quality of audit reports is of vital importance to information users. Many investors may make decisions based on firms' public information, and the most essential thing in public information is financial reports. If auditors reach an agreement with the management for various reasons to fabricate the audit report, it will have a terrible impact on the companies stock price. According to the above two views, we can find that how the early famine experience of auditors affects stock price crash risk has got to be a vital empirical issue. Our paper uses the Great Famine in China as the research background and makes an experimental study on this issue.

The reasons why we pay attention to the Chinese market are as follows. First of all, the disclosure of individual auditors in the United States began in 2017 (Public Company Accounting Oversight Board (PCAOB) [2015]). Still after the establishment of China's stock market in the 1990s, the Chinese government has required that the audit report must be publicly marked by two auditors [33]. This provides us with sufficient samples to study auditors' behavior. Secondly, our paper analyzes the impact of auditors' early disastrous experiences on their behavior. In the study of domestic and foreign events, we find that China's Great Famine experience (1959-1961) is a very representative [34]. The Great Chinese Famine offers a practical exterior standard for us to degree the influence of the catastrophe, which can diminish the conceivable inclination of self-reported traumatic encounters [15,28,35]. Thirdly, China's peaceful organizational environment is conducive to us investigating the part of foundation variables such as catastrophe experiences in corporate administration, which gives a supplement to the formal administration system. Due to the late beginning and immature advancement of China's capital market, the inside and outside corporate administration instrument is soft. For illustration, the data disclosure system is invalid, and the laws related to financial specialist assurance are constrained [36,37]. The weak environment background offers an opportunity for the auditors for various personal reasons to issue wrong financial information and conceal bad news. When the collection of bad news comes to a limit, all of the awful news come out at once, resulting in a stock price crash [3,12].

Given the few literatures studies the impact of auditors' early experience on the firm's stock price crash, this paper studies whether auditors' early experience will affect the firms' stock price like the firms' management from the auditors' point of view. Through previous studies, we think that auditors will issue audit opinions on corporate financial reports, and the accuracy of audit opinions will affect the decisions of external investors. The possibility of auditors giving false financial statements is affected by their audit quality. We believe that auditors' early experience will play a vital part in their audit opinions later.

Our paper devotes itself to the earlier literature in two ways. To begin with, we have expanded the impact of early executive experience on corporate management and governance. Enriched the research perspective, we view the problem from the perspective of the external auditor of the enterprise and explore the impact of auditors' personal experiences on corporate governance. The past paper shows appeared top executives' fiasco encounter in childhood time has impacted their chance inclination and assist influenced corporate money-related policies, cash holding approaches, speculation and financing choice, and financial disclosure quality [15,19,38,39]. Unlike the previous paper, we study the impact of auditors' experience on company governance, and then we can provide new solutions for the stability of the companies' management.

Then, our paper enriches the literature on the conclusive of stock price crash risk. The stock price of the company is affected by many factors, like news [40,41]. Many factors reduces stock price crash risk, including stock liquidity [42], company tax avoidance [43], equity incentives [44], analyst coverage [45], media coverage [46], institutional investors [47-49], religion [50], top executive gender [7], CEO power [8], gambling preferences [51], and top executives' Great Famine Experience [30]. Diverse from the previous paper, we study the impact of auditors' experience on stock price crash risk. Then we can provide new solutions for the stability of the companies' stock price through high-quality audit reports.

The rest of the paper is organized as follows: Section 2 shows the main hypotheses. Section 3 presents the data resources, variable definition, and methodology. Section4 provides the main empirical results, mechanism test, heterogeneity test, and robustness test. Finally, Section 5 concludes.

2. Hypotheses development

Jin and Myers [3] think internal managers of the company like to deliver bad news, even if the accurate information is good. So firms need to hire credible auditors; when the bad news is reported at a cost, it is reasonable. But the firm is opaque, and bad news is absorbed by insiders at first. When the amount of bad news absorbed by insiders over their limits, internal managers abandon and all the terrible news leak out. When bad news is released, bad news delivers significant negative returns. Eventually, the share price went sharply down in a short time.

We think there are agency problems between management and shareholders [52]. For the administration to make investment decisions, shareholders often link the performance of the administration to the stock price. When the stock price rises, the administration will get more compensation. Therefore, to maximize the value of shareholders, the administration will hide some bad news that is bad for the stock price and keep the company's stock price stable. At the same time, in order to supervise the management, the shareholders also employ external auditors to express their opinions on the companies' financial reports. Still the auditors may issue inaccurate audit reports for their interests to help the management cover up the bad news.

Whether to issue the fasle audit report and conceal the bad news depends on the auditors' judgment. According to the risk preference and risk attitude of auditors, weigh interests and risks and make personal decisions. Lovallo [53] believes that people who have experienced high adversity before the age of 16 have a series of changes. Some neuroscientists and bioscientists also think early life adversity (ELA) has an impact on later life [54-56]. Many literatures studies the influences of CEOs' early-life traumatic experiences on corporate governance. This influence comes from their attitude towards risk after the early experience. At present, there are two views. One is the risk aversion view, which assumes that people who have experienced early disasters will become conservative, and the other is the risk preference, which believes that people who have experienced early disasters will become bold and adventurous.

Cheng [1] believes that CEOs who have experienced disasters have a higher risk tolerance, so they are more ready to accept the risks brought by awful news hoarding, which is more likely to cause stock price crash risk. The idea is different from Cui [30], who believes that top executives' Great Famine Experience will have lower stock price crash risk. Our paper thinks people who have experienced disasters would become risk averse and more conservative [39]. CEOs who have experienced extreme fatal disasters may be more cautious in dealing with risks [20]. Yao [15] also pointed out that companies whose executives experienced the great famine in the early stage are less likely to make false financial reports. The hypothetical model of Jin and Myers [3] believes that the quality of financial reports is adversely related to stock price crash risk.

The above literature supports our view. The risk aversion view holds that auditors who have experienced the Great Famine are more delicate to the consequences of the hazard. They are less willing to require dangers and tend to issue traditionalist audit conclusions to diminish individual risks. In addition, they pay more attention to risk than personal interests, which viably decreases the plausibility of future stock price crash risk. Subsequently, we propose our hypothesis:

H1: The early Great Famine Experience of auditors will reduce the risk of further stock price crash risk.

3. Study Design

3.1. Data Selection and Description

Our empirical analysis is based on data from the China Stock Market and Accounting Research Database (CSMAR), which covers the stock returns of Chinese listed companies. We started our test period in 2007 since in 2006, the Chinese Ministry of Finance issued current accounting guidelines for commerce endeavors, effective January 1, 2007 [57]. Finally, our sample contains 22654 observations from 2007 to 2021.

3.2. Variable Design

3.2.1. Dependent Variable: Stock Price Crash Risk

We utilize the negative skewness of firm-specific week-by-week returns (*NSKEW*) and down-to-up volatility (*DUVOL*) to measure crash risk [3,29,30,43,44,58].

First, we calculate the firm-specific week by week return for firm i in week *t* ($W_{i,t}$) by assessing the following demonstrate:

$$R_{i,t} = \alpha_i + \beta_1 R_{m,t-2} + \beta_2 R_{m,t-1} + \beta_3 R_{m,t} + \beta_4 R_{m,t+1} + \beta_5 R_{m,t+2} + \varepsilon_{i,t} \quad , \tag{1}$$

Where $R_{i,t}$ is the return of stock *i* in week *t*, and $R_{m,t}$ is the normal return of the market in week *t*. The lag and lead terms for normal returns of the market are included to adjust the effect of non-synchronous exchanging. The firm-specific week-by-week return for firm is given by $W_{i,t} = Ln(1 + \varepsilon_{i,t})$, where $\varepsilon_{i,t}$ is the residual return from Eq (1). At that point, two factors are developed based on the firm-specific week-by-week return $W_{i,t}$:

(1) The negative conditional skewness of firm-specific week-by-week returns (*NCSKEM*)

$$NCSKEW_{i,t} = -[n(n-1)^{3/2} \sum W^3{}_{i,t}]/[(n-1)(n-2)(\sum W^2{}_{i,t})^{3/2}] \tag{2}$$

Where *n* is the number of exchanging weeks on stock *i* in year *t*. The higher the *NCSKEM*, the more prominent the stock price crash risk.

(2) The down-to-up volatility (*DUVOL*)

$$DUVOL_{i,t} = log\{[(n_{UP}-1) \sum_{DOWN} W^2{}_{i,t}]/[(n_{DOWN}-1)\sum_{UP} W^2{}_{i,t}]\} \tag{3}$$

Where n_{UP} (n_{DOWN})is the number of up (down) weeks. The higher the *DUVOL*, the more prominent the stock price crash risk [30].

When setting the dependent variable, we use the stock price crash risk of the next period, so we get $NCSKEW_{t+1}$ and $DUVOL_{t+1}$ as our dependent variable.

3.2.2. Independent Variable: Measure of Exp_t

A company needs to be audited by two auditors in China, so we collect the data from The Chinese Institute Of Certified Public Accountants (CICPA) for all available auditor names and match them with the date of birth. If an auditor was born before the Great Famine (1959-1961), we default that he has experienced the Great Famine. Otherwise, he has not [15,18,30]. When designing the independent variable, we set at least one auditor who has experienced the Great Famine. Therefore, we construct the variable Exp_t as a dummy which is equal to one if at least one auditor who has experienced the Great Famine, others equals to 0.

3.2.3. Control variables

Following previous literature [59,60], we control for a vector of variables that may affect stock price crash risk, including $NCSKEW_t$, $DUVOL_t$, firm size ($SIZE_t$), leverage financing (LEV_t), profitability (ROE_t), stock performance (RET_t), stock return volatility ($SIGMA_t$), monthly average excess turnover rate ($TURNOVER_t$), growth of the company ($GROWTH_t$), the proportion of independent directors ($RATIO_t$) [4,61], corporate transparency ($|DA_t|$). We can get these raw data from CSMAR. All persistent variables are winsorized at the 1% level in each tail. Standard errors are clustered by firm. In addition, the industry fixed effect and year fixed effect were controlled. Table 1 lists the variables and their definitions.

Table 1. Descriptive statistics

Variable	Measurement
$NCSKEW_{t+1}$	The skewness coefficient of the negative return of shares in firm *i* in year *t+1*
$DUVOL_{t+1}$	The fluctuation ratio of stock return of the firm *i* in year *t+1*
Exp_t	A dummy which equals to one if at least one auditor who has experienced the Great Famine, others equal to 0
$NCSKEW_t$	The skewness coefficient of the negative return of shares in firm *i* in year *t*
$DUVOL_t$	The fluctuation ratio of stock return of the firm *i* in year *t*
$SIZE_t$	The natural logarithm term of total assets
LEV_t	The total liabilities divided by total assets
ROE_t	Net profit divided by total assets
RET_t	The average weekly special yield of firm *i* in year *t*
$SIGMA_t$	The return fluctuation of firm *i* in year *t* which is the standard deviation of the special return of firm *i* in year *t*
$TURNOVER_t$	The monthly average excess turnover rate is the difference between the monthly average turnover rate of firm *i* in year *t* and the monthly average turnover rate of firm *i* in year *t-1*
$GROWTH_t$	The growth rate of fixed assets
$RATIO_t$	The ratio of the number of independent directors to the number of directors
Industry	Dummy variables for industry
Year	Dummy variables for year

3.3. Empirical Models

To study the impact of auditors' Great Famine Experience on stock price crash risk, we design the following least square method（OLS）model,

$$NCSKEW_{i,t+1} = \alpha + \beta Exp_{i,t} + \theta Controls + \varepsilon_{i,t} \tag{4}$$

$$DUVOL_{i,t+1} = \alpha + \beta Exp_{i,t} + \theta Controls + \varepsilon_{i,t} \quad (5)$$

$NCSKEW_{i,t+1}$ represents the skewness coefficient of the negative return of shares in firm *i* in year *t+1*. $DUVOL_{i,t+1}$ represents the fluctuation ratio of the stock return of the firm *i* in year *t+1*. Exp_t is a dummy variable, and it represants at least one auditor who has experienced the Great Famine. *Controls* refers to the set of control variables that may influence stock price crash risk, including $NCSKEW_t$, $DUVOL_t$, $SIZE_t$, LEV_t, ROE_t, RET_t, $SIGMA_t$, $TURNOVER_t$, $GROWTH_t$, $RATIO_t$. $\mathcal{E}_{i,t}$ represents random error terms. Our data includes all firms recorded on the Shanghai Stock Exchange and Shenzhen Stock Exchange from 2007 to 2021.

4. Analyses and Results

4.1. Descriptive statistics

Table 2 reports the descriptive statistics of the sample from 2007 to 2021, including mean, standard deviation, minimum, p50 and maximum for each variable. The mean values of $NCSKEW_{t+1}$ and $DUVOL_{t+1}$ are -0.27 and -0.196, which is lower than the mean values of $NCSKEW_t$ and $DUVOL_t$. The standard deviation of $SIZE_t$ and LEV_t are very higher than other variables, which indicates that they are widely dispersed. The maximum value of LEV_t is 295.576, but the minimum value is 0.006. We find the vast dispersed of LEV_t. To relieve the outlier, we winsorized all our variables at the 1% level in each tail.

Table 2. Descriptive statistics

Variable	N	Mean	S.D.	Min	P50	Max
$NCSKEW_{t+1}$	22654	-0.27	0.608	-1.948	-0.266	1.487
$DUVOL_{t+1}$	22654	-0.196	0.459	-1.262	-0.203	1.037
Exp_t	22654	0.062	0.24	0	0	1
$NCSKEW_t$	22654	-0.228	0.586	-1.943	-0.211	1.317
$DUVOL_t$	22654	-0.161	0.447	-1.249	-0.169	0.968
$SIZE_t$	22654	21.885	1.262	19.308	21.732	25.924
LEV_t	22654	0.667	2.903	0.006	0.549	295.576
ROE_t	22654	0.078	0.131	-0.591	0.077	0.436
RET_t	22654	-0.001	0.001	-0.003	-0.001	0
$SIGMA_t$	22654	0.049	0.015	0.007	0.048	0.105
$TURNOVER_t$	22654	-0.001	0.524	-5.92	0.024	4.023
$GROWTH_t$	22654	0.204	0.611	-0.585	0.036	4.21
$RATIO_t$	22654	0.367	0.05	0.3	0.333	0.571

4.2. Baseline results

In this section, we conduct different regression examinations to provide empirical evidence. The benchmark model of equations (4) and (5) illustrates the impact of auditors' Great Famine experience on stock price crash risk in China. From table 3, we can find the correlations are -0.04 and -0.03, and all are significant negative correlations at the 1% level. We discover a significant negative relationship between auditors' Great Famine experience and stock price crash risk. The result is reliable to our previous hypothesis. In table3, Columns (1) and (3) show the regression result without time, and industry fixed effect, while Columns (2) and (4) show the regression results with both fixed effect. Columns (1) and (2) use $NCSKEW_{t+1}$ as dependent various. Columns (3) and (4) use $DUVOL_{t+1}$ as dependent variables.

Table 3. The effect of auditors' early-life Great Famine experience (Exp_t) on stock price crash risk.

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
Exp_t	-0.03***	-0.04***	-0.03***	-0.04***
	(-2.62)	(-2.66)	(-3.82)	(-3.40)
$NCSKEW_t$	0.048***	0.068***		
	(5.45)	(7.68)		
$DUVOL_t$			0.051***	0.064***
			(5.43)	(6.78)
$SIZE_t$	-0.019***	-0.033***	-0.011***	-0.024***
	(-3.76)	(-6.38)	(-2.89)	(-6.22)
LEV_t	0.001*	0.002*	0.000	0.000
	(1.78)	(1.71)	(0.36)	(0.49)
ROE_t	-0.149***	-0.017	-0.110***	-0.001
	(-3.48)	(-0.40)	(-3.19)	(-0.02)
RET_t	45.190	10.651	31.017	2.693
	(1.07)	(0.25)	(0.94)	(0.08)
$SIGMA_t$	2.869	2.350	2.124	1.708
	(1.43)	(1.18)	(1.37)	(1.12)

$TURNOVER_t$	-0.087***	-0.009	-0.074***	-0.011
	(-8.10)	(-0.75)	(-8.82)	(-1.12)
$GROWTH_t$	-0.013	-0.010	-0.007	-0.004
	(-1.48)	(-1.18)	(-1.07)	(-0.62)
$RATIO_t$	0.085	-0.098	0.108	-0.044
	(0.73)	(-0.88)	(1.28)	(-0.54)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.053	0.238*	-0.050	0.155
	(0.40)	(1.70)	(-0.51)	(1.48)
N	22654	22654	22654	22654
Adjusted R-squared	0.010	0.063	0.011	0.062

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.3. Mechanism test

To explore how the auditors' experience of the Great Famine influences the stock price crash price of firms, we do a mechanism test. Through the mechanism test, we find that the auditor's experience of the Great Famine will affect the auditor's audit quality. And then affect the stock price crash risk of the audited firms. The experience of the Great Famine will change the risk preference of auditors, make them more cautious, and improve the audit quality. If auditors have a higher audit quality, the audited firms will have a lower stock price crash risk.

Based on Jones [62] model proposed by Dechow and Sloan [63], our paper uses $|DA_t|$ to measure audit quality [64-66]. We design $|DA_t|$ to indicate firms' earnings management. From table 4, we can find that the correlation between $|DA_t|$ and Exp_t is -0.03, which is consistent with our conclusion.

Table 4. Mechanism test

	(1)	**(2)**	**(3)**	**(4)**
	$\|DA_t\|$	**$\|DA_t\|$**	**$\|DA_t\|$**	**$\|DA_t\|$**
Exp_t	-0.03***	-0.03***	-0.03***	-0.03***
	(-3.83)	(-3.39)	(-3.84)	(-3.34)

$NCSKEW_t$	0.003***	0.002**		
	(3.22)	(2.38)		
$DUVOL_t$			0.003*	0.002
			(1.89)	(1.08)
$SIZE_t$	-0.003***	-0.003***	-0.003***	-0.003***
	(-3.90)	(-4.06)	(-3.94)	(-4.09)
LEV_t	0.002***	0.002***	0.002***	0.002***
	(3.28)	(3.48)	(3.27)	(3.47)
ROE_t	0.007	0.001	0.007	0.001
	(0.73)	(0.06)	(0.76)	(0.08)
RET_t	-9.917	-10.817*	-9.589	-10.551*
	(-1.60)	(-1.81)	(-1.55)	(-1.76)
$SIGMA_t$	0.188	0.144	0.207	0.162
	(0.69)	(0.55)	(0.76)	(0.62)
$TURNOVER_t$	-0.004***	-0.002	-0.004***	-0.002
	(-3.09)	(-1.24)	(-3.08)	(-1.27)
$GROWTH_t$	0.002	0.002*	0.002	0.002*
	(1.63)	(1.79)	(1.62)	(1.78)
$RATIO_t$	0.046***	0.044***	0.046***	0.044***
	(3.15)	(3.07)	(3.16)	(3.08)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.081***	0.092***	0.081***	0.092***
	(4.60)	(5.25)	(4.59)	(5.23)

N	19275	19275	19275	19275
Adjusted R-squared	0.040	0.084	0.039	0.083

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.4. Heterogeneity test

4.4.1. Partners' famine experience

We study the effect of the famine experienced by partners on the stock price crash [67]. $Partner_t$ characterizes whether a signing auditor could be a partner. The existing literature shows that auditors who are partners act in an unexpected way from other auditors. Since audit partners possess and manage the firm, the goal consistency between the partners and the firm is more noteworthy than that between non-partner auditors and the firm. Miller [68] contends that audit partners ought to be more conservative than non-partners. So going through the Great Famine will magnify the conservatism of partners. Compared to the non-partner auditors, partners who have experienced the Great Famine will reduce the stock price crash risk. In other words, auditors' experience of the Great Famine will alleviate stock price crash risk, which is more obvious among partners.

Table 5. Partners' famine experience

	(1)	**(2)**	**(3)**	**(4)**
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
$Exp_t \times Partner_t$	0.071**	0.072**	0.051**	0.051**
	(2.32)	(2.34)	(2.31)	(2.32)
Exp_t	0.078	0.068	0.068*	0.065
	(1.27)	(1.15)	(1.68)	(1.64)
$Partner_t$	0.019	-0.001	0.029**	0.010
	(1.28)	(-0.09)	(2.41)	(0.85)
$NCSKEW_t$	0.048***	0.068***		
	(5.40)	(7.67)		
$DUVOL_t$			0.051***	0.064***
			(5.36)	(6.76)
$SIZE_t$	-0.020***	-0.033***	-0.012***	-0.024***
	(-3.86)	(-6.29)	(-3.20)	(-6.27)
LEV_t	0.001*	0.002*	0.000	0.000

	(1.76)	(1.72)	(0.29)	(0.47)
ROE_t	-0.147***	-0.017	-0.107***	0.000
	(-3.44)	(-0.41)	(-3.11)	(0.00)
RET_t	45.024	10.410	31.071	2.815
	(1.07)	(0.25)	(0.94)	(0.09)
$SIGMA_t$	2.873	2.337	2.141	1.724
	(1.44)	(1.18)	(1.39)	(1.14)
$TURNOVER_t$	-0.091***	-0.009	-0.080***	-0.013
	(-8.09)	(-0.66)	(-9.00)	(-1.29)
$GROWTH_t$	-0.011	-0.010	-0.005	-0.003
	(-1.31)	(-1.19)	(-0.75)	(-0.52)
$RATIO_t$	0.087	-0.098	0.111	-0.043
	(0.75)	(-0.88)	(1.31)	(-0.53)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.054	0.237*	-0.047	0.154
	(0.41)	(1.69)	(-0.48)	(1.47)
N	22654	22654	22654	22654
Adjusted R-squared	0.010	0.063	0.012	0.062

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.4.2. Education level

Bertrand and Schoar [69] show that CEOs with MBA degrees are more aggressive than other CEOs. Educational experience can change a person's risk preference. So auditors with higher education are more likely to be conservative and comply with the auditing standards. Those with higher education are less likely to be affected by natural disasters in childhood. For the level of education, we set a dummy variable $Master_t$. If the auditor is a master or above, we set it to 1; otherwise, set it to 0. From table 6, we find that higher education can mitigate the impact of childhood natural disaster experiences.

Table 6. Education level

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
$Exp_t \times Master_t$	0.011**	0.011**	0.011**	0.011**
	(2.13)	(2.14)	(2.18)	(2.16)
Exp_t	-0.025	-0.038	-0.024	-0.038*
	(-0.96)	(-1.52)	(-1.21)	(-1.95)
$Master_t$	-0.022	-0.015	-0.018	-0.012
	(-1.50)	(-1.05)	(-1.57)	(-1.05)
$NCSKEW_t$	0.048***	0.068***		
	(5.46)	(7.69)		
$DUVOL_t$			0.051***	0.064***
			(5.45)	(6.80)
$SIZE_t$	-0.018***	-0.033***	-0.010***	-0.024***
	(-3.66)	(-6.31)	(-2.76)	(-6.13)
LEV_t	0.001*	0.002*	0.000	0.000
	(1.76)	(1.70)	(0.36)	(0.49)
ROE_t	-0.148***	-0.017	-0.109***	-0.001
	(-3.47)	(-0.40)	(-3.17)	(-0.02)
RET_t	45.607	10.857	31.259	2.708
	(1.08)	(0.26)	(0.95)	(0.08)
$SIGMA_t$	2.901	2.355	2.146	1.705
	(1.45)	(1.19)	(1.39)	(1.12)
$TURNOVER_t$	-0.086***	-0.009	-0.073***	-0.010

	(-7.97)	(-0.68)	(-8.68)	(-1.05)
$GROWTH_t$	-0.013	-0.010	-0.007	-0.004
	(-1.53)	(-1.22)	(-1.12)	(-0.65)
$RATIO_t$	0.084	-0.098	0.107	-0.045
	(0.72)	(-0.88)	(1.27)	(-0.55)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.045	0.235*	-0.056	0.153
	(0.34)	(1.68)	(-0.57)	(1.46)
N	22654	22654	22654	22654
Adjusted R-squared	0.010	0.063	0.011	0.062

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.4.3. Gender heterogeneity

In table 7, we study whether existing gender heterogeneity. Many literatures believe that female are more perceptual and conservative than men, and female are more vulnerable to external interference. Females who have done audit-related work are generally more risk-averse compared to males [70]. Therefore, when female auditors have experienced the Great Famine, they will become more sensitive to the experience of the Great Famine in adulthood and let them develop conservative and prudent behavior. We set a dummy *$Gender_t$*, if a firm is audited by a female, it is equal to 1, others equal to 0. Auditors' experience of the Great Famine will decrease stock price crash risk, which is more prominent among female auditors.

Table 7. Gender heterogeneity

	(1)	**(2)**	**(3)**	**(4)**
	$NCSKEW_{t+1}$	***$NCSKEW_{t+1}$***	***$DUVOL_{t+1}$***	***$DUVOL_{t+1}$***
$Exp_t \times Gender_t$	0.052**	0.053**	0.015**	0.015**
	(2.12)	(2.11)	(2.23)	(2.24)
Exp_t	0.040	0.046	0.019	0.025
	(1.28)	(1.54)	(0.78)	(1.08)
$Gender_t$	-0.031***	-0.026**	-0.026***	-0.020**

	(-2.63)	(-2.23)	(-2.79)	(-2.17)
$NCSKEW_t$	0.048^{***}	0.068^{***}		
	(5.40)	(7.65)		
$DUVOL_t$			0.050^{***}	0.063^{***}
			(5.36)	(6.74)
$SIZE_t$	-0.020^{***}	-0.034^{***}	-0.012^{***}	-0.024^{***}
	(-3.96)	(-6.52)	(-3.12)	(-6.37)
LEV_t	0.001^{*}	0.002^{*}	0.000	0.000
	(1.74)	(1.67)	(0.31)	(0.44)
ROE_t	-0.150^{***}	-0.018	-0.112^{***}	-0.003
	(-3.51)	(-0.43)	(-3.24)	(-0.08)
RET_t	45.068	10.715	30.980	2.794
	(1.07)	(0.25)	(0.94)	(0.09)
$SIGMA_t$	2.865	2.367	2.125	1.728
	(1.43)	(1.19)	(1.38)	(1.14)
$TURNOVER_t$	-0.090^{***}	-0.013	-0.077^{***}	-0.014
	(-8.34)	(-1.02)	(-9.14)	(-1.40)
$GROWTH_t$	-0.011	-0.008	-0.006	-0.003
	(-1.28)	(-1.02)	(-0.86)	(-0.47)
$RATIO_t$	0.086	-0.097	0.109	-0.044
	(0.74)	(-0.87)	(1.29)	(-0.53)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.061	0.242^{*}	-0.043	0.158

	(0.46)	(1.73)	(-0.44)	(1.51)
N	22654	22654	22654	22654
Adjusted R-squared	0.011	0.064	0.012	0.062

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.4.4. Big N audit firms

In table 8, we study auditors who work in Big N audit firms or non-Big N audit firms, whether they affect the companies' stock price crash risk. Big N audit firms prefer to recruit employees who comply with the companies' regulations. Unlike non-Big N auditors, the auditors of the Big N are more conservative [67]. Generally speaking, the professional judgment ability of the auditors those working in the Big N audit firms will be relatively high compared to working in the non-Big N audit firms, which will weaken the impact of the Great Famine on the audit. We set a dummy $BigN_t$, which equals 1 when a firm is audited by Big 10 audit firms and 0 otherwise. We find that the Big N audit firms' auditor will decrease the negative effect.

Table 8. Big N audit firms

	(1)	**(2)**	**(3)**	**(4)**
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
$Exp_t \times BigN_t$	0.031***	0.031***	0.006**	0.006**
	(2.79)	(2.77)	(2.16)	(2.14)
Exp_t	0.010	0.021	0.023	0.035
	(0.30)	(0.64)	(0.94)	(1.50)
$BigN_t$	-0.099***	-0.002	-0.080***	-0.010
	(-7.92)	(-0.13)	(-8.12)	(-0.68)
$NCSKEW_t$	0.049***	0.068***		
	(5.61)	(7.68)		
$DUVOL_t$			0.052***	0.064***
			(5.55)	(6.79)
$SIZE_t$	-0.023***	-0.033***	-0.014***	-0.024***

	(-4.47)	(-6.40)	(-3.68)	(-6.21)
LEV_t	0.002*	0.002*	0.000	0.000
	(1.75)	(1.70)	(0.50)	(0.50)
ROE_t	-0.123***	-0.017	-0.089**	-0.001
	(-2.87)	(-0.40)	(-2.56)	(-0.02)
RET_t	59.346	10.639	42.733	2.693
	(1.41)	(0.25)	(1.30)	(0.08)
$SIGMA_t$	4.142**	2.357	3.174**	1.719
	(2.07)	(1.19)	(2.06)	(1.13)
$TURNOVER_t$	-0.089***	-0.009	-0.076***	-0.011
	(-8.28)	(-0.76)	(-8.98)	(-1.12)
$GROWTH_t$	-0.015*	-0.010	-0.009	-0.004
	(-1.78)	(-1.18)	(-1.40)	(-0.63)
$RATIO_t$	0.020	-0.100	0.055	-0.047
	(0.17)	(-0.90)	(0.66)	(-0.57)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.152	0.242*	0.029	0.162
	(1.13)	(1.72)	(0.29)	(1.53)
N	22654	22654	22654	22654
Adjusted R-squared	0.016	0.063	0.017	0.062

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.4.5. Auditors' industry specialization

From some research, we find auditor industry specialization will affect auditors' behavior [71-73]. The more familiar auditors are with the field of their audit, the less likely they are to make mistakes. Auditors' specialization helps them identify and evaluate customer risks more accurately. Therefore, the auditors who know more about the industry of their audit firms are less affected by the childhood famine. We set a dummy $Expert_t$. If auditors are experts in the field of the firms they audit, it is 1, otherwise is 0. From table 9, we find expert auditors will reduce stock price crash risk. In other words, auditors' experience of the Great Famine will decrease stock price crash risk, which is more obvious among expert auditors.

Table 9. Auditors' industry specialization

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
$Exp_t \times Expert_t$	0.031^{***}	0.032^{***}	0.022^{**}	0.022^{**}
	(2.79)	(2.82)	(2.21)	(2.31)
Exp_t	-0.005	0.013	0.028	0.047^{**}
	(-0.16)	(0.42)	(1.20)	(2.07)
$Expert_t$	-0.090^{***}	-0.011	-0.069^{***}	-0.002
	(-7.32)	(-0.57)	(-7.22)	(-0.10)
$NCSKEW_t$	0.047^{***}	0.068^{***}		
	(5.32)	(7.68)		
$DUVOL_t$			0.049^{***}	0.064^{***}
			(5.27)	(6.79)
$SIZE_t$	-0.024^{***}	-0.033^{***}	-0.015^{***}	-0.024^{***}
	(-4.80)	(-6.39)	(-4.07)	(-6.21)
LEV_t	0.001^{*}	0.002^{*}	0.000	0.000
	(1.83)	(1.70)	(0.39)	(0.50)
ROE_t	-0.134^{***}	-0.017	-0.097^{***}	-0.001
	(-3.14)	(-0.41)	(-2.83)	(-0.02)
RET_t	50.723	10.674	35.649	2.787
	(1.21)	(0.25)	(1.09)	(0.09)
$SIGMA_t$	3.299^{*}	2.358	2.480	1.711

	(1.65)	(1.19)	(1.61)	(1.13)
$TURNOVER_t$	-0.090***	-0.010	-0.076***	-0.011
	(-8.39)	(-0.76)	(-9.11)	(-1.12)
$GROWTH_t$	-0.013	-0.010	-0.007	-0.004
	(-1.48)	(-1.18)	(-1.08)	(-0.62)
$RATIO_t$	0.035	-0.103	0.071	-0.043
	(0.30)	(-0.93)	(0.84)	(-0.53)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.210	0.243*	0.074	0.154
	(1.56)	(1.74)	(0.74)	(1.47)
N	22654	22654	22654	22654
Adjusted R-squared	0.015	0.063	0.016	0.062

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.5. Robustness

In this part, we conducted a robustness test to verify the robustness of the results under the replacement of the calculation method of independent variables, the calculation method of dependent variables, the placebo test, winsorize and propensity score matching (PSM).

4.5.1. Propensity Score Matching Approach

To address the endogeneity concern that the relationship between auditors' experience of the Great Famine and stock price crash risk is non-random, we implement a PSM approach to obtain a one-to-one matched sample for all our analyses. We obtain a final sample of 2604 industry-year observations that meet our data requirements to implement our initial PSM approach. To model Exp_t, we adapt from Ke, Lennox, and Xin [74] and implement the following Probit regression:

$$Exp_{i,t} = \lambda_0 + \lambda_1 SIZE_{i,t} + \lambda_2 LEV_{i,t} + \lambda_3 NSUB_{i,t} + \lambda_4 FOROPS_{i,t} + \lambda_5 LnSEG_{i,t} + \lambda_6 CURRENT_{i,t} + \lambda_7 ARINV_{i,t} + \lambda_8 SOE_{i,t} + \varepsilon_{i,t} \quad (6)$$

To control the comparability of the experimental group and the control group and avoid the experimental error caused by the incompatibility of the data, PSM is used in this paper to weaken the different degree of the samples in the control group. First, we choose asset size ($SIZE_{i,t}$), asset-liability ratio ($LEV_{i,t}$), $NSUB_{i,t}$ measures as the square root of the number of subsidiaries included in the consolidated financial, a dummy variable indicating whether the company has overseas operations ($FOROPS_{i,t}$), the natural log of the number of business segments ($LnSEG_{i,t}$), the current ratio

($CURRENT_{i,t}$) measures as current assets divided by current liabilities, and the ratio of accounts receivable and inventory to total assets ($ARINV_{i,t}$), a dummy variable indicating whether the company is a state-owned firm or not ($SOE_{i,t}$) as matching variables. Secondly, Probit is used for regression, and we subsequently obtain a one-to-one control sample ($Exp_{i,t}$ = 0) that is matched closest to our test sample ($Exp_{i,t}$ = 1). The matching results are shown in Table 10. The regression coefficients of the match are -0.11 and -0.07, and there is a significant positive correlation at the 5% and 1% level, respectively. It can be seen from the regression results that, consistent with the above results, there is still a significant negative correlation between auditors' experience of the Great Famine and stock price crash risk.

Table 10. Propensity Score Matching Approach.

	(1)	**(2)**	**(3)**	**(4)**
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
Exp_t	-0.11**	-0.11**	-0.07***	-0.07***
	(-2.32)	(-2.33)	(-2.87)	(-2.88)
$NCSKEW_t$	0.050***	0.070***		
	(5.91)	(8.19)		
$DUVOL_t$			0.054***	0.066***
			(6.04)	(7.45)
$SIZE_t$	-0.018***	-0.032***	-0.010***	-0.024***
	(-3.84)	(-6.53)	(-2.97)	(-6.45)
LEV_t	0.001*	0.002*	0.000	0.000
	(1.71)	(1.69)	(0.25)	(0.43)
ROE_t	-0.145***	-0.019	-0.109***	-0.006
	(-3.54)	(-0.47)	(-3.32)	(-0.18)
RET_t	51.927	13.137	35.667	4.108
	(1.28)	(0.32)	(1.13)	(0.13)
$SIGMA_t$	3.452*	2.516	2.562*	1.803

	(1.78)	(1.30)	(1.72)	(1.23)
$TURNOVER_t$	-0.083***	-0.009	-0.070***	-0.010
	(-8.07)	(-0.73)	(-8.75)	(-1.04)
$GROWTH_t$	-0.013	-0.010	-0.008	-0.005
	(-1.64)	(-1.29)	(-1.30)	(-0.81)
$RATIO_t$	0.085	-0.087	0.101	-0.042
	(0.77)	(-0.83)	(1.24)	(-0.54)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.028	0.214	-0.061	0.143
	(0.22)	(1.59)	(-0.65)	(1.43)
N	2604	2604	2604	2604
Adjusted R-squared	0.010	0.063	0.011	0.060

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.5.2. Placebo test

To prevent the potential interference of self-differences and unobservable variables in the experimental results, the placebo test is used in this paper. The specific idea is: assuming that the auditors' experience of the Great Famine does affect stock price crash risk, then in other years, it should not produce any significant results. If similar results are also detected in other periods, then the auditors' experience of the Great Famine is not the only reason for the change in the results. For example, firstly, we assume the empirical result of the auditors' experience of the Great Famine in 2018 on the stock price crash risk is significantly negative. Then we assume that the auditors in 2017 experienced the Great Famine, but fact, they are not. Finally, we analyze whether the auditors' experience of the Great Famine has a significant impact on stock price crash risk. If significant results are also observed in 2017, this impact is not caused by the auditors' experience of the Great Famine, but may be caused by other reasons. Therefore, according to the idea of a placebo test and referring to the experiment of Abadie [75], table 11 shows the estimated results of a placebo test. The results in columns (1) - (4) show that the corresponding coefficients of the match are not significant, which proves that the results of this paper are robust.

Table 11. Placebo test

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	*$NCSKEW_{t+1}$*	*$DUVOL_{t+1}$*	*$DUVOL_{t+1}$*
Exp_t	-0.035	-0.043	-0.031	-0.040
	(-0.51)	(-0.91)	(-0.78)	(-0.32)

$NCSKEW_t$	0.045***	0.065***		
	(5.10)	(7.47)		
$DUVOL_t$			0.050***	0.063***
			(5.52)	(7.05)
$SIZE_t$	-0.019***	-0.032***	-0.013***	-0.025***
	(-3.95)	(-6.21)	(-3.49)	(-6.51)
LEV_t	0.001	0.001	0.000	0.000
	(1.62)	(1.59)	(0.06)	(0.10)
ROE_t	-0.144***	-0.043	-0.108***	-0.025
	(-3.38)	(-1.03)	(-3.28)	(-0.75)
RET_t	78.145*	39.899	42.591	11.581
	(1.87)	(0.95)	(1.33)	(0.36)
$SIGMA_t$	4.881**	3.495*	3.040**	1.955
	(2.43)	(1.72)	(1.99)	(1.28)
$TURNOVER_t$	-0.060***	0.007	-0.052***	0.004
	(-5.67)	(0.52)	(-6.47)	(0.40)
$GROWTH_t$	-0.014*	-0.011	-0.009	-0.006
	(-1.71)	(-1.33)	(-1.53)	(-0.97)
$RATIO_t$	0.089	-0.068	0.105	-0.024
	(0.78)	(-0.62)	(1.28)	(-0.30)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.009	0.210	-0.034	0.177*
	(0.07)	(1.52)	(-0.35)	(1.72)

N	22654	22654	22654	22654
Adjusted R-squared	0.008	0.054	0.009	0.051

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.5.3. Alternative measures of the dependent variable

In the baseline regression and heterogeneity test, we use two standard variables to measure stock price crash risk. But in this robustness test, we test whether our results are robust after changing new measures of dependent variables. We use the crash dummy variable ($CRASH_{t+1}$) as our new dependent variable [30]. And from table 12, we find the correlation between $CRASH_{t+1}$ and Exp_t is -0.06, which indicates our result is robust.

Table 12. Alternative measures of the dependent variable

	(1)	(2)
	$CRASH_{t+1}$	$CRASH_{t+1}$
Exp_t	-0.06***	-0.06***
	(-2.77)	(-2.86)
$NCSKEW_t$	-0.166***	-0.058
	(-2.60)	(-0.94)
$SIZE_t$	0.041	-0.010
	(1.25)	(-0.31)
LEV_t	-0.004	-0.003
	(-0.45)	(-0.42)
ROE_t	-0.132	0.144
	(-0.45)	(0.47)
RET_t	667.665**	469.542
	(2.06)	(1.50)
$SIGMA_t$	25.053*	16.272
	(1.67)	(1.10)
$TURNOVER_t$	-0.138*	0.053

	(-1.88)	(0.57)
$GROWTH_t$	-0.029	-0.009
	(-0.50)	(-0.15)
$RATIO_t$	0.277	-0.209
	(0.38)	(-0.29)
Industry FE	No	Yes
Year FE	No	Yes
Cons	-4.347***	-3.839***
	(-4.90)	(-3.94)
N	22654	22654
Pseudo R-squared	0.0240	0.0241

Note: Standard errors are clustered by firm, and Z-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.5.4. Alternative measures of the independent variable

We redefined the independent variable, assuming that both auditors underwent the Great Famine. In table13, we change the measure of Exp_t. We set it equal 1 if both auditors who audit the same company have experienced the Great Famine, others equal to 0. The correlation between $NCSKEW_{t+1}$ and Exp_t is -0.041, significantly negatively correlated at the 5% levels. So replacing the calculation method of independent variables does not change our results.

Table 13. Alternative measures of the independent variable

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	***$NCSKEW_{t+1}$***	***$DUVOL_{t+1}$***	***$DUVOL_{t+1}$***
Exp_t	-0.041**	-0.041**	-0.041**	-0.041**
	(-2.04)	(-2.06)	(-2.52)	(-2.53)
$NCSKEW_t$	0.051***	0.070***		
	(6.19)	(8.53)		
$DUVOL_t$			0.056***	0.068***
			(6.47)	(7.94)

$SIZE_t$	-0.019***	-0.033***	-0.011***	-0.024***
	(-4.06)	(-6.81)	(-3.23)	(-6.80)
LEV_t	0.001	0.001*	0.000	0.000
	(1.64)	(1.67)	(0.13)	(0.36)
ROE_t	-0.145***	-0.026	-0.109***	-0.011
	(-3.65)	(-0.66)	(-3.45)	(-0.36)
RET_t	53.881	12.477	34.169	0.759
	(1.36)	(0.31)	(1.12)	(0.02)
$SIGMA_t$	3.745**	2.484	2.679*	1.667
	(1.97)	(1.31)	(1.85)	(1.16)
$TURNOVER_t$	-0.078***	-0.005	-0.065***	-0.006
	(-7.75)	(-0.46)	(-8.46)	(-0.71)
$GROWTH_t$	-0.015*	-0.012	-0.010	-0.006
	(-1.87)	(-1.51)	(-1.61)	(-1.09)
$RATIO_t$	0.086	-0.077	0.100	-0.035
	(0.80)	(-0.75)	(1.27)	(-0.46)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.029	0.219*	-0.053	0.149
	(0.24)	(1.68)	(-0.59)	(1.54)
N	22654	22654	22654	22654
Adjusted R-squared	0.010	0.062	0.011	0.060

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

4.5.5. Winsorize（2%）

All our regression results' persistent factors above are winsorized at the 1% level in each tail. Now we winsorized all constant factors in both the top and the bottom 2% to relieve the outlier. We find that the correlation between $NCSKEW_{t+1}$ and Exp_t is -0.05, significantly negatively correlated at the 1% levels. Our results are shown in table 15. And it indicates that our result is robust.

Table 14. Winsorize

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
Exp_t	-0.05***	-0.05***	-0.05***	-0.05***
	(-2.97)	(-2.98)	(-2.74)	(-2.76)
$NCSKEW_t$	0.052***	0.070***		
	(6.25)	(8.56)		
$DUVOL_t$			0.056***	0.068***
			(6.49)	(7.94)
$SIZE_t$	-0.019***	-0.033***	-0.011***	-0.024***
	(-4.05)	(-6.79)	(-3.21)	(-6.77)
LEV_t	0.001*	0.001*	0.000	0.000
	(1.65)	(1.67)	(0.11)	(0.33)
ROE_t	-0.143***	-0.023	-0.110***	-0.012
	(-3.58)	(-0.59)	(-3.48)	(-0.39)
RET_t	54.582	14.579	35.110	2.953
	(1.38)	(0.37)	(1.15)	(0.10)
$SIGMA_t$	3.830**	2.596	2.764*	1.775
	(2.02)	(1.37)	(1.92)	(1.24)
$TURNOVER_t$	-0.077***	-0.006	-0.065***	-0.007
	(-7.75)	(-0.53)	(-8.44)	(-0.76)
$GROWTH_t$	-0.015*	-0.012	-0.010*	-0.007

	(-1.91)	(-1.52)	(-1.70)	(-1.16)
$RATIO_t$	0.081	-0.081	0.093	-0.040
	(0.75)	(-0.78)	(1.18)	(-0.53)
Industry FE	No	Yes	No	Yes
Year FE	No	Yes	No	Yes
Cons	0.028	0.215*	-0.054	0.147
	(0.23)	(1.65)	(-0.60)	(1.52)
N	22654	22654	22654	22654
Adjusted R-squared	0.010	0.062	0.011	0.059

Note: Standard errors are clustered by firm, and T-statistics are given in parentheses. *, **, and *** indicate statistical significance at the 10 %, 5%, and 1% levels.

5. Conclusions

This paper takes the 1959-1961 Great Famine in China as the background and takes the 2007-2021 listed companies in China as a sample to study the impact of auditors’ early experience on stock price crash risk. The results show that auditors’ early experience of the Great Famine can reduce the stock price will fall sharply in the future. In addition, we also conducted a mechanism test to verify that external audits will improve information transparency, and the audit quality of auditors who have experienced famine will be higher, making the quality of audit reports issued by them higher, reducing information risk, thereby reducing stock price crash risk. This study provides modern prove for the literature on the effect of early catastrophe experience on corporate decision-making. This paper also provides a reference for firms and investors concerned about the change in future stock. We should not only pay attention to the experience of internal managers but also pay attention to the experience of external auditors.

Like other literature, this paper also has some weaknesses. First, we focus on listed companies and ignore small and micro-sized enterprises, especially when the Chinese government strongly supports small and micro-sized companies. Small and micro-sized companies may only pay less money to find external audits or use internal audits due to their small scale and shortage of capital, which will have a certain impact on the operation and management of enterprises. Secondly, we focus on the stock price of listed companies. For unlisted companies, we can not observe the impact of auditors' early experience on the company. Finally, this paper only pays close attention to the famine, not to other natural disasters, such as the 2008 Wenchuan earthquake, which will also have a greater impact on people who have experienced these disasters. Although our article has some defects, it provides new possibilities for our follow-up research.

Author Contributions: Conceptualization, Y.L.; methodology, Y.X.; software, Y.L.; validation, Y.L. and Y.X.; formal analysis, Y.L.; investigation, Y.L.; resources, Y.L.; data curation, Y.L.; writing—original draft preparation, Y.X.; writing—review and editing, Y.L.; visualization, Y.L.; supervision, Y.L.; project administration, Y.L.; funding acquisition, Y.L. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the National Natural Science Foundation of China (Project No. : 71762034).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data used to support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest: The authors declare no conflict of interest.

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Audit Report Mode Reconstruction and Stock Price Crash Risk: The Reform of Audit Report as a Quasi-Natural Experiment

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Abstract:

Based on the policy background of the new audit report standards issued by the Ministry of Finance in December 2016, this paper takes China's A+H listed companies as the sample and examines the implementation effect of audit report mode reconstruction from the perspective of stock price crash risk. We test and find audit report mode reconstruction reduces the stock price crash risk. Furthermore, the number of disclosure of key audit matters is negatively correlated with the stock price crash. Additionally, the effect of audit report mode reconstruction on reducing the risk of stock price crash is more obvious in the samples with high information asymmetry, low level of internal control, poor media environment and high agency conflict. This study can not only provide early evidence on the economic consequences of the audit report mode reconstruction but also have some inspiration for the prevention of financial risks and promotion of real economy in practice.

Key Words: Audit Report Mode Reconstruction; Stock Price Crash Risk; Key Audit Matters

Chinese Library Classification Number: F239.4 Document identification code: A

1. Introduction

The audit report is a written document that the auditor transmits the financial status, internal control and other information of the company to the investors, and it is the most important channel for the investors to obtain the information of the listed company. The traditional audit report adopts the dual audit report mode, the content of the report is simple, the form is unified, the homogenization of opinion types is serious, and the decision-useful information needed by investors is not disclosed, which weakens the transparency and relevance of audit report information. as a result, the users of external statements are unable to obtain high-quality information about the enterprise, which has been criticized by report users. In order to address the defects of the traditional audit report, the IAASB, PCAOB and FRC are committed to improving the information content of the report, promoting the reform of the audit report model, and issuing relevant policies and regulations. Among them, on December 23, 2016, China's audit committee also actively approached the international audit requirements and issued new audit standards applicable to China, which pointed out that for companies listed in China and Hong Kong simultaneously, the audit report issued to the mainland form the beginning of 2017 should include a description of the key audit matters and relevant audit countermeasures. For A-share listed companies, China requires that the key audit matters should be fully implemented in the audit work after 2018.

The stable development of the stock market is an important indicator of the prosperity of the financial system and the healthy development of the real economy, and it is one of the key elements to measure the economic development of a country. However, in recent years, the phenomenon of stock market plunges and crashes has been frequent, and even “flash crash” occurs frequently. A large number of investors suffer losses due to their inability to identify sudden financial risks, which greatly damages the resource allocation efficiency of the capital market and the economic security of the country. Through traditional information disclosure channels, the potential risks of listed companies can no longer be effectively perceived by investors. So, will the incremental information in the new executive audit report affect the stock price crash risk? Therefore, this paper takes the audit report mode reconstruction event as the research opportunity, selects the companies whose audit report mode has been reconstructed as the treatment group, and the remaining samples as the control group, to explore whether the audit report mode reconstruction reduces the risk of stock price crash. It is found that the audit report mode reconstruction reduces the stock price crash risk, and the number of key audit matters disclosures is negatively correlated with the stock price crash risk. Additionally, the effect of audit report mode reconstruction on reducing the risk of stock price crash is more obvious in the samples with high information asymmetry, low level of internal control, poor media environment and high agency conflict.

Compared with the previous literature, the research contributions of this paper are as follows: First, this paper extends the existing literature, including the literature on stock price crash risk and the literature on audit report mode reconstruction .This paper uses objective data to test the implementation effect of audit report mode reconstruction, provides a preliminary understanding of the relationship between audit report mode reconstruction and stock price crash risk, and enriches the relevant literature on audit report mode reconstruction. It is conducive to further in-depth and extensive research. Second, this paper provides new evidence on the economic consequences of audit report mode reconstruction in China’s institutional context. Combined with the institutional background of China, it confirms that the audit report mode reconstruction can reduce stock price crash risk, indicating that the disclosure of key audit matters affects investors’ decision-making, and further proves that it has a certain value for investors. (Gutierrez et al., 2018; Wang Yanyan et al., 2018; Reid et al., 2015) [1][2][3]. Third, to deepen the understanding of the stock price crash risk in audit report mode reconstruction. This paper makes an in-depth analysis of the path mechanism of the audit report mode reconstruction affecting stock price crash risk, which not only helps to deeply understand the necessary elements and methods to reduce stock price crash risk, but also starts from the specific content of the key audit matters. This paper explores the different effects of the number of key audit matters and the number of characters in the content on the stock price crash, which brings some enlightenment on how to reduce the stock price crash risk.

2. Literature Review

As for the research on audit report mode reconstruction, although scholars from China and other countries have carried out multi-level and multi-perspective theoretical analysis and related empirical research, in general, relevant research is relatively scarce, and has not reached a consensus. Combined with this paper, we take the audit report mode reconstruction as the theme, sort out and analyze the existing research results in China and other countries, and clarify the writing intention of this paper.

Some scholars believe that audit report mode reconstruction is helpful to improve audit effect. For example, Reid et al. (2015) [3] found that audit report mode reconstruction can increase the communicative value of audit report. Wang Yanyan et al. (2018) [2] also reached a similar conclusion based on the Chinese background. The research results of Chen et al. (2019) [4] and Bens et al. (2016) [5] also showed that the audit report mode reconstruction can improve the utility of audit report. Steven et al. (2014) [6] studied this issue from the perspective of audit responsibility, and hold that the audit report mode reconstruction can reduce the auditor's responsibility perceived by investors. Through a comprehensive analysis of the key audit matters contained in the new audit report, it is believed that audit report mode reconstruction can improve the information content of the audit report (Ran Mingdong and Xu Yaozhen, 2017) [7], and therefore improve the value relevance of the audit report (Doxey,2015, Zhang Jixun and Han Dongmei, 2014) [8] [9]. Lu Jun and Zhang Jindan (2018) [10] used the systematic description method to argue that the reconstruction of audit report mode can improve the transparency of audit work. Additionally, from the perspective of synchronicity, Wang Muzhi and Li Dan (2019) [11] found that it was negatively correlated with stock price synchronicity. In addition, some scholars have found that the audit report mode reconstruction can have an impact on the information transmission of the stock market, which is specifically reflected in its role as an incremental information improvement for analyst forecasting (Xue Gang et al, 2020) [12]. However, some other scholars put forward a different point of view, namely that audit report mode reconstruction has not achieved the expected effect. For example, Lennox et al. (2015) [13] made use of British data and found that the audit report mode reconstruction did not provide incremental information. Bédard et al. (2016) [14] found that the audit report mode reconstruction did not affect the company's earnings management. Sirois et al. (2014) [15] found that the audit report mode reconstruction reduced the audit quality perceived by participants. Kachelmeier et al. (2017) [16] believed that the audit report mode reconstruction will lead to the reduction of report users' confidence in financial statements. Boolaky et al. (2016) [18] also showed that it has no impact on the financial reports and audit quality perceived by bank directors.

To sum up, the existing research on the audit report mode reconstruction has made an important contribution to the development of this field. However, it is regrettable that the relevant literature is lacking, and its conclusions are still controversial, which brings a research opportunity for this paper. This paper believes that it is necessary to expand and in-depth study on the implementation effect of audit report mode reconstruction. This not only contributes to the current academic research on the reconstruction of audit report mode, but also contributes to the improvement of the supervision system of audit behaviour of China's regulatory authorities and the benign development of the audit industry. In view of this, based on China's special capital market, this paper studies the effect of audit report mode reconstruction from the perspective of stock price crash risk, and provides a modest contribution to this kind of research.

3. Research Hypothesis

As an abnormal situation of stock price volatility, stock price crash refers to the probability of extreme negative returns of individual stocks (Jin&Myers, 2006) [18], that is, the sudden crash of stock prices in a short period of time. Under the existing research, most scholars believe that the two important factors affecting the crash of stock prices are agency problem (management conceals bad news) and information asymmetry (Luo Jinhui and du Xinqiang, 2018 Bing Kim & Zhang,2016; Ding Hui et al.) [19] [20] [21]. On the one hand, the management's self-interested behaviour of "reporting good news without reporting bad news" (disclosing good news and concealing bad news) leads to the concentrated outbreak of bad news, which leads to the stock price crash (Hutton et al., 2009; Kim&Zhang, 2011; Quan Xiaofeng et al., 2015) [22][23][24]. Due to the agency conflict between shareholders and management, management may implement opportunistic behaviour, resulting in the accumulation of negative news within the enterprise (Kim & Zhang, 2011; Jiang Xuanyu and Xu Nianxing, 2015) [23] [25]. At the same time, management may delay or even hide negative news due to various reasons (such as salary, promotion or reputation) (Jensen et al., 1986; Bleck et al., 2007) [26][27]. Therefore, when it is concentrated to a certain extent, once disclosed, the stock price of the enterprise will crash (Jin & Myers, 2006) [18]. On the other hand, information asymmetry limits investors' ability to obtain information, resulting in a misjudgment of the company's stock price. When investors get information about companies that harm their own interests, their massive selling of stocks leads to a sharp fall in stock prices. Specifically, information asymmetry leads to insufficient enterprise-related information obtained by investors, making it unable to accurately evaluate the actual operation of the company, and some investors may make a wrong judgment on the company's stock price and overestimate the value of the company's stock. When the bad news broke out form the enterprise, in order to minimize the loss caused by the fall in the stock price, investors will sell a large number of their stocks, resulting in a sharp fall in the stock price (Xiao Tusheng, et al., 2017) [28]. Through the above analysis, we can find that the management agency problem (management conceals bad news) and information asymmetry may lead to the stock price crash of enterprises in the future.

The audit report mode reconstruction reduces the agent problem of management by strengthening the supervision role of the governance layer, reduces the information asymmetry by providing incremental information, and finally reduces the possibility of stock price crash in the future. Specifically, on the one hand, the audit report mode reconstruction reduces the agency problem of management. As the main body of the governance layer, the board of directors have the power to supervise the management, and their governance effectiveness also directly affects the self-interest space and opportunity of the management (Liang Shangkun et al., 2020) [29]. The major point of reform in the audit report mode reconstruction is the key audit matters (KAM), which are selected from the items communicated with the governance layer and represent the frequency and content of the communication with the auditor. In this way, the governance layer can not only obtain more relevant information of the enterprise, but also find the self-serving behavior of the management layer to hide negative news more easily, so as to communicate with the management in a timely manner and hold them accountable. Therefore, it is easier for the management layer to play its role of supervision and restriction (Yang Mingzeng et al., 2018) [30], which makes the freedom and power of the management layer limited, the space of self-interest smaller, and the difficulty and cost of the management layer to hide negative news increased, thus reducing the earnings management behavior of the management layer (Li Yanxi et al., 2019) [31]. Prevent the stock price collapse caused by the accumulation of bad news. On the other hand, the information asymmetry between management and investors has also been greatly alleviated because of the audit report mode reconstruction. Traditional audit reports have serious homogeneity and limited information content (PCAOB, 2013) [32], resulting in less useful information for investors. Compared to the traditional audit report, the audit report mode reconstruction has some innovations in both disclosure form and disclosure method. For instance, in terms of disclosure methods, the audit report mode reconstruction combines qualitative and quantitative methods, based on the company's unique features, in disclosing important matters, and adds more personalized content, significantly improve the informative content. Thus, it can be seen that the reconfiguration of audit report mode based on the perspective of user needs, enhances the content and quality of transferable information in enterprise reports and reduces information opacity (Wang Yanyan et al., 2017; Ran Mingdong and Xu Yaozhen, 2018; Sirois et al., 2018; Xu Shuozheng et al., 2020) [2][7][15][34], providing investors with useful information (Reid, 2015) [3] and incremental risk information (Chen Lihong et al., 2019) [36], and enhancing the value relevance of audit reports, ultimately affecting investors' investment judgment (Zhang Jixun et al., 2014; Sirois et al., 2018) [9][33]. Therefore, audit report mode reconstruction reduces the degree of information asymmetry by increasing the information content of audit reports, which is conducive to improving investors' judgment on the future risks of enterprises, the accuracy of predicting stock prices, and making the best investment decisions, ultimately reducing the possibility of stock price crash in the future.

To sum up, audit report mode reconstruction strengthens the supervision of management and reduces the agency problem of management. Simultaneously, the disclosure of key audit matters promotes the efficient decrease of information asymmetry and improves the information availability of investors. Following the above analysis, we propose the subsequent assumptions:

H1: Other conditions remain unchanged, audit report mode reconstruction can reduce stock price crash risk.

4. Research Design

4.1. Data Source and Sample Selection

According to the release time of the new audit report, this paper selects China's A+H share and A share listed companies from 2015 to 2016 as the samples. Based on the disclosure of key audit matters as a limiting factor, the initial samples are divided into experimental group and control group. The data is further processed as follows: financial and insurance companies are excluded; Io avoid the interference of missing samples on the verification results, the missing values of the samples are eliminated, and the final sample contains 4039 initial sample values. Additionally, to reduce the interference effect of extreme values on empirical results, all continuous variables are Winsorized by 1%.

4.2. Variable Definition

4.2.1. Audit report mode reconstruction and key audit matters

Post is a dummy variable. If it is the annual audit report of 2016, the value is 1; otherwise, the value is 0. That is, the value of *Post* is 1 after the audit report mode is reconstructed, and 0 is before the reconstruction. DID model is used for all the samples, and *KAM*=1 for companies whose audit report mode has been reconstructed, and vice versa *KAM*=0.

4.2.2. Stock price crash risk

Referring to the literature of Hutton et al. (2009) [22], Kim&Zhang (2011) [23], Quan Xiaofeng et al. (2015) [24], this paper adopts the coefficient of negative stock return skew (*NCSKEW*) and the ratio of stock return fluctuation (*DUVOL*) to measure the stock price crash risk.

Firstly, model (1) is established to calculate $R_{i,t}$:

$$R_{i,t} = \alpha_1 + \beta_1 R_{m,t-2} + \beta_2 R_{m,t-1} + \beta_3 R_{m,t} + \beta_4 R_{m,t+1} + \beta_5 R_{m,t+2} + \varepsilon_{i,t} \quad (1)$$

Where $R_{i,t}$ represents the rate of return of week t and $R_{m,t}$ represents the market rate of return of week t. The lagging and leading data of $R_{m,t}$ are added to the regression formula of model (1) to control the influence of non-synchronous trading.

Secondly, model (2) is established to calculate $W_{i,t}$:

$$W_{i,t} = In\left(1+\varepsilon_{i,t}\right) \quad (2)$$

Finally, based on the specific rate of return $W_{i,t}$, two variables *NCSKEW* and *DUVOL* are constructed, and the results of *NCSKEW* and *DUVOL* can be obtained according to models (3) and (4). The higher the value, the greater the risk of stock price collapse. Where n is the number of weeks in which the company's stock i is traded in a year, and n_{up} (n_{down}) is the number of weeks in which $W_{i,t}$ is greater than (less than) the annual average rate of return.

$$NCSKEW_{i,t} = -\left[n\left(n-1\right)^{\frac{3}{2}} \sum w_{i,t}^{3}\right] / \left[\left(n-1\right)\left(n-2\right)\left(\sum w_{i,t}^{2}\right)^{\frac{3}{2}}\right] \quad (3)$$

$$DUVOL_{i,t} = \log\left\{\left[\left(n_{up}-1\right)\sum_{down} w_{i,t}^{2}\right] / \left[\left(n_{down}-1\right)\sum_{up} w_{i,t}^{2}\right]\right. \quad (4)$$

4.2.3. Control variable

This paper refers to previous related studies (Wang Yanyan et al., 2018; Wang Muzhi et al., 2019; Kim & Zhang, 2011; Liang Shangkun et al., 2020; Xu Nianxing et al., 2012; Chen et al., 2001) [2] [11] [23] [29] [36] [37], and selects relevant control variables. The specific definition of the variables is shown in Table 1:

Table 1 Primary variable definition

Variable Name	Variable Definition
NCSKEW$_t$	Stock negative return skewness coefficient, see Model (3) for details of the algorithm.
DUVOL$_t$	Rate of fluctuation of the company's stock return, please see the model (4).
RET	Average weekly specific rate of return of the stock, which is the average weekly rate of return.
SIGMA	Fluctuation of stock returns is the standard deviation of the specific earnings of company i in the week of the t.
SIZE	Size of the company, the natural logarithm of the company's total assets.
ROE	Return on net assets, which is the ratio of net profit to net assets.

LEV	Asset-liability ratio, which is the ratio of total assets to total liabilities at the end of the period.
DA	Information transparency, measured by manipulative accruals estimated by industry and year-by-year modified Jones model, the higher the DA value, the lower the information transparency of the company.
TURNOVER	Monthly average excess turnover rate, it is the difference between the monthly average turnover rate of the t year stock i and the monthly average turnover rate of the t-1 year stock i.
RATIO	The proportion of independent directors of a company is the ratio of the number of independent directors to the number of directors.
INDUSTRY	Industry fixed effect.

4.3. Research Model

In order to test the impact of audit report mode reconstruction on the stock price crash risk of a company, the following multiple regression model is set up for testing based on previous literature such as Wang Yanyan (2018) [2], Wang Muzhi (2019) [11], Kim&Zhang (2011) [23], Quan Xiaofeng et al. (2015) [24].

$$CRASHRISK_{i,t} = \alpha_0 + \alpha_1 KAM_{i,t} + \alpha_2 Post_{i,t} + \alpha_3 KAM_{i,t} \times Post_{i,t} + \sum Controls_{i,t} + \varepsilon_{i,t} \quad (5)$$

Among them, *CRASHRISK* is stock price crash risk, which is measured by *NCSKEW* and *DUVOL* respectively. *KAM* is a dummy variable. If it is a company whose audit model has been reconstructed, take 1, otherwise 0. *Post* is a dummy variable. If it is the annual audit report in 2016, take 1, otherwise 0. Controls stands for a set of control variables. Model (5) is a DID model to test the relationship between audit report mode reconstruction and stock price crash risk. The coefficient to be tested is α_3. If α_3 is less than 0 and significant, it indicates that audit report mode reconstruction can reduce the stock price crash risk.

5. Empirical Result Analysis

5.1. Descriptive Statistics

Table 2 shows descriptive statistics: The mean value and median value of $NCSKEW_{t+1}$ are -0.118 and -0.101 respectively. $DUVOL_{t+1}$ has a mean of -0.056 and a median of -0.057. The control group and treatment group in Table 3 show that the average values of $NCSKEW_{t+1}$ are -0.109 and -0.31 respectively (the median is -0.089 and -0.289). $DUVOL_{t+1}$ are -0.05 and -0.197 respectively (the median is -0.051 and -0.227). The results are similar to those of Shi Yong and Li Sihao (2020) [38], Zhou Bo (2019) [39] and Cui Xuegang (2019) [40], indicating that there is no significant error in the estimation of stock price collapse risk in this paper.

In addition, we tested the mean and median differences between the control and treatment groups. The results in columns 8-9 of Table 3 show that $NCSKEW_{t+1}$ and $DUVOL_{t+1}$ are both positive and significant, that is, the stock price crash risk of companies without audit report mode reconstruction is significantly higher than that of companies with audit report mode reconstruction. The hypothesis has been preliminarily verified.

Table 2 Descriptive Statistics

Variable	N	Mean	Std.Dev	Min	Median	Max
$NCSKEW_{t+1}$	4039	-0.118	0.733	-2.373	-0.101	1.753
$DUVOL_{t+1}$	4039	-0.056	0.508	-1.387	-0.057	1.125
$NCSKEW_t$	4039	-0.309	0.767	-2.373	-0.273	1.576
$DUVOL_t$	4039	-0.176	0.531	-1.387	-0.18	1.092
RET	4039	-0.002	0.001	-0.006	-0.001	0.000
SIGMA	4039	0.053	0.022	0.007	0.049	0.147
SIZE	4039	22.377	1.266	19.955	22.203	26.135
ROE	4039	0.064	0.107	-0.463	0.066	0.347
LEV	4039	0.731	5.123	0.013	0.495	295.576
DA	4039	0.055	0.059	0.001	0.038	0.326
TURNOVER	4039	-0.071	0.623	-4.263	-0.065	4.023
RATIO	4039	0.375	0.054	0.333	0.333	0.571

Table 3 Mean and Median Test

6	Control Groups	Mean	median	Treatment Groups	Mean	median	Mean Variance	Median variance
$NCSKEW_t$	3867	-0.109	-0.089	172	-0.31	-0.289	0.200^{***}	16.393^{***}

DUVOL$_t$	3867	-0.05	-0.051	172	-0.197	-0.227	0.147***	16.393***
RET	3867	-0.002	-0.001	172	-0.001	-0.001	-0.000*	4.775**
SIGMA	3867	0.053	0.05	172	0.049	0.046	0.004**	4.746**
SIZE	3867	22.319	22.166	172	23.671	23.587	-1.352***	76.232***
ROE	3867	0.064	0.066	172	0.067	0.066	-0.003	0.023
LEV	3867	0.738	0.491	172	0.576	0.558	0.162	12.873***
DA	3867	0.056	0.038	172	0.046	0.032	0.010**	2.419
TURNOVER	3867	-0.074	-0.068	172	0.014	0.033	-0.088*	1.197
RATIO	3867	0.375	0.333	172	0.376	0.364	-0.002	4.145**

5.2. Multiple Regression Analysis

The relevant results in Table 4 verify whether there is a correlation between the audit report mode reconstruction and stock price crash risk. The results of $NCSKEW_{t+1}$ and $DUVOL_{t+1}$ are reported respectively in column (1) and (2) of Table 4. The coefficients of KAM*POST are -0.30 and -0.29 respectively, both of which are significant at the 1% level, and the results are also negatively significant. The results show that the audit report mode reconstruction reduces the management agency problem through enhancing the supervision role of the governance layer, reducing the information gap by increasing the information content of the audit report, and finally reducing the stock price crash risk, which verifies the hypothesis of this paper.

Table 4 Audit Report Mode Reconstruction and Stock Price Crash Risk

	(1)		(2)	
	NCSKEW$_{t+1}$		*DUVOL$_{t+1}$*	
KAM	-0.07	(-0.91)	-0.00	(-0.01)
POST	0.08**	(2.36)	0.04	(1.54)
*KAM*POST*	-0.30***	(-3.07)	-0.29***	(-4.23)
NCSKEW$_t$	0.07***	(4.26)		
DUVOL$_t$			0.08***	(5.22)
RET	-109.12**	(-2.57)	-57.37*	(-1.87)
SIGMA	-5.60**	(-2.07)	-2.48	(-1.28)
SIZE	0.02*	(1.76)	0.01	(1.02)

ROE	0.29***	(2.59)	0.15**	(2.02)
LEV	-0.00	(-1.45)	-0.00	(-1.41)
DA	0.34	(1.60)	0.19	(1.35)
TURNOVER	0.00	(0.01)	0.00	(0.03)
RATIO	0.27	(1.24)	0.12	(0.80)
_cons	-0.38	(-1.32)	-0.11	(-0.56)
INDFE	Yes		Yes	
N	4039		4039	
Adj. R^2	0.02		0.02	

Note：***means p<0.01, **means p<0.05, *means p<0.1；Standard error in parentheses, same as in the following tables

5.3. Further Analysis and Test

5.3.1. Tests based on the number of different key audit items

From the perspective of corporate information, the wider the scope of disclosed information, the higher the amount of usable information that users of external statements can obtain from it, and they will have a clearer and more accurate understanding of major matters in the company's operational process, which is reflected in a lower risk of stock price collapse. Therefore, this paper predicts a significant negative relationship between the number of key audit matters and stock price crash risk. In order to explore this problem, we manually sort out the number of key audit matters of the reconstructed company in the audit report model, refer to the literature of Wang Muzhi (2019) [11], select two variables *KAM_NUM1* and *KAM_NUM2*, and define *KAM_NUM1* as the number of key audit matters, which exceeds or equals the median of 1, otherwise it is 0. *KAM_NUM2* is defined as the number of characters of key audit matters, which is grouped according to the median number of characters of key items in the audit report. When it is greater than or equal to the median value, it is 1, but it is 0. The regression results shown in Table 5 show that: the more key audit matters are disclosed in the audit report, the more information the auditor can convey through the report, and the higher the accuracy of the stock price forecast, the better the effect of restraining the company's stock price crash risk.

Table 5 Number of key audit matters and stock price crash risk

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$
KAM_NUM1	-0.81***	-0.72***		
	(-4.31)	(-4.59)		

KAM_NUM2			-0.20	-0.22*
			(-1.37)	(-1.74)
$NCSKEW_t$	0.04		0.04	
	(0.37)		(0.40)	
$DUVOL_t$		-0.06		-0.06
		(-0.59)		(-0.54)
RET	-453.17	-417.46	-517.49	-478.47
	(-1.29)	(-1.09)	(-1.52)	(-1.28)
SIGMA	-22.33	-17.93	-23.53	-19.19
	(-1.52)	(-1.18)	(-1.58)	(-1.22)
SIZE	0.00	0.00	0.03	0.03
	(0.08)	(0.12)	(0.51)	(0.67)
ROE	-0.05	0.27	-0.45	-0.14
	(-0.09)	(0.59)	(-0.75)	(-0.26)
LEV	-0.13	-0.03	-0.20	-0.08
	(-1.18)	(-0.31)	(-1.42)	(-0.64)
DA	-3.85	-2.72	-5.44**	-4.33*
	(-1.58)	(-1.40)	(-2.07)	(-1.92)
TURNOVER	-0.10	-0.14	-0.17	-0.21
	(-0.56)	(-0.73)	(-1.02)	(-1.10)
RATIO	0.57	-0.44	1.35	0.27
	(0.47)	(-0.54)	(1.00)	(0.27)
_cons	0.41	0.38	-0.41	-0.48
	(0.30)	(0.36)	(-0.27)	(-0.39)
INDFE	Yes	Yes	Yes	Yes
N	81	81	81	81
Adj. R^2	0.26	0.27	-0.04	-0.03

5.3.2. Tests based on different degrees of information asymmetry

In terms of information disclosure, listed companies and investors interact with each other to exchange information, which easily leads to the formation of information asymmetry between management and investors. When the degree of information asymmetry is different, it may have different influence on the governance effect of the audit report mode reconstruction. For example, PCAOB (2017) [32] expects that in the context of high information asymmetry, disclosure of key audit matters can significantly promote the development of such companies. Reid et al. (2015) [3] further verified the above conclusion by exploring the market reaction of key audit matters. Therefore, if the degree of information asymmetry of the enterprise is low, the higher the information transparency of the enterprise, the higher the cost of opportunistic disclosure of information by the management. As a result, the information effect of audit report mode reconstruction and the governance effect of reducing management agency questions are limited. On the contrary, external investors cannot have a comprehensive understanding of the real operation and management of the company, and the incremental information provided by audit report mode reconstruction is more important for investors. Therefore, this paper expects that in the second case, the impact of audit report mode reconstruction on stock price crash risk is more significant.

In this paper, accounting conservatism index is used as the proxy variable for information asymmetry (Xie Yalu and Wang Chong, 2014) [41]. Based on their annual median, the samples are divided into two groups: high (first group) and low (second group) information asymmetry. Table 6, items (1) and (3) are listed as the first group of regression results, where the coefficient of *KAM*POST* is significantly negative, while the result of the other group of samples is negative but not significant. The results show that when the information asymmetry is high, the role of audit report mode reconstruction is better, significantly weakening the degree of information asymmetry, and ultimately reducing the possibility of stock price crash risk.

Table 6 Test based on different degree of information asymmetry

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
KAM	-0.11	-0.09	-0.02	-0.02
	(-1.29)	(-0.68)	(-0.24)	(-0.23)
POST	0.09^{*}	0.03	0.02	0.01
	(1.72)	(0.60)	(0.56)	(0.33)
*KAM*POST*	-0.31^{***}	-0.22	-0.22^{**}	-0.17
	(-2.61)	(-1.49)	(-2.23)	(-1.44)
$NCSKEW_t$	0.05^{**}	0.08^{***}		
	(2.14)	(3.45)		

$DUVOL_t$			0.06***	0.08***
			(2.69)	(3.50)
CRASH				
RET	-83.13	-97.33*	-21.28	-80.93**
	(-1.24)	(-1.78)	(-0.46)	(-2.07)
SIGMA	-3.49	-5.64	0.34	-4.49*
	(-0.83)	(-1.53)	(0.12)	(-1.72)
SIZE	0.03*	0.02	0.00	0.01
	(1.80)	(1.16)	(0.33)	(0.92)
ROE	0.17**	-0.01	0.12**	-0.04
	(2.03)	(-0.04)	(2.19)	(-0.44)
LEV	-0.01	-0.00	-0.01***	-0.00
	(-1.48)	(-0.88)	(-2.90)	(-1.39)
DA	0.52	0.30	0.44*	0.16
	(1.52)	(0.98)	(1.90)	(0.74)
TURNOVER	-0.00	-0.05	-0.01	-0.02
	(-0.02)	(-1.36)	(-0.27)	(-0.86)
RATIO	0.21	0.40	0.11	0.27
	(0.66)	(1.27)	(0.48)	(1.27)
_cons	-0.55	-0.56	-0.05	-0.22
	(-1.17)	(-1.36)	(-0.16)	(-0.78)
INDFE	Yes	Yes	Yes	Yes
N	1867	1850	1867	1850
Adj. R^2	0.01	0.01	0.01	0.01

5.3.3. Tests based on different levels of internal control

Internal control information is an evaluation of the effectiveness of the design and operation of internal control. The disclosure of internal control information enables investors to timely understand the hidden dangers of the internal control of the enterprise, which is conducive to improving their judgment of the future risk of the enterprise, the accuracy of predicting the stock price, and make the best investment decision. Therefore, this paper expects that under the situation of low level of a internal control, audit report mode reconstruction can significantly reduce stock price crash risk.

With reference to the research of Lin Bin et al. (2016) [42], the Dibo internal control index is selected to measure the level of internal control, and all samples are divided into high and low internal control groups according to their median. In Table 7, items (1) and (3) are listed as the sample group with low level of internal control, and the coefficient of *KAM*POST* is significantly negative. However, in the sample group (2) and (4) with a high level of internal control, the coefficient of *KAM*POST* is not significant. The above explanation: for enterprises with a low level of internal control, audit report mode reconstruction can better restrain managers' opportunism and reduce the tendency to hide bad news, thus significantly reducing the stock price crash risk.

Table 7 Tests based on different levels of internal control

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
KAM	-0.16^{**}	0.02	-0.06	0.18^{**}
	(-2.00)	(0.15)	(-1.00)	(2.17)
POST	0.03	0.13^{**}	0.01	0.06^{*}
	(0.66)	(2.26)	(0.22)	(1.70)
*KAM*POST*	-0.24^{**}	-0.21	-0.21^{**}	-0.18
	(-2.15)	(-1.16)	(-2.48)	(-1.52)
$NCSKEW_t$	0.07^{***}	0.07^{***}		
	(3.25)	(3.10)		
$DUVOL_t$			0.08^{***}	0.08^{***}
			(3.80)	(3.57)
CRASH				
RET	-89.52^{*}	-6.25	-47.83	-15.77
	(-1.84)	(-0.11)	(-1.26)	(-0.47)
SIGMA	-4.61	0.38	-2.02	0.06

	(-1.40)	(0.10)	(-0.81)	(0.03)
SIZE	0.02*	0.01	0.01	-0.00
	(1.79)	(0.44)	(0.95)	(-0.42)
ROE	0.12	0.06	0.07	0.04
	(0.70)	(1.23)	(0.60)	(1.17)
LEV	-0.01	-0.00	-0.01**	-0.00
	(-1.40)	(-0.25)	(-2.31)	(-0.49)
DA	0.62**	-0.05	0.42**	-0.14
	(2.13)	(-0.18)	(2.16)	(-0.75)
TURNOVER	0.00	-0.03	0.01	-0.02
	(0.15)	(-0.70)	(0.31)	(-0.57)
RATIO	0.40	0.17	0.17	0.07
	(1.41)	(0.55)	(0.85)	(0.32)
_cons	-0.54	-0.26	-0.21	0.16
	(-1.50)	(-0.58)	(-0.85)	(0.52)
INDFE	Yes	Yes	Yes	Yes
N	2028	2011	2028	2011
Adj . R²	0.02	0.01	0.02	0.01

5.3.4. Tests based on different media environments

When the company is in a better media environment, that is, when the company receives more media reports, as media reports are the main channel of information dissemination and the company's information disclosure makes it more susceptible to the supervision of investors, it can not only reduce the information gap between investors and enterprises, but also narrow the space of self-interest of management to a certain extent (Luo Jinhui and Du Xingqiang, 2014) [19], thus weakening the governance effect of audit report mode reconstruction on the stock price crash risk. However, when the enterprise is in a poor media environment, the information transparency of the enterprise decreases, and the probability of self-interested behavior of management increases, which may increase the risk of stock price collapse. The information effect and supervision effect of the audit report mode reconstruction are conducive to improving the information transparency of the company and reducing the behavior of encroaching on the company's interests, thus reducing the occurrence of stock price crash. Therefore, we predict that when enterprises are in a poor media environment, the role of audit report mode reconstruction in reducing the stock price crash risk is more significant.

In this paper, the media exposure index (the number of times the name of a company is mentioned in the title of a printed newspaper) is used to measure the media environment. The media exposure index is calculated as (1 plus the number of media reports) the natural logarithm (Lu Wenbin et al., 2014) [43]. If the media exposure index is greater than its median, it is the sample group with good media environment; otherwise, it is the sample group with poor media environment. The results show that in the sample group with good media environment (2) and (4) in Table 8, the coefficients of *KAM*POST* are not significant, while in the sample group with poor media environment, the coefficients of *KAM*POST* are significantly negative. The results show that the lower the exposure of corporate media, the more significant the effect of audit report mode reconstruction on improving the media environment of the enterprise, and thus significantly reducing the stock price crash risk.

Table 8 Tests based on different media environments

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
KAM	-0.07	-0.03	0.01	0.00
	(-0.84)	(-0.18)	(0.19)	(0.01)
POST	0.17***	0.01	0.09***	-0.00
	(3.39)	(0.26)	(2.63)	(-0.08)
*KAM*POST*	-0.23**	-0.25	-0.26***	-0.17
	(-2.22)	(-1.20)	(-2.92)	(-1.24)
$NCSKEW_t$	0.05**	0.08***		
	(1.98)	(3.62)		
$DUVOL_t$			0.08***	0.08***
			(3.38)	(3.69)
CRASH				
RET	16.97	-141.19**	16.52	-70.07
	(0.35)	(-2.38)	(0.51)	(-1.49)
SIGMA	2.15	-7.60**	1.93	-3.12
	(0.64)	(-2.00)	(0.86)	(-1.07)
SIZE	0.02	0.02	0.01	0.01

	(1.51)	(1.37)	(1.09)	(0.71)
ROE	0.12	0.08	0.07	0.06
	(1.16)	(1.51)	(1.04)	(1.44)
LEV	-0.01	-0.00	-0.01**	-0.00
	(-1.62)	(-1.27)	(-2.52)	(-1.16)
DA	0.45	0.39	0.28	0.21
	(1.59)	(1.22)	(1.38)	(1.06)
TURNOVER	0.04	-0.04	0.03	-0.03
	(0.96)	(-1.14)	(1.19)	(-1.09)
RATIO	0.09	0.53*	0.05	0.23
	(0.31)	(1.81)	(0.26)	(1.15)
_cons	-0.57	-0.60	-0.26	-0.21
	(-1.41)	(-1.37)	(-0.95)	(-0.64)
INDFE	Yes	Yes	Yes	Yes
N	2019	2004	2019	2004
Adj . R^2	0.01	0.01	0.01	0.01

5.3.5. Tests based on different agent conflicts

When there is an agency conflict between shareholders and management, management may implement self-interested behaviors such as not disclosing bad news, which to a certain extent increases the possibility of stock price crash (Jin & Myers, 2006) [18]. Therefore, in enterprises with low agency conflicts, various decisions of the management are restricted by the board of directors, which makes the self-interest space of the management smaller, the cost of hiding negative news high, and the information transparency high, thus leading to the limited role of audit report mode reconstruction. In enterprises with high agency conflicts, the management rights and self-interest space are larger, and opportunistic behaviors are more likely to occur. In this case, the audit report mode reconstruction can significantly reduce the management agency problem and reduce the possibility of the company's stock price crash by strengthening the supervision role of the governance layer. Therefore, this paper predicts that in the enterprises with high agency conflict, audit report mode reconstruction will significantly reduce the risk of stock price crash.

This paper adds the influential factor of agency conflict into the test, and takes whether the two positions are integrated as the agency variable to measure agency conflict (Xue Gang et al., 2020) [12]. If the general manager and chairman are the same person, it is the sample group with high agency conflict, otherwise it is the sample group with low agency conflict. (1) and (3) in Table 9 are regression results with high agency conflict, and the coefficient of *KAM*POST* is significantly negative. (2) and (4) are listed as regression results of low agency conflict, and the coefficient of *KAM*POST* is negative but not significant. The results show that in the enterprises with high agency conflict, the audit report mode reconstruction can better alleviate the agency problem and reduce the stock price crash risk more obviously.

Table 9 Test based on conflicts among different agents

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$DUVOL_{t+1}$
KAM	-0.09	0.13	-0.03	0.18
	(-1.17)	(0.60)	(-0.55)	(1.19)
POST	0.11^{***}	0.04	0.04	0.02
	(2.80)	(0.60)	(1.52)	(0.47)
*KAM*POST*	-0.21^{**}	-0.35	-0.23^{***}	-0.36
	(-2.11)	(-1.03)	(-3.22)	(-1.59)
$NCSKEW_t$	0.06^{***}	0.06^{**}		
	(3.42)	(2.14)		
$DUVOL_t$			0.08^{***}	0.09^{***}
			(4.36)	(2.74)
CRASH				
RET	-80.72^{*}	-171.58^{**}	-45.82	-103.85^{*}
	(-1.67)	(-1.98)	(-1.28)	(-1.77)
SIGMA	-2.87	-12.31^{**}	-1.26	-7.53^{**}
	(-0.95)	(-2.21)	(-0.56)	(-1.99)
SIZE	0.03^{***}	-0.01	0.01^{*}	-0.01
	(2.67)	(-0.28)	(1.73)	(-0.78)
ROE	0.27^{**}	0.24	0.15^{*}	0.20
	(2.11)	(0.96)	(1.72)	(1.24)
LEV	-0.00^{*}	-0.01^{*}	-0.00	-0.01

	(-1.67)	(-1.73)	(-1.46)	(-1.56)
DA	0.38	0.39	0.26	0.05
	(1.59)	(0.87)	(1.57)	(0.17)
TURNOVER	0.02	-0.04	0.01	-0.01
	(0.88)	(-0.89)	(0.52)	(-0.38)
RATIO	0.40^{*}	0.01	0.20	-0.10
	(1.66)	(0.01)	(1.21)	(-0.31)
_cons	-0.83^{***}	0.61	-0.33	0.65
	(-2.64)	(0.84)	(-1.51)	(1.33)
INDFE	Yes	Yes	Yes	Yes
N	3049	990	3049	990
Adj . R^2	0.01	0.01	0.02	0.01

5.4. Endogenous Test

5.4.1. Tendency score matching (PSM) test

In this paper, the propensity score matching method is used to find the corresponding control group samples for the treatment group, in order to control the differences in corporate characteristics between the sample groups. Referring to the existing relevant literature (Kim & Zhang,2011; Liang Shangkun et al., 2020; Xu Nianxing et al., 2012) [23] [29] [36], use the above control variables in this paper to perform PSM matching on enterprise samples. Then use the calculated tendency score to match the audit report pattern reconstruction and unreconstructed samples, and finally obtain the control group that matches the processing group. Table 10 shows the regression results of the explained variables $NCSKEW_{t+1}$ and $DUVOL_{t+1}$, and the *KAM*POST* coefficients are both negative and significant, indicating that the conclusion that the restructuring of the audit report model reduces the risk of stock price collapse is still valid.

Table 10 The Reconstruction of Audit report Model and the risk of Stock Price collapse

	(1)		(2)	
	$NCSKEW_{t+1}$		$DUVOL_{t+1}$	
KAM	-0.31^{***}	(-3.31)	-0.13^{*}	(-1.75)
POST	0.23^{**}	(1.97)	0.09	(1.02)
*KAM*POST*	-0.29^{**}	(-2.30)	-0.31^{***}	(-3.40)

NCSKEW$_t$	-0.01	(-0.14)		
DUVOL$_t$			0.02	(0.49)
CRASH				
RET	-150.04	(-1.15)	-194.93**	(-2.10)
SIGMA	-5.09	(-0.70)	-8.74*	(-1.69)
SIZE	0.03	(1.03)	-0.01	(-0.78)
ROE	-0.35	(-1.35)	-0.13	(-0.68)
LEV	0.05	(0.45)	0.18**	(2.04)
DA	0.32	(0.78)	0.32	(1.01)
TURNOVER	-0.03	(-0.23)	-0.07	(-0.67)
RATIO	-0.06	(-0.10)	0.32	(0.74)
_cons	-0.78	(-1.14)	0.27	(0.55)
INDFE	Yes		Yes	
N	344		344	
Adj . R^2	0.16		0.14	

5.4.2. Placebo test

In this paper, the placebo test is used to avoid the contingency of the conclusion by changing the sample interval. According to the idea of placebo test proposed by Abadie et al. (2012) [44], it is used in 2013-2014 and 2014-2015 without restructuring of audit reporting mode. The results show that the *KAM*POST* coefficients of the two sample groups are not significant, that is, the placebo test is passed, and the conclusion that the audit report mode reconstruction reduces the stock price crash risk is still valid.

Table 11 Placebo test

	(1) *NCSKEW$_{t+1}$*	(2) *DUVOL$_{t+1}$*	(3) *NCSKEW$_{t+1}$*	(4) *DUVOL$_{t+1}$*
KAM	-0.04	-0.05	-0.03	0.05
	(-0.47)	(-0.77)	(-0.42)	(0.96)
POST	0.33***	0.24***	-0.26***	-0.13***
	(9.29)	(9.96)	(-10.65)	(-7.78)

*KAM*POST*	0.07	0.10	-0.01	-0.10
	(0.60)	(1.22)	(-0.05)	(-1.23)
NCSKEW$_t$	0.09***		0.08***	
	(4.68)		(4.21)	
DUVOL$_t$		0.12***		0.10***
		(6.56)		(5.47)
CRASH				
RET	-37.37	-14.42	227.85**	93.12
	(-0.71)	(-0.39)	(2.34)	(1.38)
SIGMA	-1.60	-0.07	9.37**	3.75
	(-0.46)	(-0.03)	(2.05)	(1.18)
SIZE	-0.04***	-0.03***	-0.05***	-0.03***
	(-3.92)	(-4.37)	(-4.40)	(-4.43)
ROE	0.05	-0.07	-0.41***	-0.44***
	(0.43)	(-0.77)	(-3.25)	(-4.82)
LEV	0.00	0.00	0.03***	0.02
	(1.45)	(0.39)	(2.60)	(1.64)
DA	0.25	0.11	0.38*	0.31*
	(1.06)	(0.69)	(1.68)	(1.88)
TURNOVER	-0.01	-0.02	0.08**	0.06**
	(-0.24)	(-0.92)	(1.97)	(2.05)
RATIO	0.10	-0.03	0.12	-0.04
	(0.43)	(-0.20)	(0.49)	(-0.23)
_cons	0.61**	0.58***	0.66**	0.56***
	(1.99)	(2.82)	(2.25)	(2.75)
INDFE	Yes	Yes	Yes	Yes

N	3633	3633	3486	3486
Adj . R²	0.06	0.07	0.06	0.05

5.5. Robustness test

5.5.1. Replace the stock price collapse risk indicator

As different industrial sectors in China have their own industry characteristics, their return rates are different to a certain extent, resulting in the impact on the specific return of individual stocks. Moreover, Hutton et al. (2009) [22] and Kim & Zhang (2011) [23] did not consider the impact of industry factors on this variable. Therefore, in order to reduce the interference of this factor on the empirical results and its randomness, this paper recalculates the new indicators $NCSKEW_{t+1}$, $DUVOL_{t+1}$ and $CRASH_{t+1}$ on the basis of considering the influence of industry factors, and conducts a regression analysis of the main test again. At the same time, the $CRASH_{t+1}$ of the fourth column is obtained based on the original regression model. From the regression results in Table 12, it can be seen that the coefficients of *KAM*POST* of the explained variables are significantly negative. The results show that whether the industry factors are taken into account or not, the results are negative and significant, which proves that the conclusion of this paper is robust to a certain extent.

Table 12 The Test of replacing the risk Index of Stock Price collapse

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$CRASH_{t+1}$	$CRASH_{t+1}$
KAM	-0.04	-0.03	0.87**	-0.08
	(-0.46)	(-0.47)	(2.16)	(-0.21)
POST	0.28***	0.22***	1.15***	-0.04
	(9.51)	(9.99)	(6.14)	(-0.24)
*KAM*POST*	-0.28***	-0.13*	-1.96***	-1.42**
	(-2.62)	(-1.65)	(-3.18)	(-2.24)
Controls	Yes	Yes	Yes	Yes
INDFE	Yes	Yes	Yes	Yes
N	4039	4039	4039	4039
Adj . R²	0.06	0.07	0.01	0.01

5.5.2. Regression of enlarged sample size

In order to ensure the robustness of the results, this paper expands the sample size on the basis of the original sample interval of 2015 and 2016. As shown in Table 13, 2014 data are added to the samples in columns (1) and (2), and 2013 data are added to the samples in columns (3) and (4) on the basis of the previous one. From the results, it can be concluded that the execution of key audit matters (*KAM*POST*) is significantly negatively correlated with the stock price crash risk, which is consistent with the main test.

Table 13 The test of increasing the annual interval of the sample

	(1)	(2)	(3)	(4)
	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$
KAM	-0.06	-0.01	-0.05	0.00
	(-1.13)	(-0.27)	(-1.33)	(0.02)
POST	0.32***	0.20***	0.26***	0.18***
	(12.41)	(11.30)	(11.27)	(11.16)
*KAM*POST*	-0.27***	-0.26***	-0.28***	-0.27***
	(-3.74)	(-5.07)	(-4.29)	(-5.71)
Controls	Yes	Yes	Yes	Yes
INDFE	Yes	Yes	Yes	Yes
N	5966	5966	7993	7993
Adj . R²	0.04	0.04	0.03	0.04

5.5.3. Using the regression method of company-year two-dimensional clustering

In this paper, the main test uses the method of clustering at the company level for regression, to ensure the reliability of the results. The regression method of company-year two-dimensional clustering is used for re-testing. Table 14 (1) and (2) are listed as the test results using company-year two-dimensional clustering, and the coefficients of *KAM*POST* are negative and significant, indicating the robustness of the paper's conclusion.

5.5.4. 2% fractional tailing treatment

In order to ensure the reliability of the results, this paper adjusts the original tail reduction degree from 1% to 2%. Table 14 (3) and (4) are listed as the test results of 2% tail reduction treatment, and the coefficients of *KAM*POST* are negative and significant, which proves that the conclusion obtained in this paper is robust to a certain extent.

Table 14 Using company-year two-dimensional clustering and 2% quantile tail processing test results

	(1) $NCSKEW_{t+1}$	(2) $DUVOL_{t+1}$	(3) $NCSKEW_{t+1}$	(4) $DUVOL_{t+1}$
KAM	-0.05	0.02	-0.07	-0.00
	(-1.43)	(1.28)	(-0.90)	(-0.00)
POST	0.07***	0.03***	0.09**	0.04
	(19.73)	(6.25)	(2.46)	(1.60)
*KAM*POST*	-0.08**	-0.15***	-0.30***	-0.30***
	(-2.46)	(-7.43)	(-3.11)	(-4.27)
Controls	Yes	Yes	Yes	Yes
INDFE	Yes	Yes	Yes	Yes
N	4039	4039	4039	4039
Adj . R^2	0.01	0.01	0.02	0.02

6. conclusion

Based on the particularity of the time and scope of the audit report mode reconstruction implemented by listed companies, this paper explores the relationship between the audit report mode reconstruction and the stock price crash risk by constructing a differences-in-differences model. The research finds that: the audit report mode reconstruction reduces the risk of stock price crash, and the more the number of key audit matters disclosed, the more obvious the reduction effect on the risk of stock price crash. In addition, the effect of audit report mode reconstruction to reduce the stock price crash risk is more evident in the samples with high degree of information asymmetry, low level of internal control, poor media environment and high agency conflict.

This paper discovers the new mechanism of the audit report mode reconstruction affecting stock price crash risk. It improves the analysis framework of its economic consequences, and gives a positive evaluation of its implementation effect. At the same time, this paper shows that the audit report mode reconstruction meets the requirements of investors to obtain useful information for decision-making, which further proves that the audit report mode reconstruction has a certain value for investors, and helps to enhance their understanding of the latest audit practice. Moreover, based on the above research conclusions, this paper has the following implications: Firstly, for the personal level of certified public accountants, they are essentially responsible for the information transmission between the company and external information users, so certified public accountants should strictly check the implementation of the policy, increase the information content of the report and actively cooperate with the implementation of relevant policies to ensure the quality of enterprise information disclosure. Secondly, for investors, they should pay attention to the utility of key audit matters, and at the same time actively obtain the relevant information of the company and improve their own information processing ability in order to make correct investment decisions. Thirdly, at the corporate level, the governance layer should fully cooperate with the auditor’s audit work and conscientiously implement the relevant policies on the audit report mode reconstruction. At the same time, the management should maintain its own professional ethics, not out of self-interest motivation to hide the negative information of the enterprise, and timely disclose the characteristic information of the enterprise, so as to improve the transparency of enterprise information. Finally, at the level of regulators, national regulatory authorities should strengthen supervision and management, implement the audit report mode reconstruction, proactively identify possible risk points, improve relevant laws and regulations, and formulate relevant regulatory punishment systems. As a witness of the information transmission between the company and external information users, national regulatory authorities are the effective controller to improve the overall information transmission efficiency of the market, and the disclosure of key audit matters can help to improve the efficiency and quality of information transmission. National regulatory authorities should strictly check the implementation of the policy, increase the information content of the report, and actively cooperate with the execution of relevant policies to guarantee the quality of enterprise information disclosure.

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EVA Assessment, Institutional Environment and Audit Qualit

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Abstract:

Does the EVA assessment of central enterprises affect the practice of CPA? Based on the listed companies of central enterprises from 2005 to 2015, we examined the impact of EVA assessment on audit quality. We finding after the EVA assessment, the audit quality decreased significantly, and internal control weakens the negative relationship between the EVA assessment and the audit quality, and the media supervision will significantly weaken the negative relationship between the EVA assessment and the audit quality; From the perspective of action mechanism, after EVA examination, enterprises are improving earnings management and tend to choose low quality auditors to achieve the purpose of opinion shopping; In addition, the bigger the product market competition is, the more significant the negative relationship between EVA assessment and audit quality. After the 18th CPC National Congress, the relationship between the two greatly weakened. This study means that the EVA assessment of central enterprises will have a significant impact on the quality of audit, and play an important role in the objective and comprehensive evaluation of EVA assessment.

Key words: EVA assessment, audit quality, internal control, media supervision, operating environment

1.The question raised

Different performance evaluation mechanisms have significantly varying effects on enterprises. In the traditional assessment methods of central state-owned enterprises, compensation is typically linked to performance. These methods are straightforward and easy to implement, effectively mitigating the impact of noise caused by fluctuations in the capital market. However, they can lead to some unethical behavior by the management, potentially engaging in excessive investments to pursue superficial profits. According to data released by the State-owned Assets Supervision and Administration Commission, as of the end of 2010, the average net asset total of central enterprises was 9.56 trillion yuan, representing a 13.9% increase from the previous year. In the same year, the average return on net assets for central enterprises was 9.5%, only a 1.9 percentage point increase from the previous year. This indicates that the growth rate of the return on net assets for central enterprises lags behind their expansion in scale, and investment efficiency remains relatively low.

To regulate the investment behavior of state-owned enterprises, improve investment efficiency, and promote further development, the State-owned Assets Supervision and Administration Commission initiated and tested various indicators of Economic Value Added (EVA) starting in 2003. This included 5-year ranking calculations, research interviews, and a 3-year pilot program. After seven years of preparation, EVA performance evaluation was officially promoted and implemented in 2010, and it was fully integrated into the performance assessment of central enterprises with the "Interim Measures for Performance Evaluation of Central Enterprise Leaders" using EVA.

In 2012, the State-owned Assets Supervision and Administration Commission revised these measures, requiring central enterprises to increase the weight of EVA evaluation indicators from 40% to 50%. In 2014, the commission issued "Guidelines on Strengthening the Value Management of Central Enterprises with Economic Value Added as the Core," further instructing central enterprises to deepen their EVA performance evaluation system and enhance management standards. The "Measures for Performance Evaluation of Central Enterprise Leaders" issued in 2016 once again emphasized the importance of implementing the EVA performance evaluation system within enterprises. Moreover, local state-owned enterprises and government departments across the country have also followed suit, making the EVA performance evaluation system a widely used and significant performance assessment system.

In the academic realm, numerous scholars have conducted in-depth analyses of this issue. For example, EVA assessment can enhance investment efficiency, corporate value, innovation, and risk-taking levels while reducing corporate cost stickiness [1-7]. These studies provide crucial references for the improvement of EVA assessment. At the same time, the State-owned Assets Supervision and Administration Commission of the State Council holds high expectations for the value and utility of EVA. Specifically, they aim to "focus on core businesses and enhance corporate vitality and competitiveness through technological progress, management innovation, structural optimization, and resource allocation." However, despite nearly seven years of EVA assessment implementation, there is limited literature that examines the economic consequences of central state-owned enterprises' EVA implementation from a third-party evaluation perspective. Although many central enterprises are subject to annual supervision by the National Audit Office, there is minimal specific EVA auditing. In contrast, registered accountants, who represent social auditing, possess greater third-party external independent evaluation authority. This is due to the strong objectivity and impartiality they demonstrate when expressing opinions on the financial statements of central enterprises. Consequently, evaluating the effectiveness of EVA in central enterprises through the study of registered accountants holds significant practical value. Based on common intuition, EVA can influence the decision-making behavior of central enterprise executives, which, in turn, inevitably affects the professional judgment of certified accountants. However, there is a scarcity of literature that scientifically tests and substantiates this from both theoretical and empirical perspectives.

To this end, this article takes the state-owned enterprises (SOEs) listed from 2005 to 2015 as research samples and empirically analyzes the impact of Economic Value Added (EVA) assessment on audit quality. The study reveals that after EVA assessment, the audit quality of SOEs significantly deteriorates. However, in an environment with high-quality internal controls, the negative relationship between EVA assessment and audit quality significantly weakens. The stronger the media supervision, the less significant the negative relationship between EVA assessment and audit quality. Through an examination of its mechanisms, it is found that after EVA assessment, companies tend to engage in more positive earnings management, preferring to choose lower-quality auditors to achieve a desired audit opinion. A higher level of competition in the product market intensifies the negative relationship between EVA assessment and audit quality. Furthermore, it is observed that after the convening of the 18th National Congress of the Communist Party of China, the relationship between the two variables significantly weakens. However, potential factors such as manager's age, institutional investor ownership, and changes in corporate performance do not substantively influence the relationship between EVA assessment and audit quality.

The possible contributions and innovations of this paper are as follows: First, unlike previous research on state-owned enterprise (SOE) EVA, this paper, for the first time, investigates the relationship between EVA assessment in Chinese SOEs and audit quality from the perspective of auditor behavior. This not only provides empirical evidence for a more objective, rational, and comprehensive examination of the actual impact of the EVA assessment system in SOEs but also enriches the literature on the economic consequences of EVA assessment, especially regarding factors influencing audit quality. Second, the research in this paper indicates that while evidence of SOE executives avoiding and "selectively implementing" this system may exist in EVA assessment, strengthening internal controls and media supervision can mitigate this issue to a certain extent. Third, the research in this paper has practical implications and value. The research findings can serve as a reference for regulatory authorities in SOEs to improve the implementation details of the EVA assessment system and enhance its efficiency. Furthermore, it provides theoretical evidence for third-party evaluation mechanisms of EVA assessment, such as registered accountant audits.

2.Institutional background

Since 1989, after the Sotensite Company introduced the concept of Economic Value Added (EVA), a large number of prominent companies in the United States, with Coca-Cola as a representative, have adopted this system. In an environment of strict property rights protection and legal enforcement, this system has had a profound impact on performance evaluation in developed countries like the United States. In recent years in China, the question of how to improve the efficiency of state-owned enterprises has become a central issue in the transition from old to new economic drivers. In recent years, some state-owned enterprises in China, especially certain central enterprises, have encountered challenges such as uncontrolled expansion, wasteful capital expenditure, irrational resource allocation, and low operational efficiency, which have hindered their growth. To regulate the investment behavior of state-owned enterprises and enhance their investment efficiency to further promote their development, the State-owned Assets Supervision and Administration Commission of the State Council (SASAC) initiated and tested various EVA indicators in 2003. This included a five-year assessment ranking, research interviews, and a three-plus-year pilot program. After seven years of preparation, EVA performance evaluation system was officially introduced in 2010 and fully incorporated into the central enterprises' performance assessment through the "Interim Measures for the Performance Assessment of Central Enterprise Leaders." In 2012, SASAC revised the measures, increasing the weight of EVA assessment indicators from 40% to 50%. In 2014, SASAC issued the "Guidelines on Strengthening the Value Management of Central Enterprises with Economic Value Added (EVA) as the Core," further requiring central enterprises to deepen their EVA assessment system and improve their management levels. The "Measures for the Performance Assessment of Central Enterprise Leaders" issued in 2016 once again emphasized the importance of implementing the EVA performance assessment system in enterprises. Furthermore, various types of state-owned enterprises and government departments across the country have also followed suit, gradually adopting the EVA performance assessment system to evaluate the performance quality of state-owned enterprises.

3.Theoretical analysis and research hypothesis

Stewart (1991) argues, "Earnings, earnings per share, and the like are incorrect measures of a company's performance; EVA is the most effective metric." [8] Existing research suggests that EVA evaluation can curb corporate overinvestment, enhancing investment efficiency and ultimately increasing company value. [1-2,4,9-10] There have also been studies examining the impact of EVA on the capital structure and cost stickiness of publicly traded companies. [11,7] Through an analysis of existing research, firstly, EVA evaluation can mitigate agency problems. Compared to other performance evaluation methods, EVA evaluation tightly aligns the interests of shareholders and managers, harmonizing shareholders' wealth expectations with managerial decision-making, thereby minimizing conflicts of interest between the two parties. [1,12] Secondly, EVA evaluation aids in achieving sustained growth in corporate value creation, reducing corporate overinvestment, resulting in a noticeable improvement in the performance and company value of state-owned enterprises. [4] Kleiman's (1999) research indicates an enhancement in a company's operational performance with EVA, with the performance of EVA-implementing companies being significantly better over the three years following implementation compared to non-implementing companies. [13] Hamilton et al. (2009) found that companies implementing EVA exhibited an overall increasing trend in risk-adjusted investment returns, while non-implementing companies showed a declining trend. [14] Additionally, EVA creatively introduces accounting adjustments, such as capitalizing instead of expensing, which helps reduce noise in performance evaluations, objectively improving earnings quality, and subsequently reducing the audit costs of registered accountants, thereby enhancing audit quality. [4] In fact, based on considerations of career advancement and "political prospects," senior executives of state-owned enterprises tend to hire high-quality auditors for the sake of promotion and political reputation, cooperating during the audit process to achieve higher audit quality.

While extensive theoretical discussions exist in prior research regarding the utility of EVA, they have not found conclusive evidence to suggest that EVA outperforms accounting earnings. [15-18] Lu Chuang et al. (2010) discovered that state-owned enterprises face fairness challenges when implementing EVA evaluations. EVA rankings in these enterprises can be influenced by political connections of top executives, and in some cases, managers within state-owned enterprises may engage in various earnings adjustments and management to meet expected targets and criteria. For example, Su Anmei and Chen Xilai (2010) found that in EVA assessments in state-owned enterprises, there may be earnings manipulation behaviors involving the adjustment of interest-bearing debts and long-term liabilities to non-interest-bearing current liabilities. These actions can change normal short-term loans into financing through promissory notes, as well as report short-term commercial papers, entrusted loans, trust loans, interest-bearing intercompany loans, and medium-term notes as other current liabilities or other payables, deferring revenue from multiple periods. Such adjustments merely alter the structure of liabilities, having no impact on the total amount of debt but significantly affecting the capital cost deductions when calculating EVA. Alternatively, these adjustments might be achieved by increasing research and development expenses, including the artificial reclassification of "other items" under "management expenses" and manufacturing or production costs as research and development expenses. This can lead to the inclusion of a 50% addition in the economic value added assessment metric for state-owned enterprises while also allowing for a 50% deduction when calculating income tax. Additionally, EVA evaluations involve benefit adjustments, and during the development of implementation plans, there might be internal fraudulent activities that result in a lack of internal fairness in the scheme. This affects the effectiveness of the implementation and can be manipulated during execution, rendering the assessment program ineffective. Prior research has indicated that EVA evaluations face varying degrees of resistance in some companies. [21] In such circumstances, managers are likely to hire lower-quality auditors for auditing or seek cooperation from auditing firms during the audit process or exert pressure on auditors. This compromises audit independence, leading to a natural decline in audit quality. Therefore, the relationship between EVA evaluations and audit quality can be either positively or negatively correlated. Based on this analysis, the following opposing hypotheses are proposed:

Hypothesis 1A: Holding other conditions constant, EVA evaluations are positively correlated with audit quality.

Hypothesis 1B: Holding other conditions constant, EVA evaluations are negatively correlated with audit quality.

The analysis above examines the two potential relationships between EVA evaluations and audit quality. However, the implementation of EVA assessments is endogenous to a company's institutional environment and operational behaviors. A comprehensive exploration of EVA assessments in state-owned enterprises necessitates considering governance and institutional factors. In other words, it questions whether certain governance and institutional elements act as constraining conditions on this relationship. If EVA assessments contribute to improving audit quality, it suggests that the assessment system can effectively be "embedded" in the control environment. Conversely, if EVA assessments are detrimental to audit quality, it still implies that some elements of the control environment are important factors influencing the relationship between EVA assessments and audit quality, underscoring the need to give due consideration to the actual role of the control environment. Internal control, in fact, is one crucial governance element. Yang Songling et al. (2014) contend that the internal control quality of state-owned enterprises holding public companies positively affects the company's EVA metric, adding value to the enterprise, and indirectly impacting the relationship between the state-owned enterprise's EVA evaluation and audit quality. In other words, to realize the relevant indicators of the EVA assessment in state-owned enterprises, it is imperative to implement them in five aspects: the internal environment, risk assessment, control activities, information and communication, and monitoring. Consequently, when earnings management and profit manipulation occur during EVA assessments, high-quality internal controls act as a restraining force. Moreover, under the influence of high-quality internal controls, the reliability and compliance of financial reporting are reasonably ensured, significantly reducing the probability of false information disclosure. Furthermore, within the realm of internal control, maintaining risk awareness, identifying key value-adding points in production activities, enhancing communication among various stakeholders within state-owned enterprises, and establishing effective monitoring mechanisms all contribute to achieving the objectives of effective EVA value management. Therefore, high-quality internal control can mitigate the negative relationship between EVA assessments and audit quality. In summary, we propose the following hypothesis:

Hypothesis 2: Holding other conditions constant, high-quality internal control significantly moderates the relationship between EVA assessments and audit quality.

To protect the rights of investors, securities regulatory authorities continually strengthen their oversight and enforcement actions on auditors. Consequently, risk avoidance becomes a significant factor influencing audit decisions. In order to mitigate audit risks, auditors must conduct more extensive testing at various stages of a company's financial reporting and strive to detect significant misstatements in financial statements. At this point, making effective use of various sources of information, especially corporate information reported in the media, becomes a rational choice for auditors. [26] In the new information market environment, the diversification of media reshapes auditors' information and external constraint environment, subsequently affecting the issuance of audit opinions. [27] Previous research suggests that media scrutiny can reduce earnings management. [28] Media oversight, by exposing accounting scandals and increasing exposure, effectively supervises the behavior of managers and auditors. [29-31] Furthermore, Joe et al. (2009) found that clients negatively reported in the media were more likely to be noticed by auditors regarding their bankruptcy risk, leading to auditors modifying their audit opinions. [30] It is widely known that events or business characteristics related to state-owned enterprises are focal points pursued by numerous financial media outlets. For example, the ranking of EVA in state-owned enterprises not only affects the career prospects of company executives but also garners special attention from the media. If the EVA evaluation of state-owned enterprises affects audit quality, especially when EVA assessments lead to a decline in audit quality, external scrutiny by the media can exert significant pressure on the company, its executives, and the State-Owned Assets Supervision and Administration Commission (SASAC). This pressure compels state-owned enterprise executives to use the EVA evaluation as an opportunity to enhance internal control system development and increase the company's ability to mitigate operational risks. Particularly when media oversight is present, state-owned enterprise executives may restrain their earnings management practices to protect their reputation and political prospects, reducing the likelihood of financial misreporting. This, in turn, contributes to improving audit quality. Based on the above analysis, the following hypothesis is proposed:

Hypothesis 3: Under the condition of media oversight, and holding other conditions constant, media oversight significantly moderates the relationship between EVA assessments and audit quality.

4.Research Design

(1) Measurement of Key Indicators

1.Measurement of Audit Quality

Drawing from the research by Gul et al. (2013), this study employs three indicators to measure audit quality: Discretionary Accruals (DA), Conservatism Score (C_Score), and Abnormal Discretionary Expenditures (BL).

The first indicator is based on the performance-matching Jones model proposed by Kothari et al. (2005). Kothari and colleagues argued that the existing Jones model did not take into account the impact of firm performance on earnings management, which could lead to measurement bias in the model. Therefore, they made modifications to the model, primarily using two methods: first, controlling for firm performance variables (represented by ROA) within the basic Jones model. Second, identifying companies in the same industry in the same year with similar or matched performance as paired samples. The first method is most commonly used, and the specific calculation formula is as follows:

$$\frac{TA_{jt}}{A_{jt-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{jt-1}} + \alpha_2 \frac{\Delta REV_{jt}}{A_{jt-1}} + \alpha_3 \frac{PPE_{jt}}{A_{jt-1}} + \alpha_4 ROA_{jt} + \varepsilon_{jt} \qquad (1)$$

In equation (1), TAjt represents total accrued earnings, Ajt-1 is the lagged total assets, △REVjt is the change in main operating revenue, PPEjt is the value of fixed assets (referring to plant, equipment, etc.), ROAjt is the company's asset return on investment in year t. Through regression analysis, the estimated values of α0, α1, α2, α3, and α4 are obtained and can be applied to the following formula (2) to calculate the value of discretionary accruals (DAjt), where △RECjt represents the change in accounts receivable. Audit quality is equal to the absolute value of discretionary accruals, and the higher the value, the lower the audit quality.

$$DA_{jt} = \frac{TA_{jt}}{A_{jt-1}} - \alpha_0 - \alpha_1 \frac{1}{A_{jt-1}} - \alpha_2 \frac{\Delta REV_{jt} - \Delta REC_{jt}}{A_{jt-1}} - \alpha_3 \frac{PPE_{jt}}{A_{jt-1}} - \alpha_4 ROA_{jt} \qquad (2)$$

The second measure of audit quality is the Accounting Conservatism Index. Drawing on Khan and Watts' (2009) research, the specific calculation method is as follows, starting with the definition of Basu's (1997) conservatism model: [35-36].

$$X_i = \beta_1 + \beta_2 D_i + \beta_3 R_i + \beta_4 D_i R_i + \varepsilon_i \qquad (3)$$

Xi, Ri, and Di represent earnings, individual stock annual excess return (considering reinvested dividends), and a binary variable (taking a value of 1 when excess return is negative). Next, this paper defines the G_Score as the increment of timeliness of good news and timeliness of bad news, referred to as the C_Score.

$$G\_Score = \beta_3 = \mu_1 + \mu_2 Size_i + \mu_3 M / B_i + \mu_4 Lev_i \qquad (4)$$

$$C\_Score = \beta_4 = \lambda_1 + \lambda_2 Size_i + \lambda_3 M / B_i + \lambda_4 Lev_i \qquad (5)$$

Sizei represents the company's size, M/Bi represents the market-to-book ratio, and Levi represents the leverage ratio. Substituting equations (4) and (5) into equation (6):

$$\begin{aligned} X_i = {} & \beta_1 + \beta_2 D_i + R_i(\mu_1 + \mu_2 Size_i + \mu_3 M / B_i + \mu_4 Lev_i) \\ & + D_i R_i(\lambda_1 + \lambda_2 Size_i + \lambda_3 M / B_i + \lambda_4 Lev_i) \\ & + (\delta_1 Size_i + \delta_2 M / B_i + \delta_3 Lev_i + \delta_4 D_i Size_i \\ & + \delta_5 D_i M / B_i + \delta_6 D_i Lev_i) + \varepsilon_i \end{aligned} \qquad (6)$$

By estimating the coefficients λ1, λ2, λ3, and λ4 from the above equation and plugging them into equation (5), you can calculate the value of the Conservatism Index (C_Score). A higher C_Score indicates greater accounting conservatism, and the higher its value, the better the audit quality.

The third measurement method involves off-balance sheet items. Drawing on Chen and Yuan (2004), Haw et al. (2005), and Kao et al. (2009), off-balance sheet items are equal to the summation of net investment income (coded as B001302000 in Guotai An data), other business profits (B001304000), and non-operating net income (B001000000 minus B001300000). [37-39] A larger value of off-balance sheet items corresponds to lower audit quality.

2.Internal Control

Drawing from previous research on internal control, we use the internal control index from the Dibo database as a measure of the degree of internal control. We transform the strength of internal control into a binary variable, where a value of 1 is assigned if it is greater than the annual median, otherwise, it is set to 0. [40-41]

3.Media Oversight

Inspired by Luo Jinhui and Du Xingqiang's (2014) research, we use the number of internet news search results to reflect the level of media coverage for a company. [42] Specifically, we choose Baidu News Search Engine (http://news.baidu.com/) as the data source. For each listed company, we conduct annual searches on Baidu News for news articles containing the company's stock name in the headline. The number of news articles automatically generated by the search engine is taken as the annual median. If it exceeds the median, the variable "Media Oversight" is set to 1; otherwise, it is set to 0.

(2) Research Model and Variable Definitions

To test Hypotheses 1 to 3, we construct the following regression model, and the specific definitions of the variables are as shown in Table 1.

$$DA(C\_Score, BL) = \alpha_0 + \alpha_1 Post + Controls + Industry + Year + \varepsilon \quad (7)$$

$$\begin{aligned} DA(C\_Score, BL) = \alpha_0 + \alpha_1 Post + \alpha_2 Post \times IC + \alpha_3 IC \\ + Controls + Industry + Year + \varepsilon \end{aligned} \quad (8)$$

$$\begin{aligned} DA(C\_Score, BL) = \alpha_0 + \alpha_1 Post + \alpha_2 Post \times Media + \alpha_3 Media \\ + Controls + Industry + Year + \varepsilon \end{aligned} \quad (9)$$

Table 1 Variable definition table

Variable name	Variable definition
DA	Manipulative accruals are taken in absolute terms. The greater the value, the lower the audit quality. The calculation method is shown above.
C_Score	he greater the value of accounting conservatism, the higher the audit quality. The calculation method is detailed above。
BL	For offline projects, the higher the value, the lower the audit quality. See the above for the calculation method.
Post	The dummy variable of EVA performance evaluation is 1 in 2010 and subsequent years, and 0 in previous years.
IC	Turns internal control into a dummy variable, with a median value of 1 if greater than the annual value, and 0 if not.
Media	Turn media supervision into a dummy variable, with the value being 1 if the annual median is greater than that, and 0 if not.
Size	Natural logarithm of total assets of an enterprise at the end of the year.
Lev	Enterprise year-end asset-liability ratio, asset-liability ratio = year-end liabilities/total assets at the end of the year.
Roa	The return on assets of the enterprise, return on assets = net profit/total assets.
Ret	The return on the stock of the enterprise.

Variable name	Variable definition
Capital	Capital expenditure adjusted for the company's total assets at the beginning of the period, the cash paid by the company for the purchase and construction of fixed assets, intangible assets and other long-term assets in the year divided by the total assets at the beginning of the period.
SP	Earning a small profit, 1 when Roa is between 0 and 1, 0 if not.
Industy	Industry fixed effect.
Year	Annual fixed effect.

(3) Sample Selection and Data Sources

The data in this paper covers the period from 2005 to 2015 for central state-owned enterprises. The internal control index is sourced from the DiBo database, media supervision data are manually collected using the "Baidu News Search Engine" (http://news.baidu.com/), and other data are obtained from the GuoTaiAn database. During the data processing, we excluded samples from the financial and insurance industries, samples with an asset-liability ratio greater than 1, and samples with missing data. In the end, we retained 2967 valid samples for DA (Data Availability), 2971 for C_Score, and 1664 for BL (Bank Loan). To mitigate the impact of outliers on empirical results, we conducted Winsorization on all continuous variables at the 1st and 99th percentiles.

5.Empirical analysis

(1) Descriptive Statistics

Table 2 provides the descriptive statistics of the sample in this study. The mean of the absolute value of discretionary accruals (DA) for performance matching is 0.078, with a median of 0.175. The mean of the accounting conservatism index, C_Score, is 0.014, with a median of 0.021. For offline projects, the mean is 0.015, and the median is 0.008. These metrics are generally similar to the studies conducted by Gul et al. (2013) and Khan and Watts (2009), with minor differences possibly attributed to data sources (different capital market backgrounds), selection, and varying time frames [32,35]. Furthermore, the other variables in the model fall within reasonable ranges and exhibit a certain degree of normal distribution.

Table 2 Descriptive statistics

Variable name	Minimum value	Mean value	median	Maximum value	Standard deviation
DA	0.001	0.078	0.047	0.592	0.097
C_Score	-0.223	0.014	0.021	0.177	0.077
BL	-0.041	0.015	0.008	0.136	0.024
Post	0.000	0.598	1.000	1.000	0.490
Size	19.859	22.409	22.100	27.040	1.562
Lev	0.077	0.517	0.526	0.923	0.199
Roa	-0.188	0.030	0.029	0.183	0.056
Ret	-0.756	0.392	0.178	3.680	0.858
Capital	0.000	0.067	0.043	0.386	0.071
SP	0.000	0.872	1.000	1.000	0.334

Table 3 presents the results of the multivariate regression model (7). It can be observed that: in the first column, EVA performance evaluation (Post) is significantly positively associated with discretionary accruals (DA) at the 1% level; in the second column, EVA performance evaluation (Post) is significantly negatively associated with the accounting conservatism index (C_Score) at the 1% level; in the third column, EVA performance evaluation (Post) is significantly positively associated with offline projects (BL) at the 1% level. The results from all three columns are consistent and confirm the findings of Hypothesis 1B, indicating that EVA performance evaluation leads to a decrease in audit quality. This suggests that after EVA performance evaluation, executives in central state-owned enterprises may seek auditor cooperation to meet their performance assessment needs, potentially leading to the "concealment" and "cosmetic enhancement" of financial reporting manipulation.

Table 4 displays the results of the multivariate regression model (8), examining how internal control affects the relationship between EVA performance evaluation and audit quality. In columns (1), (2), and (3), the interaction term (Post×IC) is significantly negatively correlated at the 10% level, significantly positively correlated at the 1% level, and significantly negatively correlated at the 5% level, respectively. This implies that in situations with strong internal controls, the negative relationship between EVA performance evaluation and audit quality weakens, demonstrating that high-quality internal controls can mitigate the adverse impact of EVA performance evaluation on audit quality.

Table 5 shows the results of the multivariate regression model (9), investigating how media supervision affects the relationship between EVA performance evaluation and audit quality. In columns (1) and (2) of the table, the interaction term (Post×Media) is negatively correlated at the 1% level and positively correlated at the 1% level, respectively. However, in column (3), the interaction term (Post×Media) is positively correlated but not statistically significant, although it does not affect the overall results. This suggests that under the influence of media supervision, the negative relationship between EVA performance evaluation and audit quality weakens, indicating that media supervision can indeed curb managerial earnings management behavior.

Table 3 Influence of EVA assessment on audit quality

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.245^{***}	-0.089^{***}	0.073^{***}
	(7.47)	(-8.94)	(6.77)
Post	0.070^{***}	-0.120^{***}	0.013^{***}
	(8.41)	(-48.91)	(5.68)
Size	-0.007^{***}	0.009^{***}	-0.002^{***}
	(-5.25)	(20.77)	(-5.17)
Lev	0.035^{***}	0.013^{***}	0.010^{***}
	(3.16)	(3.95)	(2.77)
Roa	0.034	-0.020	0.136^{***}
	(0.75)	(-1.46)	(9.07)
Ret	0.008^{**}	0.004^{***}	0.000

	(2.53)	(3.74)	(0.11)
Capital	0.021	-0.030***	-0.007
	(0.81)	(-3.75)	(-0.74)
SP	-0.015**	-0.000	0.000
	(-2.19)	(-0.01)	(0.00)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2967	2971	1664
Adjusted R-squared	0.141	0.872	0.138

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

Table 4 EVA assessment, internal control and audit quality

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.213***	-0.079***	0.065***
	(6.13)	(-7.53)	(5.82)
Post	0.019**	-0.051***	0.039*
	(2.04)	(-17.62)	(1.77)
Post×IC	-0.012*	0.006***	-0.006**
	(-1.77)	(2.72)	(-2.16)
IC	0.004	-0.003	0.001
	(0.64)	(-1.54)	(0.47)
Size	-0.006***	0.008***	-0.002***
	(-4.28)	(18.70)	(-4.12)
Lev	0.034***	0.015***	0.012***
	(3.03)	(4.30)	(3.25)
Roa	0.050	-0.024*	0.155***
	(1.02)	(-1.65)	(9.50)

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
Ret	0.008***	0.004***	-0.000
	(2.59)	(3.67)	(-0.04)
Capital	0.020	-0.028***	-0.009
	(0.76)	(-3.49)	(-0.93)
SP	-0.014**	-0.000	-0.000
	(-2.00)	(-0.07)	(-0.06)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2893	2907	1603
Adjusted R-squared	0.143	0.875	0.145

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

Table 5 EVA assessment, media attention, and audit quality

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.221***	-0.080***	0.073***
	(6.36)	(-7.69)	(6.35)
Post	0.082***	-0.128***	0.012***
	(8.85)	(-46.89)	(4.41)
Post×Media	-0.021***	0.014***	0.002
	(-2.94)	(6.33)	(0.69)
Media	0.009*	-0.008***	-0.002
	(1.67)	(-4.91)	(-0.79)
Size	-0.007***	0.009***	-0.002***

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
	(-4.28)	(19.00)	(-4.68)
Lev	0.034***	0.013***	0.010***
	(3.13)	(3.87)	(2.69)
Roa	0.035	-0.020	0.136***
	(0.78)	(-1.47)	(9.07)
Ret	0.008**	0.004***	0.000
	(2.52)	(3.71)	(0.11)
Capital	0.021	-0.030***	-0.008
	(0.82)	(-3.75)	(-0.75)
SP	-0.015**	-0.000	-0.000
	(-2.20)	(-0.03)	(-0.03)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2967	2971	1664
Adjusted R-squared	0.143	0.874	0.138

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

6.Further testing

(1) Intermediate Mechanisms of EVA Evaluation Affecting Audit Quality

In the preceding text, we posited the potential existence of earnings manipulation in the EVA evaluation process. Furthermore, to conceal this behavior, managers are likely to engage low-quality auditors for the audit or seek cooperation from audit firms to purchase favorable opinions, thereby compromising audit independence and ultimately leading to a decline in audit quality. Therefore, earnings management, the hiring of low-quality auditors by managers, and opinion purchasing behavior are likely intermediate mechanisms leading to a decrease in audit quality. To investigate these issues, we analyze how EVA evaluation influences earnings management, auditor selection, and opinion purchasing behavior.

The relationship between EVA evaluation and earnings management is presented in Table 6. The first column (1) represents the relationship between EVA evaluation and positive earnings management, and the results indicate that after EVA evaluation, management engages in positive earnings management behavior more frequently. The second column (2) depicts the relationship between EVA evaluation and negative earnings management, which shows no significant impact of EVA evaluation on negative earnings management. The third column (3) illustrates the relationship between EVA evaluation and real earnings management, demonstrating a decrease in genuine earnings management by companies after EVA evaluation. This may be because after EVA evaluation, company management can manipulate profits through accrual-based earnings management without the need for more costly real earnings management practices.

In Table 7, we examine the relationship between EVA evaluation and auditor selection and opinion purchasing. [It should be noted that due to difficulties in achieving convergence when conducting Logit regression, we continue to use OLS regression in this analysis (consistent with the rest of the text). Wooldridge (2005) suggests that OLS estimation of binary variables in large samples is unbiased and not significantly different from Logit regression, and Gul et al. (2013) have employed a similar approach in the literature. Therefore, the use of OLS regression for binary dependent variables in this study is well-founded.] In the first column, the examination pertains to whether companies tend to switch from one of the top ten domestic auditing firms to non-top ten firms after EVA evaluation. In the second column, the examination pertains to whether companies tend to switch from large-scale auditing firms to small-scale firms. The size of auditing firms is determined by the median of the total assets audited by the firm's clients in a given year; firms with total assets above the median are considered large-scale firms, while those with total assets below the median are considered small-scale firms. The results from columns (1) and (2) in Table 7 indicate that after EVA evaluation, companies tend to select lower-quality auditors. Drawing from the calculation method of Gul et al. (2013), we analyze the impact of EVA evaluation on opinion purchasing, as seen in the third column of Table 7, revealing an increase in the extent of management opinion purchasing after EVA evaluation.

In summary, the above results reflect that after EVA evaluation, management tends to choose lower-quality auditors to conceal earnings management behavior and achieve their motivation for opinion purchasing.

Table 6 How does EVA assessment affect earnings management

	(1)	(2)	(3)
	DA^+	DA^-	*EM*
_cons	0.223***	-0.255***	-0.036
	(5.30)	(-5.19)	(-1.02)
Post	0.020*	0.015	-0.016*
	(1.75)	(1.22)	(-1.79)
Size	-0.007***	0.008***	0.002

	(1)	(2)	(3)
	DA^{+}	*DA*$^{-}$	*EM*
	(-3.79)	(3.59)	(1.33)
Lev	0.043***	-0.047***	0.004
	(3.04)	(-2.83)	(0.31)
Roa	-0.081	-0.216***	-0.327***
	(-1.30)	(-3.33)	(-6.64)
Ret	0.005	-0.006	0.009***
	(1.27)	(-1.31)	(2.79)
Capital	-0.012	-0.002	0.102***
	(-0.36)	(-0.04)	(3.62)
SP	0.000	0.018*	0.013*
	(0.01)	(1.68)	(1.73)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	1561	1505	2925
Adjusted R-squared	0.115	0.185	0.039

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

Table 7 EVA assessment, auditor selection behavior, and opinion buying

	(1)	(2)	(3)
	Switch^{Big10}	*Switch*^{BigN}	*ARAgg*
_cons	0.012	0.042	0.431***
	(0.25)	(1.30)	(7.29)
Post	0.025**	0.025***	0.040***
	(2.22)	(3.12)	(2.59)
Size	-0.001	-0.003*	-0.032***
	(-0.56)	(-1.84)	(-12.74)

	(1)	(2)	(3)
	Switch^{Big10}	*Switch*^{BigN}	*ARAgg*
Lev	-0.007	0.001	-0.039**
	(-0.48)	(0.07)	(-1.96)
Roa	-0.016	-0.029	0.546***
	(-0.24)	(-0.64)	(6.58)
Ret	0.018***	-0.004	0.005
	(4.03)	(-1.12)	(0.92)
Capital	0.008	-0.002	0.047
	(0.22)	(-0.09)	(0.98)
SP	0.000	0.004	0.062***
	(0.00)	(0.53)	(4.86)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	3055	3055	3026
Adjusted R-squared	0.021	0.011	0.152

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

(2) The Impact of Product Market Competition

In addition to internal controls and media oversight, are there any other constraints on the relationship between EVA evaluation and audit quality? Product market competition is an external governance mechanism that cannot be ignored. Therefore, we further examine how product market competition affects the relationship between EVA evaluation and audit quality. The regression results, as shown in Table 8, reveal that as product market competition intensifies, the negative relationship between EVA evaluation and audit quality becomes more pronounced. This may be because in more competitive environments, managers find it increasingly challenging to meet the requirements of EVA evaluation, leading to a stronger incentive for them to engage in earnings management and exert pressure on auditors.

Table 8 EVA assessment, product market competition and audit quality

	(1)	(2)	(3)
	DA	*C_Score*	*BL*

_cons	0.256***	-0.090***	0.074***
	(7.81)	(-9.08)	(6.85)
Post	0.051***	-0.118***	0.011***
	(5.68)	(-44.15)	(4.24)
Post×HHI	0.035***	-0.006***	0.003
	(5.11)	(-3.02)	(1.01)
HHI	-0.003	0.006**	0.002
	(-0.31)	(1.99)	(0.77)
Size	-0.008***	0.009***	-0.002***
	(-5.33)	(20.82)	(-5.20)
Lev	0.037***	0.013***	0.010***
	(3.36)	(3.85)	(2.81)
Roa	0.035	-0.020	0.136***
	(0.77)	(-1.45)	(9.07)
Ret	0.009***	0.003***	0.000
	(2.94)	(3.51)	(0.24)
Capital	0.017	-0.030***	-0.008
	(0.66)	(-3.67)	(-0.78)
SP	-0.014**	-0.000	0.000
	(-2.03)	(-0.05)	(0.09)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2967	2971	1664
Adjusted R-squared	0.149	0.873	0.139

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

(3) The Influence of Managerial Age

In state-owned enterprises, managers approaching retirement age may be more motivated to seek rent, pursuing higher control and private gains. However, they may also become more disciplined at this age to avoid tarnishing their late career prospects. Therefore, including this variable in our study holds practical significance. We created virtual variables using 55 and 60 years as cutoff points, as demonstrated in Tables 9 and 10. It can be observed that there is no clear evidence to support the idea that managerial age has a significant impact on EVA evaluation and audit quality.

Table 9 EVA assessment, age of managers and audit quality (whether managers are over 55 years old)

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.245***	-0.089***	0.073***
	(7.44)	(-8.86)	(6.78)
Post	0.072***	-0.120***	0.012***
	(8.48)	(-48.24)	(5.34)
Post_Age	-0.012	-0.001	0.005
	(-1.20)	(-0.23)	(1.23)
Age	0.015*	0.002	-0.004
	(1.75)	(0.69)	(-1.29)
Size	-0.008***	0.009***	-0.002***
	(-5.33)	(20.55)	(-5.13)
Lev	0.036***	0.014***	0.010***
	(3.24)	(4.01)	(2.80)
Roa	0.032	-0.020	0.137***
	(0.70)	(-1.46)	(9.12)
Ret	0.008***	0.004***	0.000
	(2.59)	(3.75)	(0.06)
Capital	0.019	-0.031***	-0.007
	(0.73)	(-3.78)	(-0.68)
SP	-0.015**	-0.000	0.000
	(-2.15)	(-0.01)	(0.00)
Year FE	Yes	Yes	Yes

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
Indutry FE	Yes	Yes	Yes
N	2967	2971	1664
Adjusted R-squared	0.142	0.872	0.138

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

Table 10 EVA assessment, age of managers and audit quality (whether managers are over 60 years old)

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.249***	-0.089***	0.073***
	(7.57)	(-8.94)	(6.78)
Post	0.070***	-0.120***	0.013***
	(8.36)	(-48.76)	(5.61)
Post×Age	0.013	-0.003	0.005
	(0.64)	(-0.46)	(0.66)
Age	0.016	0.002	-0.008
	(0.99)	(0.40)	(-1.26)
Size	-0.008***	0.009***	-0.002***
	(-5.40)	(20.72)	(-5.12)
Lev	0.036***	0.013***	0.010***
	(3.26)	(3.93)	(2.79)
Roa	0.030	-0.020	0.136***
	(0.67)	(-1.46)	(9.12)
Ret	0.008**	0.004***	0.000
	(2.50)	(3.75)	(0.08)
Capital	0.019	-0.030***	-0.007
	(0.73)	(-3.74)	(-0.73)

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
SP	-0.015**	-0.000	0.000
	(-2.17)	(-0.01)	(0.01)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2967	2971	1664
Adjusted R-squared	0.143	0.872	0.138

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

(4) The Impact of the 18th National Congress

Following the ascension of a new generation of leaders after the 18th National Congress in 2012, China witnessed an extensive, long-lasting, and far-reaching anti-corruption campaign. According to the data released by the Central Commission for Discipline Inspection, in 2013, over 21,000 individuals were held accountable nationwide, including 54 department-level officials and 1,477 county-level officials. In 2014, more than 70 cases of disciplinary violations involving mid-level management officials were disclosed, with over 300 cases involving officials at the department and bureau levels. A total of 2,738 cases were reported throughout the year. From the 18th National Congress in 2012 to 2015, as many as 67 officials at or above the provincial and ministerial levels were investigated and punished.

The question arises as to whether such a large-scale anti-corruption campaign could have a spillover effect on central state-owned enterprises (SOEs) and their publicly listed companies. We incorporated this issue into our study and introduced an interaction term (Post_Post2012). The regression results in Table 11 reveal that, except for offline projects (BL), all the interaction terms are significantly negatively correlated at the 1% level, while one interaction term is significantly positively correlated at the 1% level. This suggests that after the 18th National Congress, the anti-corruption campaign had a deterrent effect on managerial earnings management behavior. Consequently, it suppressed and weakened the relationship between EVA evaluation and audit quality, contributing to the creation of a favorable institutional environment for the effectiveness of EVA evaluation.

Table 11 Influences after the 18th National Congress

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.245***	-0.089***	0.073***
	(7.47)	(-8.94)	(6.77)

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
Post	0.070***	-0.120***	0.039*
	(8.41)	(-48.91)	(1.76)
Post_Post2012	-0.082***	0.072***	-0.027
	(-10.81)	(29.37)	(-1.19)
Post2012	-0.082	0.055	-0.027
	(-10.67)	(23.96)	(-1.22)
Size	-0.007***	0.009***	-0.002***
	(-5.25)	(20.77)	(-5.17)
Lev	0.035***	0.013***	0.010***
	(3.16)	(3.95)	(2.77)
Roa	0.034	-0.020	0.136***
	(0.75)	(-1.46)	(9.07)
Ret	0.008**	0.004***	0.000
	(2.53)	(3.74)	(0.11)
Capital	0.021	-0.030***	-0.007
	(0.81)	(-3.75)	(-0.74)
SP	-0.015**	-0.000	0.000
	(-2.19)	(-0.01)	(0.00)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2967	2971	1664
Adjusted R-squared	0.141	0.872	0.138

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

(5) The Impact of Institutional Investor Ownership

Some research suggests that institutional investor oversight can curb managerial earnings management behavior. Therefore, we included it in our study of the relationship between EVA evaluation and audit quality. The regression results, as shown in Table 12, are somewhat disappointing. There is no clear evidence to indicate that institutional investors have a significant impact on the relationship between EVA evaluation and audit quality. One possible reason for this is that in central state-owned enterprises (SOEs), the dominant presence of state ownership may be more pronounced, thereby weakening the supervisory role of institutional investors and other small shareholders.[44] Unfortunately, there is no substantial evidence suggesting that institutional investors influence the relationship between EVA evaluation and audit quality, possibly due to the prevalent dominance of state ownership in central SOEs, which could lead to a weakening of the supervisory function of institutional investors and other minority shareholders.

Table 12 EVA assessment, institutional investor shareholding and audit quality

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.240***	-0.091***	0.073***
	(7.16)	(-8.85)	(6.76)
Post	0.014	-0.122***	0.011***
	(1.56)	(-45.37)	(4.45)
Post×INS	0.000	0.003	0.002
	(0.02)	(1.54)	(0.88)
INS	-0.003	-0.004**	-0.005**
	(-0.60)	(-2.26)	(-2.12)
Size	-0.007***	0.009***	-0.002***
	(-4.64)	(20.60)	(-5.01)
Lev	0.033***	0.014***	0.010***
	(2.97)	(4.07)	(2.66)
Roa	0.031	-0.020	0.140***
	(0.69)	(-1.38)	(9.24)
Ret	0.008**	0.004***	0.001
	(2.38)	(4.06)	(0.55)
Capital	0.023	-0.030***	-0.007
	(0.89)	(-3.64)	(-0.67)

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
SP	-0.016**	-0.001	-0.000
	(-2.25)	(-0.33)	(-0.02)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2889	2893	1645
Adjusted R-squared	0.136	0.871	0.141

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

(6) The Impact of Changes in Corporate Performance

Does the relationship between EVA evaluation and audit quality change when corporate performance experiences fluctuations? The regression results, as shown in Table 13, reveal that only when the measure is C_Score, the coefficient of the interaction term (Post×droa) is significantly negatively correlated at the 5% level. In other regressions, the interaction terms are not significant. This implies that there is weak evidence to suggest that the negative relationship between EVA evaluation and audit quality intensifies when corporate performance undergoes significant changes. The reason for this may be that when performance is not sustainable, executives in central SOEs are more likely to resort to earnings management for "self-rescue."[44]Unfortunately, there is no substantial evidence suggesting that institutional investors influence the relationship between EVA evaluation and audit quality, possibly due to the prevalent dominance of state ownership in central SOEs, which could lead to a weakening of the supervisory function of institutional investors and other minority shareholders.

Table 13 Effects of changes in corporate performance

	(1)	(2)	(3)
	DA	*C_Score*	*BL*
_cons	0.244***	-0.097***	0.065***
	(7.20)	(-9.58)	(5.51)
Post	0.066***	-0.122***	0.001
	(7.57)	(-48.66)	(0.03)
Post×droa	-0.031	-0.043**	0.028
	(-0.55)	(-2.46)	(1.38)

droa	0.070	0.042***	0.055***
	(1.62)	(3.18)	(3.25)
Size	-0.007***	0.009***	-0.002***
	(-4.83)	(21.50)	(-3.26)
Lev	0.034***	0.011***	0.003
	(2.93)	(3.11)	(0.85)
Roa	0.002	-0.037**	0.104***
	(0.04)	(-2.54)	(6.09)
Ret	0.008**	0.004***	-0.001
	(2.49)	(4.01)	(-0.55)
Capital	0.026	-0.028***	-0.001
	(0.97)	(-3.34)	(-0.08)
SP	-0.015**	0.000	-0.003
	(-2.07)	(0.01)	(-1.18)
Year FE	Yes	Yes	Yes
Indutry FE	Yes	Yes	Yes
N	2839	2842	1326
Adjusted R-squared	0.143	0.874	0.163

"Note: *** , ** , * represent statistical significance at the 1%, 5%, and 10% levels, respectively (t-statistic in parentheses)."

In order to ensure the robustness of our conclusions and demonstrate that they are of a general nature rather than arising by chance, this paper employed the following methods for robustness testing. Due to space constraints, we have not presented the corresponding regression results.

In the main test, we used data from 2005 to 2015, with the purpose of looking back symmetrically 5 years before and after 2010 as the reference point. In the robustness test, we used data from 2005 to 2014 to compare the periods of 2005 to 2009 and 2010 to 2014 separately. Additionally, we also considered the approach of using data from 2005 to 2015 while excluding 2010, as the first year of policy implementation often involves an adjustment process, and removing 2010 helps reduce noise.

In the main test, ordinary least squares (OLS) regression was used. The OLS regression may have a correlation between the explanatory variables and unobservable factors that do not change over time, which could potentially affect the results of this paper. Therefore, in robustness testing, fixed-effects models were employed to address this concern. Random-effects models were also used for comparison.

In the main test, even though all continuous variables were trimmed (top and bottom 1%), some variables may still have extreme values even after trimming. These extreme values may inevitably influence the empirical results. Therefore, for caution, in the robustness tests, we re-conducted regression analysis after trimming within the ranges of top and bottom 2% and top and bottom 5%.

7.Conclusion

Existing research on EVA performance evaluation has primarily focused on investment efficiency and cost stickiness, with limited literature directly investigating the impact of EVA evaluation on audit quality. This presents a significant opportunity to understand and evaluate the policy's effects from a fresh perspective and from multiple angles [1, 2, 4, 7]. In this study, we examine the issue using data from centrally-owned state-owned enterprises (SOEs) listed from 2005 to 2015. Our research reveals that audit quality decreases after the implementation of EVA evaluation. However, internal controls and media oversight can mitigate this decrease. Furthermore, we find that in highly competitive product markets, the negative relationship between EVA evaluation and audit quality becomes more pronounced. After the Eighteenth National Congress of the Communist Party of China, this relationship significantly weakens. Additionally, factors such as manager age, institutional investor holdings, and corporate performance do not significantly affect the relationship between EVA evaluation and audit quality.

The empirical results of this study indicate a negative relationship between EVA evaluation and audit quality. This suggests that when implementing EVA evaluation, it is essential to combine appropriate governance mechanisms and complementary measures, taking into account local circumstances and the theoretical nature of EVA evaluation. Establishing suitable technical pathways and carefully advancing complementary management systems is crucial to facilitate the transformation of centrally-owned SOEs from a "scale-oriented" approach to a "quality-oriented" approach, ensuring the effectiveness of policy implementation and ultimately expanding the scope and depth of EVA evaluation, laying the groundwork for its broader adoption in the future. This research also holds significant policy value. Firstly, for policymakers, given the role of internal controls between EVA evaluation and audit quality, it is essential to introduce systematic thinking into the implementation of these systems. When constructing internal control norms and EVA evaluation, attention should be given to the integration of these two systems, allowing them to work together and produce the necessary comprehensive governance effects. Secondly, in the design of policies, a top-down design concept should be adopted, focusing on the coordination between internal control norms and EVA evaluation systems, eliminating the fragmented effects resulting from the simple, isolated superposition of various systems, and avoiding situations where these systems lack alignment or even conflict with each other. Thirdly, as media industry reform deepens and the media sector continues to thrive, news media and public opinion have become a significant invisible external supervisory force. In light of the empirical results in this study, media oversight can significantly weaken the negative relationship between EVA evaluation and audit quality. Therefore, when implementing EVA evaluation, it is crucial to emphasize and utilize the public oversight role of news media and engage the general public in jointly monitoring the earnings management practices of executives in state-owned enterprises. Lastly, due to variations among different enterprises, policy design should retain sufficient flexibility and include possible "fault-tolerance mechanisms" to allow companies to boldly apply the EVA evaluation system based on actual circumstances.

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A qualitative enquiry on the challenges for Central Bank Digital Currency (CDBC)issuance

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Abstract:

The recent growth of fintech firms has attracted central banks’ attention around the world as they began introducing central bank-regulated digital currencies. While we witness several successful launches of central bank digital currencies (CDBCs), for example, Sand Dollar in the Bahamas and JAM-DEX in Jamaica, there are examples of CDBCs cancelled before their launch by central banks. Therefore, we explore the challenges for CDBC adoption using a qualitative research framework. We apply semi-structured interviews with fintech experts and content analysis based on data collected from secondary sources. Our qualitative research approach allows us to identify several key challenges for CDBC adoption from a global perspective, which include (1) privacy issues, (2) stability concerns, (3) impact on financial inclusion and (4) resilience from cyber-attacks. We provide early evidence on the challenges for CDBC adoption based on past resources which could allow central banks' currently developing digital currencies to make necessary adjustments.

Keywords: CDBC, Central Bank, Digital Currency, FintechJEL Codes: E42 and E58

1. Introduction

Central Bank Digital Currency (CBDC) is a governmentally funded currency that may be used alongside traditional fiat currency or may replace entirely. CBDCs differentiate themselves from regular, privately issued cryptocurrencies such as Bitcoin, Ripple, and other similar digital currencies in their design, issuing, and use. For the government and public, CBDCs may represent many benefits and opportunities as well as a diverse range of challenges and constraints. At this early stage of CDBC development, this innovation could face public, regulatory, and governmental disapproval (Fernández-Villaverde et al., 2021).

Initial developments of CBDCs started in recent years, with a significant rise after 2017 when China officially began the development of the digital Yuan. CBDC development may have significant outcomes for monetary policies in many countries. However, the topic went unnoticed by the public until late 2020. Headlines and public attention were in recent years taken by cryptocurrencies, especially Bitcoin. Tett (2021) explain CBDCs as an opportunity for consumers to use ″computerised code as "money", thus echoing some of the features of bitcoin″ (Tett, 2021).

According to Tett (2021), central banks have realised that CDBC has the potential to solve the present issues of the current banking system and not destroy it. The banks now want to join the new FinTech opportunities; however, they are unwilling to change their approach to business aspects drastically. They do not want to face the risk that fiat currency is debased in the future by excessive supply, such as quantitative easing″ (Tett, 2021).

In 2020, Bank for International Settlements (BIS) released a report on CDBCs, where the results of their survey based on central bank CBDC development were presented. The report indicates that 86% of central banks are interested in the development of CBDC. However, several challenges could affect the widespread adoption of CBDC, discussed below:

Type of instrument	Cash	Bank Deposit	Central Bank Digital Currency	Cryptocurrency
Type of claims	Claim on the central bank	Claim on commercial bank	Claim on the central bank	No specific claims to anyone
Tangibility	Tangible	Intangible	Intangible	Intangible
Stability	Stable value	Stable value	Stable value	Value fluctuates significantly

Table 1: Characteristics of cash, bank deposits, CBDC (Central Bank Digital Currency) and

cryptocurrency

Source: Denmark National Bank (2017)

Before CBDC´s position in the modern payments system is discussed, the main characteristics of the current means of payment should be observed. Denmark National Bank (2017) has developed a chart that summarizes the main characteristics of cash, bank deposits, CBDCs, and cryptocurrencies. In Table 1, according to Denmark National Bank (2017), only cash has its physical form (banknotes and coins), which makes it tangible. All of them, however, have similarities and differences in distinctive characteristics (Bindseil, 2019). To define the current payments system, Adrian (2019) has selected four attributes: type, value, backstop, and technology. Such segregation allows for a clear structure of different payment types in the monetary system. Based on Adrian´s (2019) statements, we discuss the attributes below:

- Type: Type defines the physical form of payment. On the one hand, cash is an object-based means of payment where the transaction is settled on the spot. The second is claim-based payment. Such payments can be even more straightforward. However, they require much more complex infrastructure to operate. Those transactions are settled with the transfer of claim from customer to vendor. It can be easily explained as a credit card payment. When a product is purchased, the claim in the agreed amount is transferred from buyer to seller. The seller then claims funds from the bank that issued the claim for the buyer.
- Value: Next attribute defined by authors at IMF (International Monetary Fund) is value.

  There are two different value redemptions – fixed and variable. Fixed value redemption stands for the right to claim an exact amount in pre-established face value in a particular unit of account. For example, a claim on a bank in the form of deposits of 10 euros can be exchanged for 10 euros worth of bills and notes. These claims resemble debt instruments (which may or may not pay interest) that can be redeemed upon demand at face value.
- Backstop: The third attribute is backstop which only applies to fixed-value redemptions.

  The question is whether the government backstops the redemption guarantee, or it is based on usual business and legal practices, and therefore redemption guarantee is private. It is essential to distinguish the two as they may significantly impact the user's trust. Mentioned trust is differentiating according to different regulatory responses as well as diverse types of currency.
- Technology: The fourth attribute is technology. It addresses the topic of centralized and

decentralized transactions. Centralized transactions are used in the current payments system as transactions use a centralized proprietary server. It is usually the case in central and consumer banks. The decentralized transaction, on the other side, uses decentralized ledger technology (DLT) or Blockchain to process transactions.

Mancini-Griffoli et al. (2018) have distinguished five means of payment: (1) B-money (issued by banks), (2) E-money (issued by private firms), (3) i-money (investment money, issued by private investment funds), (4) Central bank money, and (5) Cryptocurrency. For the scope of this research, the focus is on Central bank money, more specifically Central Bank Digital Currency.

Cash, represented by notes and coins, is the oldest means of payment. Cash is issued by each central bank and denominated in local currency. Mancini-Griffoli et al. (2018) state that transactions made with cash can be completely anonymous as they cannot be completely tracked. That is due to its physical form. Mancini-Griffoli et al. (2018) see cash as a decentralized means of payment due to no need for a centralized authority to process a cash transaction. Some central banks have started to weigh the possibility of introducing CBDCs as a digital replacement for cash. Although CBDC may replace cash, its features are not the same. Adrian and Mancini-Griffoli (2019) predict that CBDCs would not be completely anonymous. However, its safety features against third parties would be improved. It is believed that CBDCs could be designed as a centralized or decentralized means of payment.

2. The Concept of Central Bank Digital Currency

According to Mancini-Griffoli, et al. (2018), the topic of benefits should be observed from two sides. The consumer or demand side observes how CBDCs could replace the need for money and what could be improved for actual consumers of CBDCs. On the other side, supply observes how CBDCs could improve central bank public policy achieving and improve its reactions to specific market failures. However, in the conceptual framework, there cannot be only benefits. Mancini-Griffoli, et al. (2018) outline some trade-offs and potential costs of CBDCs that need to be considered. The main aspect or benefit that CBDCs aim for is to be able to improve the functions of money that are currently present. Bank of International Settlements (2020) has described three potential strategies for future CBDC developments:

1. “Not harm”: The first strategy supports the idea that modern technologies must support and fulfil public objectives. Modern technologies should not disturb the central bank´s objectives and core principles regarding monetary and financial stability. According to Bank for International Settlements (2020), CBDCs should maintain the distance towards central bank policies and act as a standalone currency. That would give consumers the possibilities to choose between different forms of money.
2. Coexistence: Central banks serve as an authority that maintains the stability of the currency. They must establish modern technologies with caution regarding currency stability. Therefore, innovative technologies, such as CBDCs, should be developed and used together with traditional payments such as cash and credit cards. Bank of International Settlements (2020) believes that central banks should issue and support cash if there will be demand.
3. Innovation and efficiency: With all mentioned aspects understood and chosen final direction of CBDCs (Central Bank Digital Currency) can be set. Different governments will undoubtedly take different approaches. However, although some governments may take different approaches, the core benefits of CBDCs will remain the same.

There are different conceptual frameworks provided for each degree of CBDCs integration with current payment systems. However, attention in development must be on the aspect of the retail and wholesale framework as well. As already established, wholesale CBDCs are limited to commercial banks and other financial institutions. It can also be used by institutions that may have access to central bank reserves. With general-purpose CBDCs, the concept is entirely different. This kind of CBDC can be offered to the public, corporations, and small businesses. Therefore, creating a much larger user base. As end-users of CBDCs may have different requirements and need a clear distinction between the two frameworks needs to be provided (Davoodalhosseini, 2022). CBDCs will have to follow specific regulations and demands. Therefore, it needs to be developed in a way that will satisfy its users. The major features could be further divided into three sub-categories.

1. Instrumental features – that focus primarily on the aspect of convertibility, convenience, availability, and cost-effectiveness.
2. System features – that focuses on security, speed, resilience, throughput, scalability, and adaptability.
3. Institutional features – that focus on regulatory framework and standardization.

These features give CBDCs a platform to be developed and issued, but they are not the only important aspect. The role of CBDCs in day-to-day use and their role in the banking system is crucial to be observed. If the new digital currency and its features do not fit well into the banking system, issuing will not be successful. According to Mancini-Griffoli, et al. (2018), consumers want to maximize their benefits while at the same time minimizing their costs and r isks. However, it is hard to predict the global direction that the public would want CBDCs to follow. Public interests may vary significantly from country to country as well as from person to person. It is believed that CBDCs would not necessarily be superior to other forms of money in all terms (Minesso, Mehl, & Stracca, 2022).

Therefore, Adrian and Mancini-Griffoli (2019) at the IMF have produced two potential designs that may be used to develop the CBDCs conceptual framework. Fixed design features are designed in a way that the central bank would not have discretion. CBDCs would be better off from person to person, B2B, and B2C payment options. The main benefit of it would be its low settlement risk and meagre cost of transactions. In some countries, Adrian and Mancini-Griffoli (2019) expect that CBDCs would be better in terms of default risk. However, that may not be true in all circumstances. In fixed design, other means of payments would perform better in the aspect of additional features, where CBDCs are not as strong, and their cross-sell potential may be limited. With flexible design, CBDCs would be able to offer better interest returns. Adrian and Mancini-Griffoli (2019) state that the safety and especially anonymity of CBDCs would also be much better compared to traditional means of payment. With increased anonymity, it is harder to detect and track criminal activities and detect and reverse illegal transactions. Therefore, the risk of theft and loss may even increase. Central banks may also not be favourable towards anonymity (Williamson, 2022). They may offer total anonymity of transactions only at strict terms and with low limits on holdings of CBDCs. CBDCs may be beneficial in terms of interest rates, which could be as attractive as other finance solutions. On the other side, commercial banks may adapt to that and still offer better interest on deposits and increase their lending fees to compensate.

3. Methodology

We apply a qualitative research design in this study. As the topic of CBDC is new, we apply the qualitative research design which offers the most up-to-date information and a better understanding of the impacts of CBDCs on the global banking system. This study uses positivism as an epistemological paradigm. According to Malhotra & Birks (2006), a qualitative research approach is exploratory and is undertaken with small samples to understand and highlight new insights to address research questions. We collect data using semi-structured interviews using open-ended questions.

The theoretical framework selected in this study is based on grounded theory. The grounded theory applies research theory based on systematically obtained data. After obtaining and selecting relevant sources, final data will be selected using content analysis and literature review. As grounded theory suggests, final theories will be derived from the obtained amount of data. Finally, those theories will be discussed, and conclusions to research questions will be provided.

Folkestad (2008) states that one of the approaches can be a quote-research method which is also widely used in past studies. That is of the essence when research results are not in the form of systemized transcripts. Dixon-Woods (2011) has produced three different approaches for qualitative data analysis: (1) thematic or content analysis, (2) discourse analysis, and (3) grounded theory.

According to Dixon-Woods (2011), with thematic or content analysis, the researcher analyses interview responses by making two decisions. First, the researcher needs to identify themes which are done by transcribing the obtained data. After that, similar themes are combined into similar clusters. Different clusters are made by identifying different codes. Those codes are usually generated by the researcher when reading the responses. Each code consists of similar keywords, opinions and reasoning. We also apply content analysis in this study.

Code	Industry /Sector	Qualification	Experience
J	FinTech / digital money	n/a	Leadership
H	FinTech / Consulting	PhD.	Leadership
A	FinTech/payment technologies	M.J.I.	Legal & Regulatory
F	FinTech / Consulting	PhD.	Entrepreneurship
S	Academic / university	Professor, PhD.	Professor
W	FinTech / digital money	PhD.	Leadership
V	Academic / university	Professor, PhD.	Professor

Table 2: Respondent details

4. CBDC's Role in the Banking System

On the CBDCs supply side are the central banks. They are the central authority that controls the functions of money and delivers it to consumers. According to Mancini-Griffoli, et al. (2018), central banks have two roles: first, they must attend to the consumer needs as they are the authority that designs money. They are also accountable to regulate their currency. The second role is to ensure that the money they issue meets agreed social criteria. Adrian and Mancini-Griffoli (2019) state that the currency issued by the central bank in the majority has three roles:

- Units of account: As a type of public good, money must have fair price stability in all positive and negative economic circumstances. To mitigate such risk money must be designed in the right way. As cash has no interest, it is hard for central banks to mitigate negative interest rates after recessions.
- Means of payment: it must be widely accepted and proven or verifiable. It must ensure proper consumer protection and must be cost-efficient to develop and issue.
- Store of value: money must be as secure as possible as the user is storing his savings in the form of money. It also must allow for resources to be efficiently allocated.

Adrian and Mancini-Griffoli (2019) have emphasized the importance of central banks not undermining other monetary public policies that support money functions. Those are financial integrity, financial stability, and monetary policy effectiveness. All of those might be seen as a weak points in the full integration of CBDCs, as the public might perceive the change as undermining the three policies and making the monetary system unstable.

It is essential to understand how central banks would ensure that CBDCs implementation would not make the country´s monetary policy unstable and benefit central banks. According to Adrian and Mancini-Griffoli (2019), especially in developing or third-world countries, CBDCs could help resolve financial inclusion issues. Mancini-Griffoli et al. (2018) believe in making means of payment available for all citizens, especially as cash might be hard to obtain and use in inaccessible and rural areas. CBDCs would lower the costs associated with infrastructure supporting cash as issuing and managing cash is expensive.

According to Adrian and Mancini-Griffoli (2019), the initial implementation and managing CBDCs will result in high fixed costs. However, its operational costs would be lower than the operational costs of cash. The result would make the implementation of CBDCs more beneficial in larger economies that would easier absorb initially high fixed costs. There is another aspect CBDCs would not be able to solve. Mancini-Griffoli et al. (2018) see the problem of tension between offering a secure store of value and promoting financial intermediation.

It applies to the growth of narrow finance solutions. They offer a secure store of value and charge for financial intermediation. Mancini-Griffoli et al. (2018) believe that central banks have the responsibility to reverse the trend. It would allow fractional-reserve banks to offer a competitive service compared to other value storage facilities.

According to Bech et al. (2018), the decline in cash is already evident and will only increase in the future. One of the best examples is Sweden which has seen a significant decline (from 13.9% to 11.7%) in the use of cash and a switch to digital means of payment. On the other hand, Bech et al. (2018) state that, for example, in Hong Kong and Japan use of cash seems to be growing. When further observed, it is evident that such movement can be explained by the low-interest rates of the last decade. Bech et al. (2018) expect that cash will further decline when older generations give way to younger generations using technology to a greater extent. It can also be observed that merchants have also adapted and are now in the majority offering the possibilities of credit card payments and are abandoning cash.

5. Challenges for CBDCs

Ideas of CBDCs started to develop around 2017. In 2021, BIS surveyed CBDC's development and adoption. Boar and Wehrli (2021) found out that in the last four years, the number of banks that actively engaged in the development of CBDCs grew by around one-third. CBDCs are set to change the central bank's monetary and global financial system drastically. Therefore, a robust legal and regulatory framework is a necessary foundation. Boar and Wehrli (2021) have presented the changes in legal and regulatory approaches to accommodate the development of CBDCs.

Most banks may not issue their CBDC in the near-term future. Although, some of them are looking into the topic and observing scenarios. There is a belief that as soon as the first CBDCs launch and if successful, they will encourage other central banks to do the same. According to Boar and Wehrli (2021), the 2020 pandemic has sparked new motivations in CBDCs development, resulting in even faster legal and regulatory approval of it in the future.

Research is now focusing on a more detailed overview of the potential legal and regulatory framework of CBDCs. According to Boar and Wehrli (2021), legislation governing central banks is formed based on a legal framework. It consists of the constitution, central bank law, and other supporting laws such as consumer protection law, budget law, financial integrity law, and similar. The regulatory framework is different for each central bank. Therefore, each central bank is responsible to assess whether the legal framework allows the development and issuance of CBDCs in their specific jurisdiction. Central banks must pay attention to the facilitating conditions of issuing CBDCs. It is also crucial that the issuance of CBDCs relates to the designation of banknotes as legal tender and the bank´s accounting practices. There is also an indirect aspect which relates to cyber and data security, oversight, and the right of the government to issue directives.

According to Mancini-Griffoli, et al. (2018), with the development of legal tender, central banks must answer the following questions: What application of legal tender can facilitate retail CBDCs issuance? If retail CBDCs are denominated in the country´s existing currency, we can expect that such retail CBDCs would be accepted as legal tender in the selected country. If retail CBDCs would be denominated as any other currency, they must be declared legal tender by the government or jurisdiction. This type of approval must be passed by the regulatory authorities so that such retail CBDCs would serve as a means of loan repayment. The concept of legal tender will have to be defined further. Some central banks have decided to further investigate how retail CBDC´s digital legal tender differentiates from existing ones. They are also researching which central bank law would need amendments to accommodate the new digital central bank currency. In addition to the general problem of the issuance of CBDC discussed above, we identified several specific challenges through our semi-structured interviews with the fintech experts.

Privacy Issue

A means of payment can be completely private as transactions paid using cash cannot be tracked back in any sort of way. The only transaction that can be tracked is when the consumer withdraws money from ATM. With the introduction of CBDCs and their digital nature, the personal aspect that cash has will no longer be the same. There are many reasons consumers want to keep some transactions private. For example, if all their transaction data can be viewed, institutions will use them to charge higher interest on loans. Mancini-Griffoli et al. (2018) believe that some transactions may increase a loan repayment risk. Another issue is the digital format of CBDCs. Cash can be kept in physical form and cannot be hacked and stolen as CBDCs can be. Respondent A elaborates on several benefits of CDBC:

> *The main benefits are the clearing of currencies with fewer intermediaries (e.g., no Swift or Target required) and 24/7 payment windows. I see the opportunity to use a CBDC for cross-transaction purposes. A CBDC can be used for instance for a Blockchain-based Letter of Credit/trading business where payment and trading can be connected through Smart Contracts. The biggest threat is a lack of technical knowledge and no clear international regulation of crypto. (A)*

Respondent W and V, on the other hand, highlights the privacy issues associated with CBDC:

> *As privately developed currencies failed in most cases in the long run, the central bank guarantee enables the required features for any currency: trust and coverage. (W)*
>
> *On the other hand, major threats are understood as lack or even no transaction privacy, disruption of monetary policies, hurdles in integration into all*

segments of the population, and lack of trust from the consumer's perspective. (V)

Kaminska (2020) believes that CBDCs would not replicate the privacy of physical cash. It is so since if they allow such privacy as they do for physical cash, they will have to break their rules. If total privacy is ensured, banks would not know whom they are servicing, and they would not be able to fight against organised crime and money laundering. Kaminska (2020) believes that central banks issuing CBDCs will not act as neutral infrastructure providers. Contrary to that, they would compete to become dominant issuers with their enclosed systems and rules. Such central bank positions will encourage distrust in the consumer aspect, leading to the end of CBDC development and monetary system integration. We discussed this issue with our respondents and receive the following comments:

There is a high probability that CBDC will replace cash in the medium to long run. CBDC is starting to emerge worldwide and with the ongoing demand for digital payments across the world, there would be a decrease in cash usage which could reduce access to money provided by central banks to a major portion of society. In the short term, CBDC can be introduced to make payments simple and safe to supplement cash, but not to replace it. (V)

Yes. I believe it is a matter of time before unnecessary and costly intermediaries (e.g. Swift and Target) will be replaced by innovation. CBDC is currently the best option for offering a global (borderless) payment tool which provides trust to all parties and replaces the intermediary. (A)

In the long term, e-money will do away with cash as part of the digital transformation. The increasingly widespread possibility of the digital wallet as a contactless payment, e.g., B. with the help of the smartphone and near field communication (NFC), points in this direction. This also reduces transaction costs in all areas (central banks, commercial banks, companies, and private households). (S)

There is a possibility. But the question should be whether that possibility will become reality in the short term or long term. Right now, if you see at any *economy, you have two to 3% cash. And another thing is regulatory requirements and compliance requirements are pushing people towards using digital cash. Normally what you do is that you do the transaction online whether you are using your credit card or debit card. So, these cards are plastic money. It is not cash and then you are also making a transaction with your bank account. So, in this case, very less transactions are being completed in the form of cash, and whenever you are doing a cash transaction, people happen always concerned that they are. They might be involved in tax evasion, etc. It is only a matter of time before consumers completely avoid cash. (F)*

Stability of CBDCs Compared to Fiat Currency

Similarly, to cryptocurrencies, stability is an even more significant concern for CBDCs. As mentioned, one of the supporting factors of cash functions is to provide stability to the currency. As CBDCs are new digital technology managing their stability is even more critical. According to Mancini-Griffoli, et al. (2018), it is almost impossible to ensure that CBDCs will offer price stability soon. That would be especially hard in fast-changing economic circumstances. Such challenges can be a global budgetary crisis and a global pandemic. Such events proved that the presence of cash could constrain interest rate policy. However, Mancini-Griffoli et al. (2018) still believe that cash will stay in circulation for the near future, and CBDCs will not replace cash overnight.

Adrian and Mancini-Griffoli (2019) have compared the stabilities of other means of payment to CBDCs. The idea is that CBDCs are closely compared to cash or central bank money, which is optimal as a store of value in normal circumstances. In general, digital money is exposed to operational and cyber risks. However, those two risks are present in all other means of payment. On top of the two common risks there are, according to Adrian and Mancini-Griffoli (2019), the following four additional risks that digital money or CBDCs are facing:

- Liquidity risk: digital money issuer can, in this case, experience a lag between the redemption request and the actual redemption of the agreed amount. Such risk in the majority depends on market liquidity and its ability to repay.

- Market risk: it connects to assets in possession of a digital money provider. If a digital money provider experiences more substantial capital losses, its redemptions can be at risk.
- Foreign exchange rate risk: If claims held as digital money are denominated in a currency compared to the country´s unit of account. Some digital money issuers can mitigate that risk by dominating the currency to a basket of currencies.
- Default risk: It is a risk of default if the digital money provider fails to repay debt obligations or losses occur in the day-to-day business environment. Therefore, that leaves customers' funds at risk of being taken by creditors.

Adrian and Mancini-Griffoli (2019) have produced four viable solutions to stated risks. Those solutions can minimize the risks and improve the stability of CBDCs. Proposed solutions would stabilize the digital currency so that it will resemble the stability of fiat currency. The first of the four proposed solutions is based on investments. To stabilize digital currencies, central banks should invest more in short-term government papers. For example, according to Adrian and Mancini-Griffoli (2019), the safest and most liquid assets would be central bank reserves. The second proposed solution is related to the creation of digital money or CBDCs.

The third solution is aimed towards held assets. Those assets must not be encumbered. They are the assets that are usually taken as collateral for loans. Adrian and Mancini-Griffoli (2019) state that CBDC issuers would have to make sure that they exclude such assets from their balance sheets to protect consumers. It must be done to protect the consumers in case of bankruptcy. To improve the stability of CBDCs and their issuers, there is a consensus that sufficient capital is needed. Especially to offset sudden market movements and potential losses that may affect stability significantly. We received the following comments during our interview:

> *Money, I think should be issued by a government, and held by an individual, I think we should emulate cash. Then we got a working solution. Print it and we can use it. That model is, I think, the healthiest way to have a fiat currency. An to emulate that model as the model has privacy in it. That model has ownership. In it you own under the $100 you have in your hand is yours and you choose to give it to someone else. Nobody takes it from you automatically because you are subscribed to something you forgot to unsubscribe from. You must actively give the funds over. And it has instant finality, and I think that that is healthy. So, money should be issued by the state and held by the people. (J)*

If CBDC developers can overcome or mitigate all the above requirements and risks, CBDC might become a stable means of payment. However, if those requirements are not met, CBDCs would be like the stability of cryptocurrencies. Those seem completely uncorrelated and highly volatile. Such volatility would be unacceptable for a central bank currency.

Financial Inclusion

CBDC development represents the achievement of different goals for each central bank, and motivations to do so vary significantly. Boar et al. (2021) believe that the most significant differences are evident between emerging economies and advanced economies. However, there can also be an enormous difference only between different central banks. According to Board al. (2021), the primary motivation behind the development of CBDCs is the possibility to use them as a means of payment. With CBDCs developments, it is important to understand that they will not bring only positives but also some trade-offs. Our respondents have the following comments:

> *The CBDC is a currency that commercial banks will use. Unless it is a Tier 1 bank and the CBDC is in the Interbank Settlement format, these banks are just external users of the CBDC, like the public. (H)*

> *Central banks are likely to involve commercial banks in their operations which would act as intermediaries for digital currency accounts. Central banks can use a two-tier distribution model where central banks are responsible for creating CBDCs and then distributing them to commercial banks against cash or reserves deposited at the central banks. In turn, the banks will issue the corresponding amount to the general public and business enterprises. The CBDC is a direct claim on the central bank. The process of then converting digital currency to cash takes the reverse route. (D)*

If CBDCs development is not approached comprehensively, it could deepen financial inclusion. Especially in less developed parts of the world, digital services such as internet connection, data privacy, hardware, and support are not available. Boar et al. (2021) see the opportunity in emerging markets. When researching CBDCs, emerging market economies should use the opportunity and improve financial inclusion with the usage of CBDCs.

Resilience Against Cyber Risks

Many central banks are developing CBDCs to replace cash and act as a security system in extreme events. However, BIS (2020) believes that offline capabilities are essential for the successful development of CBDCs. Not only offline capabilities BIS (2020) believes that dependencies such as the availability of electricity to power mobile devices and servers need to be sorted. Compared to cash, CBDCs counterfeiting is also digitalizing. Now the primary threat is cyber-attacks. Our respondents have the following comments:

> *Allowing CBs to reduce the face value of a digital currency is tantamount to setting rates as negative as monetary authorities may want, unconstrained by any zero-lower bound. In other words, this format allows for unlimited financial repression and the possibility, argued by many, of responding aggressively and effectively against recessionary threats. Conversely, a rise in the face value of CBDC would amount to positive interest rates, implying an automatic expansion of the monetary base. (H)*

When the currency is in digital form, one successful cyberattack on the CBDCs system could significantly impact its stability. According to BIS (2020), defending will be even more complicated with a higher number of endpoints present in a general-purpose CBDC system compared to the number of endpoints currently present in a wholesale central bank system. Therefore, defending against cybercrime will be of high importance.

6. Conclusion

CBDCs may represent many benefits and opportunities as well as challenges, threats, and constraints. Public, regulatory, and governmental disapprovals are also to be expected. CBDC development may have significant outcomes for monetary policies in many countries. The report indicates that 86% of central banks are interested in the development of CBDCs. CBDC's position in the modern payments system is discussed. The most differentiating of them are the cryptocurrencies with no claim on anybody and are highly fluctuating. CBDCs will have to follow specific regulations and demands. Therefore, it needs to be developed in a way that will satisfy its users. The major features could be further broken down into three sub-categories: Instrumental features, system features, regulatory framework, and standardization.

Central banks are the authority that controls the functions of money and delivers it to consumers. The importance of central banks not undermining other monetary public policies. CBDCs could help resolve financial inclusion issues, especially in developing or third-world countries. CBDCs can only help fractional reserve banks with their fast payment system. They offer a secure store of value and charge for financial intermediation. Initial implementation and managing CBDCs will result in high fixed costs. However, operational costs would be lower than the operational costs of cash.

CBDCs are set to change the central bank's monetary and global financial system. Therefore, a robust legal and regulatory framework is a necessary foundation. the 2020 pandemic has sparked new motivations in CBDCs development. Research is focusing on a more detailed overview of the potential legal and regulatory framework of CBDCs. Legislation needs to be reformed to accommodate the issuance of CBDCs.

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The Impact of Energy Comsumption On Economic Growth

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Abstract:

The rapid development of human society cannot do without the use of energy. Since China's reform and opening up to the new era, the economy has been growing rapidly, and at the same time, energy consumption is also increasing. Based on the Panel data of 30 provinces in China from 2000 to 2019, this paper uses the econometric research method to build a spatial econometric model to explore the impact of energy consumption on economic growth. This article finds that: (1) There is a significant spatial correlation between energy consumption and economic growth in various provinces and cities, and spatial econometric models need to be used for analysis. (2) There is a strong spatial dependence and spatial scale effect between neighboring provinces. The total output of energy consumption plays a crucial positive role in promoting local economic development, and also has an indirect impact on surrounding provinces, and this indirect effect is a negative spatial spillover effect. (3) Among the four main energy consumption quantities that constitute energy consumption, the four main energy consumption plays different roles, and labor and capital are also important factors.

Keywords: Energy consumption，Economic growth，Spatial econometric model

Introduction

Over the past 40 years of reform and opening up, China's economy has achieved sustained, comprehensive and rapid development. In 2010, China surpassed the United States to become the world's largest energy consumer, according to the BP Statistical Yearbook of World Petroleum. With the rapid development of China's economy, in the near future, energy demand will become the primary factor that must be considered in China's development.

China has a large land area, rich terrain, large energy and various types. Since the beginning of the new century, with the continuous development of China, the demand for energy and consumption of various production activities have increased a lot compared with previous years. As the country pays more and more attention to the ecological environment, the policies adopted by the government are more supportive and encouraging the consumption of cleaner and renewable energy, which means that the relevant policy documents are gradually changing the energy consumption pattern.

According to the national energy and economic data, China's total energy consumption and GDP continue to grow year by year, especially from the comparison between the growth rate of China's total energy consumption and economic growth rate (see Figure 1-1), it can be seen that China's total energy consumption and GDP maintain a basically consistent development trend. Although the specific growth rate of total energy consumption and GDP growth are not the same, the change trend and change amount of growth rate have a high degree of cofrequency, and the turning point of growth decline and rise are extremely consistent. For example, the growth rate of total energy consumption and GDP growth reached the maximum value in 2004 and the minimum value in 2016. The growth rate of total energy consumption is slower than that of GDP. After 2011, total energy consumption maintained a relatively stable level, while after 2011, GDP growth rate also gradually decreased, and gradually increased to positive after falling to the minimum value in 2016. That is still less than GDP growth in the early 2000s. Based on the facial data of 30 provinces and cities in China from 2000 to 2019, this paper studies the impact of energy consumption on economic growth and explores the promoting role of energy consumption on economic growth according to the spatial econometric model.

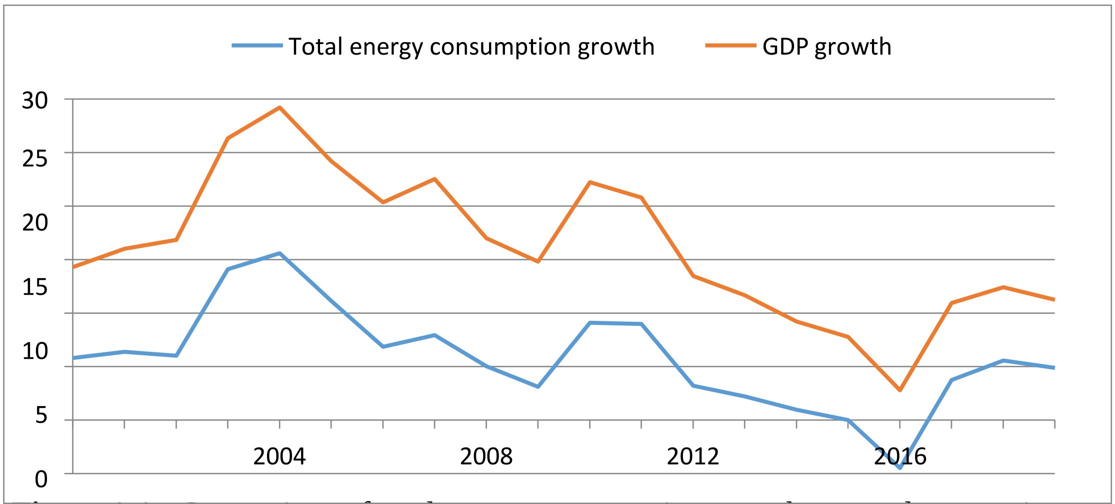

Figure 1-1 : Comparison of total energy consumption growth rate and economic growth rate in China (2000-2019, unit: %)

The rest of this paper is organized as follows: The second part is the main literature review of the impact of energy consumption on economic growth, and describes the mechanism of nonlinear impact; The third part establishes the spatial econometric model, and makes necessary explanation and preliminary processing to the variables and data used in this paper. The fourth part is the empirical research results, and make the basic analysis and test; The fifth part is a summary of the main conclusions of this paper, and puts forward policies and suggestions.

Literature Review

Foreign research status

On the empirical analysis of energy consumption and economic growth, scholars around the world have conducted a lot of scientific research. At the beginning, when overseas scholars studied the impact of energy consumption on economic growth, the key focus was on the impact of national energy consumption on economic growth and the Granger causality between them. Most of them chose traditional econometrics to build the impact relationship model based on the logical relationship detection of two variables. For example, Jabeur (2019) discussed the different impacts of energy consumption on economic growth in the long and short term based on the data information of energy consumption and economic growth in France. According to the empirical research, economic growth promotes energy consumption in the short term, but in the long term, energy consumption will in turn promote long-term economic growth, and then obtain the key result that energy consumption has a significant long-term impact on urbanization development. With the increasing concern of macroeconomists about the impact of energy consumption on economic growth, overseas experts and scholars have gradually introduced the production function and added some other explanatory variables to further study the impact of energy consumption on economic growth. For example, Ajmi et all, in their study in 2020, introduced energy into the production function as a factor of capital input for production and manufacturing, and created a multi-factor model with asset, human capital and energy factors at the same time. Model regression shows that economic growth is obviously affected by energy input, but in the long term, when manipulating energy consumption, we must consider whether it will inhibit the sustainable growth and development of the economy, and the current policy of environmental protection and energy conservation will have a relatively large constraint on long-term economic growth, which will not be easy and effective and unreasonable. With the prevalenceof panel data theory and its advantages of effectively getting rid of the information defects of time series data, overseas experts and scholars have gradually introduced panel data theory to study the impact of energy consumption on economic growth based on a lot of panel data.

For example, Nyasulu (2020) conducted an empirical study on the data information of energy consumption and economic growth of 15 SADC countries from 1990 to 2015, and came to the conclusion that energy consumption has a greater impact on economic growth in a short period of time. Based on this, it is proposed to use energy for manufacturing units that must consume a lot of energy according to the countermeasures of environmental protection and energy saving in daily life, so as to promote economic growth. Behera & Mishra (2019) studied the energy consumption represented by coal consumption. Based on the collected data information about coal consumption and economic growth in 15 countries in the past 27 years, they created a panel data entity model and obtained the result that coal consumption has a significant impact on economic growth.

Domestic Research Status

At present, domestic research on the impact of energy consumption on economic growth started later than overseas research. Unlike foreign scholars, who are mainly concerned about the impact of overall energy consumption on economic growth across the country, many Chinese scholars tend to choose some provinces and cities in China as the main research objects, and have also achieved certain research results. For example, Wang (2020) used the energy consumption data information and economic growth data of Jiangsu Province from 1990 to 2017 to carry out stability and co-integration testing, and then used Toda-Yamamoto causal testing to discuss the impact of energy consumption in Jiangsu Province on the economic growth of the province. Taking Anhui as the research object, Hao (2020) selected Anhui's economic growth, total energy consumption, asset capital input, human input in the secondary industry and output value of the secondary industry as explanatory variables of the study, created a VAR model associated with them, and finally conducted an in-depth study based on Anhui's 31-year time series data from 1988 to 2018. Analyze the interaction between variables. Guo (2009) conducted an empirical study on the total energy consumptionand gross domestic product of Fujian from 1978 to 2007, and found that the two are the resultof one-way causality rather than two-way causality. In addition to studying individual provinces, there are also different scholars who study the impact of energy consumption on economic growth from different aspects such as regions and industries. For example, Xu et al. (2008) found that the impact of energy consumption on economic growth in the eastern and western regions of China was significantly different based on the analysis of the number of

provincial panels in the eastern and western regions of China during 1986-2005. The correlation between energy and economic growth in eastern China is closer than that between energy consumption and economic growth in western China.

Data Methods and models

Variable selection

With reference to the studies of many scholars on economic growth and energy consumption, this paper takes the nominal GDP of each province in 2000 as the base period, and the GDP value calculated according to the GDP deflator and the nominal GDP of each year as the explained variable to measure economic growth. The core explanatory variables are the total energy consumption, coal consumption, oil consumption, natural gas consumption, and electricity consumption of each province, and labor and capital are selected as control variables. The labor data is measured by the number of employees at the end of each year, and the capital data is measured by the provincial and municipal fixed assets investment in each year.

Data sources

Based on the availability and comparability of data, the data of energy consumption, economic growth and control variables in this study were selected from the panel data of 30 provinces and cities in China from 2000 to 2019. All data and information are derived from China Statistical Yearbook, National Bureau of Statistics, China Population and Employment Statistical Yearbook, China Provincial GDP Statistical Yearbook and some cities' statistical yearbooks over the years

Space panel model

Spatial matrix

The spatial weight matrix is an n-order square matrix Wij (n*n), which is used to distinguish the spatial adjacent levels between different observations (Wang, 2006). When measuring whether two provinces are adjacent, a spatial weight matrix W is constructed .

the form of an adjacency matrix. After comprehensive consideration, combining data and referring to previous research methods, this paper will choose a binary adjacency matrix as aspatial weight matrix, and then test the spatial correlation.

Model setting

Based on the data testing of spatial metrology and the research model of Shao et al. (2022), it is determined that the spatial Durbin model is used. The SDM model constructed isset as follows:

$$lny_{it} = \rho W_{it} lny_{it} + \beta lnX_{it} + \delta W_{it} lnX_{it} + \varepsilon_{it}$$

i and t represent the i province (city) and t year respectively. Iny_{it} is the explained variable, derived from the logarithm of provincial GDP. InX_{it} is the explanatory variable after logarithm is taken, including the core explanatory variables, total energy consumption, coal consumption and oil consumption. Natural gas consumption (gas), and electricity consumption (electricity), and the control variables labor (K) and capital (L). ρ is the spatial auto regressive coefficient, W is the spatial weight matrix, ε and μ represent the random errorterm, λ is the spatial auto correlation coefficient of the error term.

Descriptive statistics of variables

Table 3-1shows the descriptive statistics of explained variables and explanatory variables:

Table 3-1: Descriptive statistics of each initial variable

Variable	Unit	Observation	Average	Standard	Minimum	Maximum
GDP	Hundred million yuan	600	10809	11059	263.6	63297

Total energy consumption	Ten thousand tons Standard coal	600	11511	8176	479.9	41390
Coal consumption	Ten thousand tons	600	11314	9691	182.8	51332
Oil consumption	Ten thousand tons	600	1507	1254	0.174	6443
Hundred million	Hundred million m^3	600	41.14	46.94	0.010	288.1
Electricity consumption	Hundred million kW·h	600	1377	1230	42.23	6831
Labor（L）	Ten thousand perple	600	2539	1688	275.5	7150
Capital（K）	Hundred million	600	36487	38267	1511	228702

Empirical analysis

Moran index test

This paper uses the global Moran Index to conduct a spatial autocorrelation test on the GDP of 30 provinces from 2000 to 2019, and the results are shown in Table 4-1. As can be seen from Table 3-2, when the adjacency matrix is used, the global Moran's I of 30 provinces
in China is all positive, and the P-value is less than 0.05, the significance level is 95%, and

the significance level has a trend of increasing year by year, indicating that the economic development level has a positive spatial effect in each year. This means that the economic development level of 30 provinces in China has a significant spatial dependence, and the general regression analysis does not take into account the spatial correlation between variables, so the use of empty panel model is more accurate than the use of traditional panelmodel.

Table 4-1: Economic development levels of 30 provinces in China 2000-2019 Moran's I

Variables	I	E(I)	sd(I)	z	p-value*
GDP2000	0.197	-0.034	0.116	1.984	0.024
GDP 2001	0.197	-0.034	0.116	1.991	0.023
GDP 2002	0.197	-0.034	0.116	1.990	0.023
GDP 2003	0.194	-0.034	0.116	1.973	0.024
GDP 2004	0.195	-0.034	0.116	1.986	0.024
GDP 2005	0.191	-0.034	0.115	1.957	0.025
GDP 2006	0.190	-0.034	0.115	1.950	0.026
GDP 2007	0.191	-0.034	0.115	1.958	0.025
GDP 2008	0.194	-0.034	0.115	1.979	0.024
GDP 2009	0.192	-0.034	0.115	1.967	0.025
GDP 2010	0.191	-0.034	0.115	1.950	0.026
GDP 2011	0.186	-0.034	0.116	1.911	0.028
GDP 2012	0.186	-0.034	0.116	1.904	0.028
GDP 2013	0.187	-0.034	0.116	1.917	0.028
GDP 2014	0.190	-0.034	0.115	1.944	0.026
GDP 2015	0.193	-0.034	0.115	1.972	0.024
GDP 2016	0.199	-0.034	0.115	2.022	0.022
GDP 2017	0.201	-0.034	0.115	2.040	0.021
GDP 2018	0.202	-0.034	0.115	2.054	0.020
GDP 2019	0.204	-0.034	0.115	2.068	0.019

LM test and R-LM test

The results of LM test and R-LM test are shown in Table 4-2. From the P-value resultsin Table 4-2, it can be seen that the P-value of the spatial error model is significant at 1% level, which means that the SEM model can be chosen. Since the P-value of the spatial lag model is also significant at 5% and 1% levels, SAR model can also be chosen. In summary, the SDM model combining SEM and SAR is selected in this paper because both SEM and SAR models are suitable.

Table 4-2: LM test and R-LM test results

Test	Statistic	df	p-value
Spatial error:			
LM	621.313	1	0.000
R-LM	605.523	1	0.000
Spatial lag:			
LM	20.877	1	0.000
R-LM	5.087	1	0.024

Hausmann test

In order to determine whether the fixed effects model or the random effects model should be chosen, the Hausmann test is performed. The original hypothesis of Hausmann testis that random effects are more effective than fixed effects, if the original hypothesis is accepted, it is more convenient to choose random effects, if the original hypothesis is not true,then fixed effects are better, in which case the fixed effects model should be used. In the results of Hausmann test, chi=757.78 is positive, and p value of 0.000 is less than 0.01, whichis significant at 1% test level. Therefore, when selecting SDM model, it is better to choose fixed effect model.

LR test and Wald test

In the LR test, the p value of lrtest sdm sar and lrtest sdm sem is 0.000, which is very significant, and both reject the null hypothesis of degradation. In Wald test, prob>chi2=0.0000 is very significant, rejecting the original hypothesis that SDM model will degenerate into SEM model or SAR model. In combination, SDM model is more suitable as the spatial metrology model in this paper. After the hausman test, the result shows that the testis passed at 1%. According to the results of the three effects of regional fixed effect, time fixed effect and double fixed effect, the time fixed effect is the most significant, so we chooseto use the spatial Durbin time fixed model next.

Regression results and interpretation of spatial Durbin time fixed model

The regression results of the spatial Durbin time fixed model are shown below (see Table 4-3). Model (1) is the estimation result of the main regression, model (2) is the estimation result of the spatial lag term of the variable, that is, the diffusion effect, and model

(3) - (5) is the estimation result of the direct, indirect and total effects of the decomposition of spatial effects. In Table 4-3, the R-square result was 0.926, and Log-likelihood was 276.6309 by test, with a larger value, indicating a higher degree of fit and high confidence of the model. According to the constructed spatial Durbin model, ρ is the spatial autoregressive coefficient rho, the statistical results of β coefficient are shown in Main in Table 4-3, and the statistical results of WX coefficient are shown in Wx item in Table 4-3.

The p value of the spatial autoregressive coefficient is 0.00, which is significant at 1% level, and its coefficient of 0.31 is greater than 0, which is positive, indicating that the explained variable, namely GDP, has a positive spatial spillover effect on itself, that is, the economic development of each province has a positive spatial spillover effect on itself. According to the statistical β value in Main, all variables have reached the significance level of 1%, the coefficient of coal and electricity consumption is negative, and the other variables are positive, indicating that coal and electricity consumption have a negative impact on economic development, and the total energy consumption and the added control variables have a positive impact on economic development. However, Wx can explain the spatial conduction effect better than the coefficient of Main. The coefficients of total energy consumption, natural gas and capital are negative, and the p-value is 0.00, indicating that these three variables all have negative spatial spillover effect, and neighboring provinces have negative conduction effect on local economic development, except coal, which is not significant. The situation of other variables is opposite to the effect of these three variables, which is the positive spatial spillover effect and the positive conduction effect.

As can be seen from Table 4-3, total energy consumption, oil consumption, natural gas consumption and capital are significant in terms of direct effect, indirect effect and total effect. According to the display results, it can be seen that in the direct effect, If the total energy consumption, oil consumption, natural gas consumption and capital increase by one unit, the economic growth of the province will change by 0.75, 0.03, 0.017 and 0.652 units,

respectively. In the indirect effect, a one-unit increase in total energy consumption, oil consumption, natural gas consumption and capital in neighboring provinces will lead to changes in economic growth of the province by -0.489, 0.126, -0.053 and 0.512 units, respectively. In the total effect, one unit of change in total energy consumption, oil consumption, natural gas consumption and capital in all regions can affect the economicgrowth of the province by 0.261, 0.156, -0.036 and 1.164 units.

Table 4-3: Regression results of spatial Durbin time fixed model

Variable	Modal(1) Main	Modal(2) Wx	Modal(3) Direct effect	Modal(4) Indirect effect	Modal(5) Total effect
total energy	0.777***	-0.593***	0.750***	-0.489***	0.261*
coal	-0.250***	0.046	-0.253***	-0.038	-0.292***
oil	0.022***	0.084***	0.030***	0.126***	0.156***
gas	0.021***	-0.045***	0.017***	-0.053***	-0.036**
electricity	-0.269***	0.279***	-0.254***	0.272***	0.019
L	0.251***	-0.239***	0.239***	-0.222***	0.017
K	0.624***	0.182**	0.652***	0.512***	1.164***
rho	0.310***				
	(0.00)				
sigma2_e	0.020***				
	(0.00)				
Observations	600	600	600	600	600
R-squared	0.926	0.926	0.926	0.926	0.926
Number of id	30	30	30	30	30

Conclusions and Suggestions

basic conclusions

Based on the panel data of energy consumption and GDP of 30 provinces and cities from 2000 to 2019, this paper adopts spatial measurement method to study the internal relationshipbetween energy consumption and economic growth and its temporal and spatial impact.

Finally, the following conclusions are drawn:

First, China's total energy consumption and GDP have maintained a basically consistentdevelopment trend, and the change trend and change magnitude of the growth rate have a high degree of synchronicity. Secondly, according to the analysis results of the spatial econometric model, it can be seen that: First, there is an obvious spatial correlation between energy consumption and economic growth in each province, and it is necessary to use the spatial econometric model for analysis. Secondly, neighboring provinces have strong spatial dependence and spatial scale effect. Third, the total energy consumption plays an important positive role in promoting the regional economy, and also has an indirect effect on neighboring regions, and this indirect effect is a negative spatial spillover effect. The direct effect of total energy consumption is 0.750, the indirect effect is -0.489, and the total effect is

0.261. This shows that the impact of energy consumption in the province on the economic growth of the province is 0.750, and the impact of energy consumption in neighboring provinces on the economic growth of the province is -0.489. Among the four main energy consumption, coal consumption has a negative promoting effect on the province and neighboring provinces, and the direct effect and total effect are particularly significant. Both

direct and indirect effects of oil consumption are positive, and are significant at 1% level under various models, with a total effect of 0.156. Although the effect of natural gas consumption on the economic growth of the province is positive, the spatial spillover effect on neighboring provinces is negative, and the total effect is also negative. The direct effect ofelectricity consumption is positive, the indirect effect is negative, the influence coefficient of the two is close, but the total effect is positive. For the two control variables, the contribution of labor force to local economic growth is not much different from that of neighboring regions, but the contribution to the province is positive, and the contribution to the neighboring provinces is negative, and the overall contribution is positive. There is little difference in the effect of capital on the economic growth of the region and the neighboring regions, both of which are positive, and the total effect is the largest among all explanatory variables (1.164).

Sustained and steady economic growth has always been a priority for our country.

Theoretically speaking, energy consumption plays an important role in China's economic growth. Through the regression analysis of the test results of the above spatial econometric model, we can see that the total energy consumption does affect economic growth, and the four major energy consumption also play different roles, and labor and capital are also important factors.

relevant suggestion

(1) Reduce consumption of coal and natural gas. At present, China has become the world's largest energy consumer, but the growth of energy consumption in the form of high energy consumption, especially the proportion of coal use has been high, such a situation is not sustainable. It is not difficult to find from the regression results of the spatial Durbin time fixed model that the consumption of coal has a negative spatial effect on both the province and the neighboring province, which is also corresponding to the primary problems existing in China's energy environment at the present stage. In order to deal with the shortcomings of China's energy and environment problems at the source, the consumption of coal and natural gas must be reduced. Coordinate energy development and environmental protection, for overall consideration, make more use of more economical and clean energy, in order to betterpromote economic development.

(2) Increase consumption of oil and electricity. It can be seen from the empirical analysisthat the promoting effect of oil consumption on economic growth is all positive, and under the decomposition of the spatial Durbin model, the direct effect, indirect effect and total effect are all positive, and the effect of oil consumption is positive both for the province and the neighboring province. While the direct effect of electricity consumption on economic growth is negative, the indirect effect and the total effect are positive. Therefore, when issuing various policies, we should not blindly eliminate the reduction of oil consumption, but increase the consumption of oil, and at the same time, we should actively use electric energy to help daily production and life.

(3) According to the economic development status of each province, different renewableenergy consumption targets and personalized energy finance, taxation and subsidy policies should be formulated for different regions. Improve the relevant system construction and legal construction, and strive to ensure that areas with high energy

consumption intensity and low level of economic development can get more preferential policies, so that China's energy consumption and economic growth can be healthier, balanced and sustainable development.

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Has the New Audit Report Reduced Agency Costs?

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Abstract:

To promote capital market reform, the Chinese government has introduced a new audit reporting standard, i .e. the addition of a key audit matter paragraph in the audit report, which provides a new way to reduce information asymmetry. This paper empirically investigates the impact on agency costs in the new auditor's reporting standard using the propensity score matching method and the double difference model (PSM-DID) for the analysis of A-share and A+H-share listed companies, using a sample of pre-pilot companies that have not implemented the key audit matter and a sample of A+H-share companies that have implemented the standard for the first time. The results show that when key audit matters are disclosed in the audit report, the effect on agency costs is reduced, and the higher the number of key audit matters disclosed, the more significant the effect on agency costs is. It was further found that the reduction in agency costs was mainly due to the reduction in information asymmetry through the disclosure of key audit matters, and that the reputation of the accounting firm also had an impact on this reduction.

Keywords: Audit Report;Agency Costs;Audit Matters;Accounting Firm;The InformationAsymmetry

1 Introduction

The direction of improvement and optimisation of the communication value of the audit report is increasingly focused on the reliability and relevance of the information in the audit report. The International Auditing and Assurance Standards Board (IAASB) and the US Public Company Accounting Oversight Board (PCAOB) issued newly revised auditor's report standards in 2015 and 2017, respectively. The revision takes disclosure of key audit matters as an entry point and aims to reduce information gaps and communication gaps between report users and auditors by increasing personalised disclosures. Aiming to speed up the process of aligning China's auditing reporting standards with international standards and improve the efficiency of the capital market, the Chinese Ministry of Finance issued new auditing standards in December 2016. The newly issued standard not only requires the disclosure or non-disclosure of key audit matter fields in the audit report, but also requires a statement of the reasons for the choice to disclose the matte. A further description is given of the targeted audit procedures undertaken by the auditor during the audit.

Since key audit matters must be matters that the auditor has communicated with governance, this necessary communication strengthens the auditor's connection with the governance of the audited entity and increases governance's attention to the key audit matters mentioned in the report of results, thereby enhancing the information content and information quality of the financial statements. Traditional audit reports differ only in the audit opinion, which has limited information content (PCAOB, 2013), and investors do not have access to the company's risk items and the auditor's audit procedures in the audit. The focus of audit reporting reform is to increase the disclosure of key auditor matters. The main purpose of disclosing key matters is to increase the transparency of the audit and to provide incremental information to report users to assist them in focusing on and understanding the most important matters in the audit of financial statements as derived from the auditor's professional judgment. Critical matters convey more information about the fundamentals of the company to external users of the audit report, thus reducing the uncertainty of the company's information. The disclosure of material matters not only affects the information content but also positively affects auditor responsibility. According to existing studies, materiality disclosure will affect the CPA's perceived audit responsibilities and conclusive evaluations in response to materiality increase the auditor's perceived audit responsibility.

Agency costs are the costs paid to reduce the agent's day-to-day negligence, private appropriation of the company's interests, etc. Generally speaking, the separation of ownership and management of a company is the root cause of agency costs. It is the inability to fill the cracks of information asymmetry between the principal and agent contracts that makes it difficult for the principal to fully control the agent's business behaviour. One study found that the value of companies listed in China, found that the value of the company decreased by approximately 33.6% to 37.8% due to the conflict between the principal and agents; other scholars found that agency costs can cause an average loss of 28% of the value of the company under this conclusion. A study based on the financial data of A-share listed companies from 2007-2013 found a significant negative relationship between the business performance of companies and agency costs.

A key cause of agency problems is the information asymmetry that exists between principal and agent. The higher the agency costs of a company, the higher the demand for quality audits. Based on the information asymmetry theory, disclosure of key audit matters has a positive effect on improving information content and audit transparency, helping to fill the information gap between report users and auditors, and enhancing the feedback and predictive value contained in the audit report. In addition, with the introduction of new auditor's reporting standards, higher standards of practice have prompted auditors to adopt more effective audit practices to reduce the risk of misstatements and omissions being missed, forcing management to reduce self-serving behaviour under stricter standards and increased pressure from auditors.

Using the exogenous event of the pilot audit reporting reform, this paper empirically tests the impact of disclosure of materiality segments on the implementation of the new auditing standards by using mainland listed companies in A+H shares in 2017 as the treatment group, and non-pilot companies in the same industry and PSM method paired companies as the control group, respectively, using a combination of propensity score matching and double difference model (PSM-DID). The impact of corporate agency costs is examined empirically to provide empirical evidence on the policy effects of implementing new auditing standards in China, and to enrich the literature in the field of agency costs. The results of the study indicate that the disclosure of materiality significantly reduces the cost of agency of companies. Furthermore, this paper examines the relationship between the number of materials matters and the cost of agency of a company, and finds that the higher the number of material matters disclosed, the more significant the suppressive effect on the cost of agency of a company. Meanwhile, this paper considers the influence of the reputation of accounting firms and finds that the disclosure of materiality after an audit by a well-known accounting firm has a significant inhibitory effect on the cost of corporate agency, while by a non-well-known firm does not have such an effect.

The following contributions may exist in this paper: first, this paper examines the impact of increased disclosure of material matters in audit reports on the cost of agencies .In the context of the institutional reform of audit reports in China. Academics have begun to explore whether the materiality paragraph improves information content, and this paper uses objective data to advance relevant research in this area based on the original literature. The study finds that: the effective implementation of this policy has improved the quality of information disclosure, which plays an important role in reducing the cost of agency and promoting the effective operation of the capital market. Secondly, this paper explores the different effects of disclosure of material matters on the cost of the agency from two dimensions: disclosure or non-disclosure of material matters and the number of disclosures, and provides targeted opinions for regulators to regulate the form and content of key audit disclosures by specifically analyzing the details related to the impact of material matter disclosures on the cost of agency, so as to help reduce the negative impact of cost of agency and promote the construction of a transparent and efficient capital market. Finally, the findings of this paper support the hypothesis related to motivated reasoning, expand the research related to motivated reasoning, and enrich our understanding of the role of motivated reasoning in the audit process.

2 Theoretical analysis and research hypothesis

2.1 Literature Review

Existing research on the disclosure of key audit matters can be broadly divided into the following directions: in terms of its direct effect, the disclosure of key audit matter paragraphs improves audit quality by changing the information content(Neal et ai., 2015), communication value(Touche, 2014) and usefulness(Reid et al., 2016) of audit reports (Zeng et al., 2021), but likewise leads to a significant increase in the average audit fees of listed companies(DeFond and Zhang, 2014).Scholars have also found that different markets react differently to the disclosure of critical audit matters: the mainland Chinese capital market reacts quickly to critical audit matters, while the Hong Kong market reacts more slowly(Zhang and Li, 2019). Lennox et al. f ound that the UK capital market was not sensitive to the disclosure of critical audit matters by studying the market in that country (Lennox et al., 2019). A similar situation has emerged in Germany, where Boolaky and Quick found that German bank directors do not pay attention to key audit matter information when making credit decisions (Boolaky and Quick, 2016). In terms of different industry markets, it has been concluded through research that the significant positive relationship accompanying the increase in the number of key audit matters disclosed is reflected in both the audit and securities markets, with the securities market showing higher sensitivity(Wang and Zhu, 2021); however, overall, the disclosure of key audit matters has a significant impact on reducing share price synchronisation (Xu and Zhang, 2021)and the risk of share price collapse (Hou and Kang, 2021)of listed companies.

In the case of audited entities, Liquidity of listed company shares shows a positive relationship with the level of disclosure of key audit issues(Liu et al., 2021); the cost of indirect financing for listed companies shows an inverse relationship with the level of disclosure (Jiang et al., 2020); and the inclusion of conclusive evaluations in key audit issues also affects the credit rating of corporate bonds bonds accordingly(Christensen et al., 2014). Investors are more likely to change their investment decisions when key audit matters are disclosed in the audit report than in the traditional reporting model (Gutierrez et al., 2018). The additional information contained in the disclosure of key audit matters and the ability of external investors to judge the auditor's work on this basis increases the effectiveness of external oversight (Reid et al.,2015); investors make more objective investment decisions based on more relevant and reliable decision-making information(Zhang et al.,2016). Communicate important matters and the cost of agency Disclosure of materiality reduces the gap between what users of the report expect to receive and the information actually provided in the audit report, and curbs the cost of non- compliance by reducing the information asymmetry between management and other users of the report. As an independent third-party professional, the auditor's disclosures are more reliable and credible, and the same information disclosed by the auditor in the results report has a greater impact than if it were disclosed by management in the annual report. Key audit matters disclosed by the auditor in the results report may directly increase the information set available to statement users for decision making, enhance their ability to analyze the company, and thus be more informative for companies with fewer alternative sources of information. Users of the results report can easily identify the level of management's efforts by comparing the companies managed by management with other companies in the same industry. In addition, the disclosure of materiality paragraphs can enhance the willingness of management to communicate with the auditor (Liu and Zhang, 2019). The enhanced communication between auditors and governance is conducive to giving full play to governance's role in monitoring and constraining management, restraining management's surplus management behavior, compressing the operating space for management's self- interested behavior, and reducing the cost of agency.

The disclosure of materiality also serves as a disincentive to the cost of the agency by enhancing auditor responsibility. First, the new auditing standards require auditors to disclose not only risk items based on professional judgment, but also the audit procedures performed specifically for the matter in question. As a result, CPAs will need to expend more effort and resources to identify possible significant events and special risks in financial reports. In order to cope with the requirements of the new auditing standards, CPAs will strengthen their own professionalism, bring in relevant industry experts and improve their professional competence and practice level, which will help auditors to identify more hidden and deeper self-interested behaviors of management that may not have been noticed before. Secondly, auditors need to disclose in the auditing standards what they originally only used to show in the audit working papers, which can make the audit more transparent to a certain extent and prompt auditors to proactively discover the company's surplus management behavior(Gutierrez et al., 2018). Finally, disclosure of material matters means that the audit process is transparent and subject to the scrutiny of a wide range of report users. However, report users, who are usually unfamiliar with what auditors do, believe that auditors have a corresponding responsibility to give ways to respond and reduce risks after disclosing material matters, thus increasing CPAs' own litigation risk (Heilmann and Rematzki, 2019), making auditors more responsible (Gimbar and Ozlanski, 2016), which in turn may lead to their increased legal risk(Li and Liu, 2021). That is, the disclosure of material matters makes the auditor more responsible and strengthens the auditor's external oversight of management, thus reducing the cost of agency.

Therefore, according to the above analysis, auditors will show more skepticism and cautious behavior when communicating important matters, and also consequently strengthen the attention of the unit's governance to the relevant matters, thus reducing the cost of agency. That is, hypothesis H1:

H1: Communicating important matters in the audit report significantly reduces the cost of agency of listed companies. The number of key matter matters communicated and the cost of agency The number of materiality disclosures has a positive effect on reducing the cost of agency by affecting the information content. Material disclosure will improve the information environment of the capital market and alleviate the information asymmetry between information users and management. The increase in information transparency exposes listed companies more to the public eye and invites increasingly stringent social supervision. On the whole, the more the number of important matters disclosed and the longer the length, the more informative it is(Su and Hu, 2020). First, the number of disclosures, as an intuitive expression of information content, indirectly represents the size of the disclosure scope. When the number of important matters disclosed is higher, the larger the scope of disclosure involved, the more useful information investors can extract from important matters, and thus the deeper the degree of understanding of the company (Li et al., 2020), which is more effective in mitigating the degree of information asymmetry and inhibiting management's opportunistic behavior . Secondly, since material matters originate from matters that have been communicated with governance, therefore, companies with more disclosure of material matters indicate that CPAs and governance have communicated more comprehensively, which makes governance further understand the company's daily operating activities and better play the role of governance in supervising and restraining management, restraining management from seeking self-interest. Finally, materiality disclosure also improves audit quality by strengthening constraints on auditors, reducing the room for opportunistic behavior of management and improving the quality of financial information of listed companies. The content of materiality disclosures may not only convey more material misstatement risk points to users of the statements and enhance the information content of the results reports, but also increase the risk of regulatory penalties and investor lawsuits: materiality disclosures are not related to material misstatements due to auditor lack of professional competence or independence. Thus, more materiality disclosures may indicate that the auditor has adopted a more prudent approach and maintained a more rigorous professional skepticism in the practice, which makes it more difficult for management to conceal self-interested behavior and thus reduces the cost of agency. As a result, we propose hypothesis H2:

H2 :The more important matters are disclosed, the more significant the disincentive effect on the cost of agency will b

3 Study design

3.1 Sample selection and data sources

This paper selects the data of listed companies before and after the full implementation of the "materiality" standard 2016-2017 as the sample for the empirical study, and the data of materiality are mainly collected manually through the annual reports of listed companies and CNRDS database, while other data are mainly collected through CSMAR database for collection. In addition, in order to ensure the reliability of the research data, certain processing and selection of the obtained raw data are carried out: excluding the sample data of supervisory companies facing delisting, such as *ST and ST; excluding the observations of listed companies with asset-liability ratio greater than 1, the financial situation of such enterprises is severe and may affect the research results; excluding the sample data of financial category, due to the special nature of the industry, there are a large number of off-balance sheet business, financial due to the special nature of the industry, there are a large number of off-balance-sheet businesses, and the financial statements and data of financial enterprises are different from those of general enterprises. Finally, we obtained 4072 "company-year" samples.

3.2 Variable definition

(1) Cost of agency (AgC). Reference to relevant academic studies, this paper uses the management expense ratio to measure the firm's cost of agency (AgC). Specifically, the overhead ratio is the ratio of the sum of overhead and selling expenses to main business revenue, which mainly captures and reflects the cost of agency arising from the agency behavior of the company's management such as on-the-job spending, and the higher the overhead ratio, the higher the cost of agency between shareholders and management. This paper uses the ratio of other receivables to total assets to perform robustness tests.

(2) Materiality (KAM). The value of "1" is assigned if the listed company is issued with a materiality, otherwise the value of "0" is assigned.

(3) Number of key audit matters KAM_SUM. KAM-SUM represents the number of key audit matters issued to listed companies.

(4) Control variables. This paper introduces firm size SIZE, financial leverage LEV, profitability ROE, growth capacity GROWTH, independent director ratio DD, marketability index MARKET, price-to-net ratio MB, cash flow from operating activities CFO, annual average stock trading turnover rate VOLUME, systematic risk factor BETA, dummy variable DUAL for two positions in one, years of listing AGE, and Liquidity ratio CR In this paper, all variable inclusions are summarized and explained, and the definition of each variable of the model is shown in Table 1.

Table 1 Variable definition table

Variable Type	Variable Name	Variable Identification	Variable Definition
Explanatory variables	Agency costs	AgC	Administrative expenses/Operating income
Explanatory variables	Key Audit Matters	KAM	Key audit matters, dummy variables, first batch of A+H stock companies implementing the new standard KAM=1
	Number of key audit matters disclosed	KAM_NUM1	The number of key audit matter disclosures communicated in the audit report in the current year, over or equal to the median is taken as 1, otherwise it is taken as 0

	Number of characters for key audit matter disclosures	KAM_NUM2	The number of characters communicating the disclosure of key audit matters in the audit report in the current year is taken as 1 if it is more than or equal to the median, otherwise it is taken as 0
Control variables	Company Size	SIZE	Natural logarithm of total assets at the end of the year
	Return on Net Assets	ROE	Net Income / Shareholders' Equity
	Gearing Ratio	LEV	Liabilities at the end of the year/total assets at the end of the year
	Sole Director Ratio	DD	Number of sole directors/number of board members
	Marketability Index	MARKET	Using the corresponding number from the China Marketization Index Report by Province (2018)
	Price to Net Ratio	MB	Market price per share/net assets per share
	Cash Flow from Operating Activities	CFO	Net cash flow from operating activities/total assets
	Growth	GROWTH	(Operating income at the end of the year - operating income at the end of the previous year) / Operating income at the end of the previous year
	Average annual stock exchange rate	VOLUME	Stock trading volume/total issue volume
	Systemic Risk	BETA	Systematic risk, which is the beta of the company's stock
	Two positions in one	DUAL	1 if the chairman and general manager are the same person, 0 otherwise
	Number of years listed	AGE	Natural logarithm of the number of years the company has been listed
	Liquidity Ratio	CR	Current assets/current liabilities

3.3 Model construction

To test the association between disclosure of material matters and the cost of agency, this paper uses a double difference model to test hypothesis one of this paper.

$$AgC = \beta_0 + \beta_1 POST + \beta_2 KAM + \beta_3 KAM \times POST + \beta_4 Controls + \sum Indutry + \varepsilon \qquad (1)$$

Based on the double difference model, the following model is constructed in order to investigate the impact of the difference in the number of specific items of materiality on the cost of agency of the company, taking the disclosure of materiality as the basic condition.

The explanatory and control variables in this model are basically the same as in model (1), and the detailed definitions are shown in Table 1. The explanatory variable KAM_numin model (2) is the information characteristics of material matter disclosure, which is divided into two different dimensions with reference to relevant academic studies . KAM_num1 is the number of material matter disclosure, and over or equal to the median is taken as 1, otherwise it is 0. Second, KAM_num2 is the number of characters in important matters, over or equal to the median is taken as 1, otherwise it is 0. By the way, in the calculation process, the paper not only makes Winsor tail contraction of 1% for all continuous variables, but also controls the influence of industry (Indutry) on the longevity of the results. (Indutry).

1 Empirical Analysis

1.1 escriptive statistics

Table 2 gives descriptive statistics for all variables used in the study of this paper. Table 3 shows the mean difference test. It includes the mean, median, maximum, minimum and standard deviation of the main variables in the full sample. According to the table of descriptive statistics results, the mean of cost of agency (AgC) is 0.178, the median is 0.141, the minimum and maximum values are 0.016 and 1.004, respectively, and the standard deviation is 0.155, which indicates that the cost of agency varies from year to year or from one sample company to another, and there are significant differences. The minimum and maximum values of disclosure of important matters (KAM) are 0 and 1, respectively, with a standard deviation of 0.256 and a mean value of 0.07, which means that only about 7% of thesample companies have disclosed important matters in their audit reports, indicating that there are large differences in the communication of important matters among listed companies, and a significant proportion of listed companies do not communicate important matters. This finding initially verifies our proposed hypothesis.

Table 1 Full-sample descriptive statistics results

variable	N	mean	sd	min	p50	max
AgC	4072	0.178	0.155	0.016	0.141	1.004
KAM	4072	0.07	0.256	0	0	1
SIZE	4072	22.452	1.273	19.649	22.29	26.244
ROE	4072	0.056	0.132	-0.682	0.063	0.372
LEV	4072	0.577	0.423	0.066	0.516	3.212
DD	4072	0.374	0.053	0.333	0.333	0.571
MI	4072	8.111	1.66	3.49	9.08	9.78
MB	4072	5.937	7.533	1.651	4.096	62.359
CFO	4072	0.056	0.095	-0.276	0.053	0.408
GROWTH	4072	0.223	0.85	-0.593	0.062	6.522
VOLUME	4072	0.805	0.237	0.161	0.909	1

BETA	4072	1.203	0.196	0.616	1.228	1.62
DUAL	4072	0.229	0.42	0	0	1
AGE	4072	18.656	5.177	8	18	31
CR	4072	2.05	1.784	0.224	1.535	11.64

Table 2 Test for differences in means

Variables	G1(0)	Mean1	G2(1)	Mean2	MeanDiff
AgC	3785	0.181	287	0.144	0.037***
SIZE	3785	22.355	287	23.727	-1.371***
ROE	3785	0.056	287	0.052	0.005
LEV	3785	0.574	287	0.626	-0.053**
DD	3785	0.373	287	0.383	-0.010***
MARKET	3785	8.059	287	8.795	-0.736***
MB	3785	5.975	287	5.442	0.533
CFO	3785	0.057	287	0.056	0.001
GROWTH	3785	0.227	287	0.172	0.055
VOLUME	3785	0.797	287	0.905	-0.108***
BETA	3785	1.209	287	1.118	0.091***
DUAL	3785	0.234	287	0.164	0.071***
AGE	3785	18.446	287	21.432	-2.986***
CR	3785	2.091	287	1.5	0.591***

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

1.2 Correlation analysis

In this paper, the research hypotheses are explored through correlation analysis, and the main results are detailed in Table 4 ,where the lower left triangular area shows the pearson correlation coefficient results and the upper right triangular area shows the spearman correlation coefficient values. From the correlation coefficients between the variables in the table, it can be seen that the relationship between the cost of agency-related indicator (AgC) and firm size (SIZE), return on equity (ROE), gearing ratio (LEV), and cash flow from operating activities (CFO) is significantly negatively correlated at the 1% level; and the sole director ratio (DD), market-to-book ratio (MB), and current ratio (CR) show different degrees of significant positive correlation. Except for the correlation coefficient between the number of significant events and gearing ratio, which is greater than 0.5, all other coefficients are less than 0.5, indicating that there is no multicollinearity in the regression model as a whole.

1

Table 4 Correlation test of main variables

	AgC	SIZE	ROE	LEV	DD	MARKET	MB	CFO	GROWTH
AgC	1	-0.397***	-0.084***	-0.324***	0.005	-0.035*	0.102***	-0.039*	-0.092***
SIZE	-0.313***	1	0.136***	0.502***	0.011	-0.040*	-0.306***	0.042**	0.092***
ROE	-0.113***	0.108***	1	0.037*	-0.037*	0.172***	-0.071***	0.406***	0.368***
LEV	-0.134***	0.350***	0.055***	1	0.007	-0.058***	0.234***	-0.130***	0.223***
DD	0.033*	0.027	-0.02	-0.009	1	-0.016	0.024	-0.022	-0.007
MARKET	-0.050**	-0.004	0.152***	-0.031*	-0.01	1	-0.021	0.073***	0.084***
MB	0.160***	-0.306***	-0.234***	0.114***	0.052***	-0.061***	1	-0.161***	-0.032*
CFO	-0.073***	0.037*	0.310***	-0.021	-0.015	0.032*	-0.131***	1	0.115***
GROWTH	-0.046**	0.048**	0.194***	0.519***	0.02	0.008	0.018	0.117***	1
VOLUME	-0.003	0.096***	-0.190*	-0.138*	0.005	-0.092*	0.192***	-0.111**	-0.242***

			**	**		**		*				**	
BETA	0.006	-0.179***	-0.089***	-0.02	-0.017	0.035*	-0.027	-0.120***	-0.03	-0.001	1	0.014	-0.023
DUAL	0.056***	-0.121***	0.054***	-0.008	0.099***	0.093***	-0.003	0.001	0.031*	-0.150***	0.012	1	-0.106***
AGE	-0.006	0.051**	-0.029	0.113***	-0.049**	-0.066***	0.129***	-0.066***	0.050**	0.194***	-0.034*	-0.103***	1

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

1.3 Multiple regression analysises

Table 5 reports the results of testing the relationship between the disclosure of material matters in the audit report and the cost of agencies. Among them, column (1) is the regression result of the disclosure of material matters on the cost of agency of the firm. Controlling for the relevant variables, it can be found that the regression coefficient of the cross-product term KAM_POST in column (1) is -0.02 and is significant at the 5% level,indicating that the disclosure of important matters in the audit report has a significant inhibitory effect on the cost of agency of the company, which verifies hypothesis one of this paper. No. (2)-(3) are the regression results of the effect of the number of important matters disclosed on the cost of agency of the company, and the coefficients of KAMnum1 and KAMnum2 are -0.06 and significant at the 1% level and -0.05 and significant at the 5% level, respectively, indicating that the more the number of important matters disclosed in the audit report and the more the information content, the more significant the inhibitory effect the cost of agency of the company, which verifies hypothesis two of this paper.

To improve the robustness of the regression results, this paper controls for industry fixed effects (Industry FE) in the regression tests and reports t-values adjusted for clustered robust standard errors. For the control variables, the regression coefficients of firm size (SIZE), return on equity (ROE), gearing ratio (LEV), and cash flow from operating activities (CFO) are negative and significant, while the regression coefficients of sole director ratio (DUAL), market-to-net ratio (MB), and current ratio (CR) are positive and largely significant. The variables such as annual average stock trading turnover (VOLUME) and years on the market (AGE) did not find significant effects on the agency cost of the company.

Table 3 Regression Results of Key Audit Matter Disclosure and Agency Cost

	(1) AgC	(2) AgC	(3) AgC
POST	0.01**		
	(2.08)		
KAM	0.03**		
	(2.19)		
KAM_POST	-0.02**		
	(-2.18)		
KAMnum1		-0.06***	
		(-3.09)	
KAMnum2			-0.05**
			(-2.37)
SIZE	-0.03***	-0.04***	-0.04***
	(-8.75)	(-4.90)	(-5.05)
ROE	-0.12***	0.09	0.10
	(-3.98)	(1.22)	(1.29)

LEV	0.01	-0.04	-0.04
	(0.59)	(-1.11)	(-1.09)
DD	0.07	0.12	0.10
	(1.37)	(1.05)	(0.76)
MARKET	-0.00**	-0.00	-0.01
	(-2.21)	(-0.65)	(-0.69)
MB	0.00*	0.02***	0.02***
	(1.79)	(7.33)	(7.49)
CFO	-0.05	-0.19	-0.21
	(-1.57)	(-1.02)	(-1.06)
GROWTH	-0.01**	0.02	0.02
	(-2.18)	(0.50)	(0.52)
VOLUME	0.00	0.15***	0.15***
	(0.38)	(3.40)	(3.36)
BETA	-0.03**	-0.10	-0.10
	(-1.98)	(-1.46)	(-1.52)
DUAL	0.00	-0.01	-0.01
	(0.52)	(-0.50)	(-0.63)
AGE	-0.00	-0.00	-0.00
	(-0.38)	(-0.66)	(-1.00)
CR	0.01***	-0.01	-0.02
	(3.25)	(-1.02)	(-1.24)
_cons	0.74***	0.98***	1.05***
	(9.71)	(4.06)	(4.25)
Indutry FE	Yes	Yes	Yes
N	4072	94	94
Adjusted R-squared	0.26	0.65	0.64

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

1.4 Further testing

4.4.1 Intermediate mechanisms: important matters and information asymmetry

In the previous theoretical analysis, this paper pointed out that financial report users have more incremental information related to decision making through the disclosure of material events in the audit report, which strengthens the external monitoring role of the CPA and limits the opportunistic behavior of management, thus reducing the cost of agency of the company. The results in Table 3 of the main test show that disclosure of materiality in the audit report is negatively associated with the cost of agency, which supports this inference. However, it remains to be further explored through which mechanism and what kind of opportunistic behavior of management the important matters disclosed in the audit report act on the cost of agency. Based on the self-interest motivation of management's opportunism and the previous literature on the factors influencing the cost of agency, this paper argues that the effective disclosure of the risk of material errors in financial reporting through the disclosure of material events in the audit report is important for effective information sharing between CPAs and report users, which enables report users to make judgments and estimates of managers and this is important for effective information sharing between CPAs and report users, enabling report users to gain a deeper understanding of managerial judgments and estimates as well as the audit process, thus enabling information gaps to be reduced. Refer to the research methods of relevant scholars, manipulative accrual (Cscore) is introduced here as a measure of information asymmetry, and the model is constructed as follows.

$$AgC = \beta_0 + \beta_1 POST + \beta_2 KAM + \beta_3 KAM \times POST + \beta_4 Controls + \sum Indutry + \varepsilon$$

From Table 6, it can be seen that the disclosure of material matters in the audit report shows a significant negative correlation at the 1% level for reducing information asymmetry. It can be subdivided that the disclosure of important matters in the audit report contributes to the reduction of information asymmetry.

Table 4 Effectiveness of the new audit report in reducing information asymmetry

	(1) INN	
POST	-0.00***	(-3.00)
KAM	-0.01	(-1.46)
KAM_POST	-0.01**	(-2.42)
SIZE	0.00***	(2.72)
ROE	0.31***	(26.66)
LEV	0.02***	(3.33)
TobinQ	0.00	(1.39)
DD	-0.00	(-0.19)
MARKET	-0.00	(-0.60)
MB	-0.00***	(-2.59)
CFO	-0.70***	(-44.05)
GROWTH	0.00	(1.29)
VOLUME	-0.02***	(-5.83)
BETA	-0.01***	(-2.91)
DUAL	0.00	(0.06)
AGE	-0.00	(-0.63)
CR	0.00***	(3.58)
_cons	-0.01	(-0.22)
Indutry FE	Yes	
N	4007	
Adjusted R-squared	0.68	

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

4.4.2 The influence of the reputation of the accounting firm on the role of disclosure ofmaterial matters.

The reputation of an accounting firm is a tangible expression of the impression it has formed in the public mind over time. In general, the reputation of an accounting firm depends on the professional competence of the members within the firm. Large firms tend to invest more resources in staff training and industry-specialized audits, which more specialized audit techniques and more sophisticated audit procedures. Moreover, well-known firms are more independent than ordinary firms. If a firm compromises with its clients and issues a low quality audit report, once a crisis breaks out, the damage to its reputation will lead to loss of clients, compensation and lower audit fees resulting in much higher losses for well-known firms than for ordinary firms. Therefore, we believe that the financial and operational information of listed companies audited by reputable accounting firms is more accurate and transparent, which encourages users of financial reporting information to use the available information more efficiently to make judgments and decisions.

Based on previous related studies, the collected samples are divided into two groups: the top ten firm group and the non-top ten firm group. As can be seen from Table 7, the regression coefficient of the cross product term KAM_POST in column (1) is -0.05 and

significant at the 5% level, which means that the audit reports issued by the well-known top ten accounting firms containing disclosure of important matters still have a significant inhibitory effect on the agency cost of companies, however, the regression coefficient of the cross product term KAM_POST in column (2) is not significant, implying that the non-well- known top ten. However, the regression coefficient of the KAM_POST in column (2) is not significant, implying that the suppressive effect of score reports containing materiality disclosures issued by non-reputed top ten accounting firms on the agency cost of companiesis not significant. It indicates that the suppressive effect of materiality disclosure on the cost of agency of companies is affected by the type of accounting firm that issues the audit report. That is, the higher the firm's visibility and professional competence, the more the suppressiveeffect of the disclosed materiality on the cost of the agency will meet the expectations of the intended users of the audit and report.

Table 5 The effect of the type of accounting firm on the role of disclosure of key audit matters

	(1) AgC		(2) AgC	
POST	0.00	(0.73)	0.01*	(1.84)
KAM	0.02	(0.69)	0.03*	(1.85)
KAM_POST	-0.05**	(-2.44)	-0.01	(-1.41)
SIZE	-0.03***	(-5.07)	-0.03***	(-7.05)
ROE	-0.17***	(-2.91)	-0.08***	(-2.89)
LEV	0.01	(0.87)	0.00	(0.28)
DD	-0.01	(-0.08)	0.11	(1.63)
MARKET	-0.01*	(-1.85)	-0.00	(-1.43)
MB	0.00	(1.14)	0.00	(1.08)
CFO	-0.04	(-0.77)	-0.05	(-1.30)
GROWTH	-0.01	(-1.61)	-0.01*	(-1.77)
VOLUME	-0.02	(-0.86)	0.02	(1.20)
BETA	-0.05**	(-2.19)	-0.01	(-0.78)
DUAL	-0.01	(-0.78)	0.01	(1.24)
AGE	0.00	(0.56)	-0.00	(-0.75)
CR	0.01***	(2.63)	0.01**	(2.33)

_cons	0.86***	(6.36)	0.73***	(7.25)
Indutry FE	Yes		Yes	
N	1583		2489	
Adjusted R-squared	0.24		0.29	

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

4.4.3 Economic consequences: investment efficiency and enterprise value

The low quality of information disclosure affects the effectiveness of the execution of investors "voting on their feet" and makes it difficult to communicate information about the company's high-quality investment projects. Significant events are selected as the most important events in the audit process, with the aim of improving personalized information about the company and increasing the information content of the audit report. The material matters emphasize the investment-related content that needs to be focused on in the financial report, and disclose the investment risks and opportunities that the company has or will have. Investors can more quickly access the disclosures related to key audit indicators and pay more attention to them. In order to attract investors' attention and investment, management will pay more attention to the development of corporate profitability, asset operation level, solvency and subsequent development ability, and promote the improvement of corporate audit. Therefore, we speculate that the disclosure of important matters will effectively improve investment efficiency and ultimately corporate audit.

Refer to the research model of relevant scholars, in which the absolute value of residuals is used to measure the level of inefficient investment in the firm, where the larger the absolute value of residuals, the more severe the inefficient investment in the firm, the following model is constructed:

$$\square \square_6 KAM \square POST \square AgC \square Controls \square Industry \square \square$$

$$TobinQ \square \square_0 \square \square_1 AgC \square \square_2 KAM \square \square_3 POST \square \square_4 KAM \square POST \square \square_5 POST \square AgC$$

$$\square \square_6 KAM \square POST \square AgC \square Controls \square Industry \square \square$$

The remaining key variables of the above model as well as the control variables are the same as in the main test, and the specific content of the variable definitions is shown in Table
1. In the above model this paper also controls for the effect of industry.

As can be seen from Table 8 , the regression coefficients of the KAM_POST for both column (1) and column (2) data are significantly negatively correlated at the 5% level. This indicates that disclosure of important matters will be effective in improving investment efficiency, and ultimately corporate audit.

Table 8 Regression Results of Key Audit Matter Disclosure and Investment Efficiency, Corporate Performance

	(1) Invest	(2) TobinQ

POST	-0.00	(-1.30)	-0.35***	(-3.61)
KAM	-0.00*	(-1.93)	0.70**	(2.13)
KAM_POST	0.01**	(2.52)	0.64**	(2.45)
SIZE	-0.00***	(-3.82)	-0.94***	(-12.92)
ROE	0.01**	(2.44)	3.67***	(3.56)
LEV	0.01***	(5.00)	-1.16***	(-4.47)
DD	-0.00	(-0.33)	3.27***	(3.38)
marketall	-0.00	(-1.18)	-0.03	(-1.02)
MB	0.00*	(1.66)	0.29***	(6.44)
CFO	0.03***	(4.36)	0.07	(0.07)
GROWTH	-0.00**	(-2.10)	0.23*	(1.93)
VOLUME	-0.01**	(-2.33)	-2.15***	(-9.74)
BETA	-0.00	(-0.99)	-1.42***	(-4.25)
DUAL	0.00***	(2.91)	0.30**	(2.13)
AGE	-0.00	(-0.93)	0.00	(0.17)
CR	-0.00*	(-1.69)	0.25***	(7.54)
_cons	0.10***	(6.07)	24.42***	(13.84)
Indutry FE	Yes		Yes	
N	3806		4072	
Adjusted R-squared	0.08		0.53	

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

1.5 Robustness test

4.5.1 Endogeneity test

The above regression process controls for industry and other related variables, but it does not mean that no other influencing factors exist. The main purpose of this paper is to examine the relationship between disclosure of important matters in the audit report and the impact of disclosure of important matters in the audit report on the cost of agency of companies from the perspective of influencing information asymmetry of companies and strengthening the responsibility and willingness of external supervision of CPAs, but the results of the regression analysis obtained in the previous paper mainly indicate that there is acorrelation between the two, and the conclusion may also be plagued by the problem of mutual causality endogeneity. In view of this, this paper employs the PSM test and the placebo test for robustness testing. As shown in Table 9 and Table 10, disclosure of material matters in the audit report and cost of agency still reveal a significant negative correlation at the 5% level. These results remain highly consistent with the results in Table 4 ,indicating that the endogeneity problem of mutual causality does not materially affect the main results of this paper and that the findings of the previous related studies are reliable.

Table 9 Robustness test-1

	(1) AgC	
POST	0.00	(0.27)
KAM	0.04**	(2.27)

KAM_POST	-0.03*	(-1.96)
SIZE	-0.02***	(-3.60)
ROE	-0.14*	(-1.94)
LEV	-0.01	(-0.47)
DD	0.08	(0.59)
MARKET	0.00	(0.38)
MB	-0.00	(-0.47)
CFO	0.02	(0.27)
GROWTH	0.00	(0.26)
VOLUME	0.03	(0.87)
BETA	-0.05	(-1.36)
DUAL	0.01	(0.71)
AGE	-0.00*	(-1.71)
CR	0.00	(0.12)
_cons	0.72***	(4.07)
Indutry FE	Yes	
N	574	
Adjusted R-squared	0.30	

Table 6 Robustness test-2

	(1) AgC	
POST	0.01***	(3.34)
KAM	0.05***	(3.50)
KAM_POST	-0.01	(-1.08)
KAMnum1		
KAMnum2		
SIZE	-0.02***	(-7.04)
ROE	-0.12***	(-4.11)
LEV	-0.04**	(-2.46)
DD	-0.01	(-0.14)
marketall	-0.01***	(-3.52)
MB	0.00***	(3.61)
CFO	0.05	(1.40)
GROWTH	-0.01*	(-1.73)
VOLUME	-0.00	(-0.45)
BETA	-0.01	(-0.63)
DUAL	0.01	(1.40)
AGE	-0.00	(-0.22)
CR	0.01***	(2.83)
_cons	0.60***	(8.89)
Indutry FE	Yes	
N	3898	
Adjusted R-squared	0.29	

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

4.5.2 Alternative indicators

In the main test, the ratio of receivables to total assets is mainly used as a proxy indicator for the management expense ratio. Since the funds appropriated in other receivablesunder the name of "temporary loans" are highly concealed, they are an important part and themain form of funds appropriated by major shareholders to listed companies. Therefore, the higher the ratio of other receivables to total assets, the more serious the second type of agency problem between major shareholders and small and medium shareholders, and the higher the corresponding cost of agency. The following section chooses the average ratio of other receivables to the assets of the sample companies to calculate the agency cost of the sample companies. The results are shown in Table 11, which shows that the regression results do not differ from the main test.

Table 7 Robustness test-3

	(1) AgC	(2) AgC	(3) AgC
POST	-0.00		
	(-0.70)		
KAM	0.01**		
	(2.01)		
KAM_POST	-0.01***		
	(-3.08)		
KAMnum1		-0.02***	
		(-3.23)	
KAMnum2			-0.01*
			(-1.89)
SIZE	-0.00	0.01**	0.01**
	(-0.10)	(2.16)	(2.08)
ROE	-0.01*	-0.01	-0.01
	(-1.70)	(-0.40)	(-0.49)
LEV	0.00*	-0.01	-0.01
	(1.66)	(-1.11)	(-1.44)
DD	0.01	-0.02	-0.01
	(1.18)	(-0.49)	(-0.34)
marketall	0.00	0.00	-0.00
	(1.07)	(0.21)	(-0.15)
MB	0.00***	0.01***	0.01***
	(2.96)	(8.83)	(8.76)
CFO	-0.02***	-0.07	-0.05
	(-3.00)	(-1.59)	(-1.16)
GROWTH	0.00	0.00	0.01
	(1.64)	(0.23)	(0.50)
VOLUME	-0.00	0.07**	0.06**
	(-0.94)	(2.56)	(2.25)
BETA	-0.00	0.01	0.01
	(-0.18)	(1.09)	(1.06)
DUAL	-0.00	0.02	0.02
	(-0.30)	(1.43)	(1.14)
AGE	0.00***	-0.00	-0.00
	(3.73)	(-0.06)	(-0.43)
CR	-0.00	0.00	0.00

	(-0.86)	(0.45)	(0.47)
_cons	0.00	-0.20**	-0.21**
	(0.23)	(-2.21)	(-2.05)
Indutry FE	Yes	Yes	Yes
N	4072	94	94
Adjusted R-squared	0.10	0.58	0.55

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

4.5.3 lagging a period and shrinkage treatment

In order to control the effect of the current period to some extent, all independent and control variables are treated with a one-period lag in this paper. In addition, to eliminate the effect of outliers, all continuous variables in this paper are Winsorized with a 2% upper and lower tail reduction. The results are shown in Table 12and Table 13 , and it can be seen that the regression results do not differ from the main test, which can be said to verify that the results of the main test in this paper are robust and reliable.

Table 8 Robustness test-4

	(1) AgC	(2) AgC	(3) AgC
POST	-0.00		
	(-0.32)		
KAM	0.03**		
	(2.16)		
KAM_POST	-0.02*		
	(-1.67)		
KAMnum1		-0.06**	
		(-2.20)	
KAMnum2			-0.04*
			(-1.72)
SIZE	-0.02***	-0.03***	-0.03***
	(-7.76)	(-3.85)	(-3.76)
ROE	-0.09***	0.15*	0.16*
	(-3.12)	(1.86)	(1.91)
LEV	-0.01	-0.09**	-0.09**
	(-0.77)	(-2.41)	(-2.43)
DD	0.07	0.13	0.14
	(1.35)	(0.88)	(0.93)
marketall	-0.00*	-0.01	-0.01
	(-1.83)	(-1.07)	(-1.11)
MB	0.00	0.03***	0.03***
	(1.60)	(7.61)	(7.68)
CFO	-0.05	-0.28	-0.26
	(-1.57)	(-1.17)	(-1.10)
GROWTH	0.00	0.01	0.01
	(0.41)	(0.33)	(0.35)

VOLUME	0.00	0.20***	0.19***
	(0.12)	(3.47)	(3.37)
BETA	-0.02	-0.12*	-0.12
	(-1.27)	(-1.70)	(-1.55)
DUAL	-0.00	-0.00	-0.01
	(-0.39)	(-0.19)	(-0.52)
AGE	-0.00	-0.00	-0.00
	(-0.21)	(-0.92)	(-1.04)
CR	0.01***	-0.01	-0.01
	(2.68)	(-1.13)	(-1.16)
_cons	0.66***	0.90***	0.92***
	(8.83)	(3.25)	(3.16)
Indutry FE	Yes	Yes	Yes
N	4069	94	94
Adjusted R-squared	0.26	0.71	0.70

Table 9 Robustness test-5

	(1) AgC	(2) AgC	(3) AgC
POST	0.01**		
	(2.54)		
KAM	0.02**		
	(2.02)		
KAM_POST	-0.02***		
	(-2.91)		
KAMnum1		-0.06***	
		(-3.13)	
KAMnum2			-0.05**
			(-2.38)
SIZE	-0.02***	-0.04***	-0.04***
	(-7.38)	(-6.23)	(-6.47)
ROE	-0.13***	0.07	0.08
	(-4.88)	(0.79)	(0.89)
LEV	-0.02	-0.03	-0.03
	(-1.47)	(-0.90)	(-0.87)
DD	0.05	0.19	0.15
	(0.92)	(1.24)	(0.88)
marketall	-0.00**	-0.01	-0.01
	(-2.30)	(-0.88)	(-0.93)
MB	0.00***	0.02***	0.02***
	(2.86)	(7.41)	(7.45)
CFO	-0.04	-0.19	-0.22
	(-1.28)	(-0.99)	(-1.02)
GROWTH	-0.01**	0.04	0.03
	(-2.35)	(0.85)	(0.82)
VOLUME	-0.01	0.17***	0.17***
	(-0.92)	(4.11)	(4.08)
BETA	-0.02*	-0.11	-0.11
	(-1.80)	(-1.61)	(-1.65)
DUAL	0.00	-0.00	-0.01

	(0.64)	(-0.17)	(-0.30)
AGE	-0.00	-0.00	-0.00
	(-0.33)	(-0.57)	(-0.88)
CR	0.01***	-0.01	-0.02
	(3.31)	(-0.96)	(-1.18)
_cons	0.62***	1.08***	1.16***
	(8.90)	(5.11)	(5.25)
Indutry FE	Yes	Yes	Yes
N	4072	94	94
Adjusted R-squared	0.29	0.65	0.64

Note: ***, **, and * denote significant at the 1%, 5%, and 10% levels, respectively, as follows.

5 Conclusions of the study

5.1 Conclusion

Audit report is an important communication bridge between auditors and report users, with the main goal of disclosing relevant information of listed companies and safeguarding the authenticity of their financial statements. The traditional audit report has problems of templatization and process, which makes it difficult to assume the responsibility of resolving information asymmetry and reducing investment risks. In order to increase the information content of the audit report, the Ministry of Finance issued the audit report guidelines, which require the addition of personalized materiality paragraphs in the audit report. This paper explores whether the disclosure of materiality paragraphs can improve the communication value of the audit reports of listed companies in China.

The results of the study show that disclosure of materiality paragraphs has a significant inhibitory effect on the cost of agency, which indicates that materiality paragraphs convey incremental information to the market, while investors give positive responses to the audit reports and the value of audit report communication is enhanced. Furthermore, the inhibitory effect of disclosing material events is mainly reflected in the sample with better reputation. Finally, the book content of important matter disclosure significantly affects its total inhibitory effect on the cost of agency. The weakness of this paper lies in the limited consideration of hidden costs by quantifying agency costs through firms' overhead rates, but it can still provide empirical evidence for audit reporting reform to a certain extent.

5.2 Policy recommendations

The conclusions reached in this paper illustrate that the disclosure of material matters in the reformed audit reports can improve the incremental information, which has the effect of enhancing the transparency of audit reports and reducing the cost of agencies. In contrast, the disclosure of material matters by non-reputable accounting firms does not have the effect of reducing the cost of agencies. Additional requirements for disclosure of materiality are needed if materiality is to be made more effective. At the relevant regulatory level, to achieve the intended objectives of the revision of the reporting standards on audit, further guidance needs to be provided at the standard level for disclosure of key audit matters, to reduce the current problem of homogeneity in disclosure of key audit matters, and to billion promote personalization and heterogeneity of information disclosure in order to improve the information content of results reports. At the auditor level, auditors, as the "economic police", should not only continuously improve their professional competence and practice level, but also "adapt" to the specific audit environment of the audited unit to disclose important matters in the course of practice. Further, auditors should keep up with the pace of updating standards, strengthen the study of reporting standards, and tighten the "strings" in the practice process. At the investor level, when faced with a company audited by a non- reputable firm, it is important to recognize that such companies may have inadequate disclosures and overstatements, and to find ways to obtain more information to reduce investment risks, in addition to carefully studying the matters involved in important matters.

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Enterprise Digital Transformation and Systemic Risk

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Abstract:

The digital transformation gives the enterprise new development momentum, can it further improve the systemic risk of the enterprise?Based on the data of Chinese A-share listed companies from 1999 to 2020, this paper vividly depicts the intensity of enterprise digital transformation by collecting the key words of "digital transformation" in the annual report of Chinese A-share listed companies with the help of crawler technology,empirical test of the impact of enterprise digital transformation on systemic risk and its channel mechanism.The study found that the digital transformation of enterprises significantly reduced the systemic risk.The channel mechanism shows that digital transformation can reduce the systemic risk of enterprises by reducing information asymmetry.In further research, it is found that the reduction of systemic risk caused by digital transformation mainly occurs in non-state-owned enterprises,profit-making enterprises with high shareholding by institutional investors, high-tech and non-top ten audit firms.This conclusion is still valid after a series of robustness tests.The research results expand the economic consequences of digital transformation and provide empirical evidence for enterprises to deal with systemic risks.

Key words: Digital Transformation,Systemic Risk, Information Asymmetry, Corporate Governance.

1 Introduction

On January 12, 2022, the State Council issued the "14th Five-Year Plan for the Development of the Digital Economy" general requirements and goals: by 2025, the digital economy is moving toward full expansion, the added value of the core industries of the digital economy accounted for 10% of GDP, the number of active users of IPv6 will reach 800 million, and the number of gigabit broadband users will reach 60 million, and the size of the software and information technology service industry will reach 14 trillion yuan, and the application penetration rate of industrial

Internet platforms will reach 45%[1] , elevating the The digital economy has been elevated to a very high strategic position, and digital economy has become one of the core themes of the era (Li et al., 2022; Kraus et al., 2022). As a product of the deep integration of digital technologies such as big data, artificial intelligence, blockchain and cloud computing with the real economy, the digital

[1] The State Council on the issuance of the "14th Five-Year Plan" for the development of the digital economy (Guo Fa [2021] No. 29)_Government Information Disclosure Column (www.gov.cn)

economy is expected to solve the problem of lack of economic growth (Gruber, 2019; Myovella et al., 2022), and plays a dominant role in the current process of China's economic development (Li Yun and Ding Linfeng, 2020). Among them, enterprises are the micro bearers of the deep integration of digital transformation and the real economy (Khurana et al., 2022), and digital transformation is gradually being mapped into specific changes in enterprises' production behaviors (Liu et al., 2022; Gaglio et al., 2022), including their financial behaviors. On the one hand, the use of digital transformation and other technologies by firms will provide more valuable information, reduce the cost of searching for information, and provide multidimensional and visual annotations that can help optimize firms' financial behavior (Abou foul et al., 2021). At the same time, we should also perceive that the implementation of digital technologies by firms may bring more strategic risks (Llopis-Albert et al., 2021), as well as increase financial risks by creating great uncertainty in recognition, measurement, recording, and reporting (Battisti et al., 2022). As can be seen, the consequences of digital transformation on financial behavior are not very certain (Kohtamäki et al., 2020) and are an issue well worth testing empirically. However, academics have paid little attention to this issue, which presents a rare research opportunity and space for this study. For this reason, this paper finds it necessary to expand this research in depth, and thus chooses an important perspective of enterprise risk, enterprise systemic risk, to empirically analyze the impact of digital transformation on enterprise risk. So, does digital transformation affect enterprise systemic risk (Tian et al., 2022)? Are there other mechanisms or constraints involved? The elucidation of this set of critical and unresolved real-world questions is essential for us to better understand the elements and pathways needed to improve systemic risk, interpret the process and outcomes of digital transformation in firms (Rothstein et al., 2021), improve internal corporate governance (Aben et al., 2021), and optimize regulatory measures (Chen, 2020; Helen et al., 2021), enhance the efficiency of capital market, improve the related system, and promote the healthy and sustainable development of enterprises (George et al., 2022; Guandalini, 2022; Nayal et al., 2022) have important theoretical value and practical significance.

In this paper, we link the digital transformation of Chinese enterprises in the new era with systemic risk, analyze the relationship between "digital transformation and enterprise systemic risk", expand the understanding of systemic risk from the perspective of micro-structural subjects, and enrich the understanding of digital transformation on systemic risk; In terms of research data, based on the practice of Wu Fei et al. (2021) and Ghosh et al. (2022), based on the text recognition function of Python crawler, and based on the annual reports of listed companies in Shanghai and Shenzhen, we use the keyword "search-pairing-summing" method to characterize the relationship between "digital transformation and enterprise systemic risk". Based on the annual reports of listed companies in Shanghai and Shenzhen, we use the keyword "search-pair-add" method to portray the degree of digital transformation of enterprises; in terms of research paradigm, according to the research framework of "baseline analysis-mechanism analysis-heterogeneity test", we unveil the mystery of the relationship between digital transformation and systemic risk. In the research paradigm, the research framework of "benchmark analysis - mechanism analysis - heterogeneity test" is used to unveil the mystery between enterprise digital transformation and systemic risk; in the research content, the basic conditions required for enterprise digital transformation to be transferred to the capital market in the context of the development of the digital economy are highlighted, the important external support for enterprise digital transformation to promote the reduction of systemic risk is examined, and it is verified through effective empirical means.

Based on existing research, the possible contributions of this paper are as follows: first, it provides a theoretical basis for enterprises to promote digital transformation. Previous literature has mostly focused on exploring the concept and mode of digital transformation, the impact of digital transformation on enterprise innovation (Xiao Tusheng et al., 2022), enterprise high-quality development (Wang Xiaohong et al., 2022; Zhu Heliang and Wang Chunjuan, 2022), and corporate social responsibility (Affirmation Hao et al., 2022; Zhao Chenyu, 2022). This paper examines the mechanism of digital transformation from the perspective of enterprise systemic risk, opens the "black box" of digital transformation affecting enterprise systemic risk, enriches the research on the economic consequences of digital transformation, and provides reference for the economic consequences of enterprises to promote digital transformation, as well as provides a theoretical basis for enterprise digital transformation. Second, it deepens the theoretical cognition of the economic consequences of enterprise digital transformation. Based on the microeconomic level of enterprise systemic risk, this study expands and deepens the understanding of the impact of digital transformation on enterprise systemic risk, assesses the implementation effect of enterprise digital transformation more comprehensively, and the conclusions help to more deeply

understand the driving role of digital transformation on enterprise economic development, and provide empirical evidence for enterprises to carry out digital transformation. Third, the research on the impact factors of enterprise systemic risk is expanded by taking enterprise digital transformation as an entry point. While the literature has discussed the relationship between changes in officials, fiscal spending volatility (Xu Yude et al., 2019), bank lending (Li Shouwei et al., 2020), and corporate governance (Zhu Nanjun and Wu Luqi, 2021; Manita et al., 2020) with enterprise systemic risk, little literature has focused on the impact of digital transformation on enterprise systemic risk. This paper enriches the research on the factors affecting enterprise systemic risk from this new perspective of enterprise digital transformation.

2 Literature Review and Hypothesis Formulation

There is a predominantly positive and negative literature on the economic consequences of digital transformation, with some studies suggesting that digital transformation has positive effects on businesses. However, other studies suggest that digital transformation brings benefits to firms with corresponding costs or negative impacts. For the positive effects on firms, relevant studies suggest that digital transformation can reduce audit costs (Zhang Yongshen et al., 2021), improve audit quality (Zhai Huayun and Li Qianru, 2022), enhance stock liquidity (Wu Fei et al., 2021) and innovation performance (Ardito et al., 2021), and promote the performance level of firms' main business (Yi Luxia et al., 2021; Zhai et al., 2022), which in turn improves firm valuation (Yang, Deming, and Bi, Jianqin, 2019), firm productivity (Yuan, Chun, et al., 2021), and financial performance (Eller et al., 2020; Troise et al., 2022). On the other hand, digital transformation also brings some costs and risks. Shi Yaya and Yang Deming (2021) studied digital transformation in terms of business system innovation and concluded that digital transformation increases the degree of corporate surplus management, raises audit costs (Yang et al., 2020), and may also trigger the risk of stock price collapse (Shi Yaya and Yang Deming, 2020; Jiang et al., 2022; Wu et al., 2022). As we can see from the above literature, the study of the economic consequences or effects of digital transformation has been a hot issue in academia. Past literature has made important contributions to the development of the field, but there is still room for improvement, mainly in the following ways: first, the conclusions of the studies on the effects of digital transformation have not yet reached a consensus and are still divided. This study provides a marginal contribution

to the literature in this area. Second, no literature has yet explored the impact of digital transformation on systemic risk. This paper not only analyzes the effects of digital transformation from the perspective of systemic risk, but also tries to find a new influencing factor of systemic risk.

The logical starting point of this study is the impact of digital transformation on systemic risk. Digital transformation is an important stage driven by the new round of scientific and technological revolution that micro enterprise subjects must go through by following the law of development, which is essentially the process of the deep integration of all kinds of production factors of enterprises with digital technology (Wu Fei et al., 2021), and academics have already carried out a lot of in-depth research on systemic risk (Zhao Fang et al., 2019), and the effect of this digital transformation is supposed to affect the systemic risk of enterprises. This study argues that digital transformation affects enterprise systemic risk in two main ways.

On the one hand, digital transformation reduces information asymmetry making firms less systemic risky. In the context of the national digital economy development strategy, the transparency of corporate data has become increasingly high (Qi Huaijin, 2020; Zhai Huayun, 2022), and the availability and traceability of data urges enterprises to improve the quality of information disclosure (Zhang Yongshen, 2021), reduce the information asymmetry between investors and enterprises (Li Hong, 2021; Yi Luxia et al., 2021), and optimize the allocation of resources (Chen Qingjiang et al. 2021), which to a certain extent makes the systemic risk of enterprises reduced. Moreover, benefiting from the cross-border connectivity attribute of digital technology, enterprises can search all kinds of information resources online, expanding the scope of search (Lanzolla et al., 2021), enhancing the depth of search, helping to obtain more comprehensive and valuable decision-making information (Yang Deming et al., 2019; Paolucci et al., 2021), and reducing the information asymmetry. At the same time, enterprises can realize the intensive management of fragmented information, effectively crack the contradiction that diverse information resources are difficult to synergize, thus reducing the systemic risk of enterprises.

On the other hand, digital transformation leads to scientific and precise management decisions that reduce systemic risks in the enterprise. In the era of digital economy, the uncertainty faced by enterprises has increased, and the management's decision-making needs to be supported by big data (AlNuaimi et al., 2022; Porfírio et al., 2021), and the digital transformation of

enterprises helps to form a digital governance system based on data mining, analysis and application (Fernandez-Vidal et al., 2022), and promotes the scientific and precise nature of corporate supervision and governance mechanisms (Zhao Can et al., 2020). 2022), which promotes the enterprise supervision and governance mechanism to be scientific and precise (Zhao Can et al., 2020). Big data significantly improves the accuracy and effectiveness of capital allocation decisions through data support, and management can optimize resource allocation and improve productivity while supervising management to regulate their own behavior, regulate subjective judgments and even distort the manipulation space in the decision-making process, and improve the level of corporate governance (Zhu, 2019; Chen Deqiu and Hu Qing, 2022). With the support of digital technology, managers' investment decisions are more derived from quantitative analysis of data rather than subjective judgments (Simsek et al., 2019), which can not only shrink managers' discretionary power and constrain their opportunistic behaviors (Li Lei et al., 2022), but also reduce the managers' professional concerns in the investment process, realize the scientific and rationalized investment decisions, and avoid speculation and reduce investment risk (Tingting Liu et al., 2022; Lin et al., 2022), which serves to reduce the systemic risk of enterprises. This leads to the hypothesis:

H1: All else being equal, digital transformation significantly reduces enterprise systemic risk.

3 Research Design

3.1 Sample and data sources

Digital transformation was first proposed by International Business Machines Corporation (IBM) in 2012, emphasizing the application of digital technology to reshape customer value propositions and enhance customer interaction and collaboration. This paper selects the data of China's A-share listed companies from 1999 to 2020 as the initial research sample, including the years before and after the digital transformation, which can better compare the impact of the degree of digital transformation on systemic risk, and treats this data as follows: first, financial enterprises are excluded; second, samples of ST and period delisting are excluded; third, to reduce the impact of outliers, this paper applies 1% and 99% shrinkage treatment to all of the continuous variables with 1% and 99% shrinkage and Cluster treatment at firm level. After the above treatment, 37,779 company observations are obtained. The relevant corporate annual report data come from the official websites of Shenzhen Stock Exchange and Shanghai Stock Exchange, the digital transformation data are obtained by crawler text processing function and manual arrangement, and the other raw data come from the database of Cathay Pacific (CSMAR).

3.2 Definition of variables

3.2.1 Explanatory variables

Degree of Enterprise Digital Transformation (DCG). The quantitative measurement of enterprise digital transformation is a difficult question to answer accurately in both academia and practice. From the theoretical definition, although data has been widely accepted as an important economic "lifeline" in the new era and new stage, enterprise digital transformation is not just the digitization of enterprise data, but the use of cutting-edge digital science and technology technology and hardware systems to promote the digitization of the enterprise's production materials and production processes, so as to achieve the important goal of improving quality and efficiency. Important goal. As the turning point of enterprise's high-quality development in the new era, this kind of characteristic information is more visible in the annual reports of enterprises with the nature of summarizing and guiding, and the vocabulary usage in the annual reports can reflect the future outlook of the enterprises, which to a certain extent reflects the development concepts promoted by the enterprises and the development paths under the guidance of such concepts. Therefore, it is feasible and scientifically credible to characterize the degree of digital transformation of listed companies from the perspective of the frequency statistics of words related to "enterprise digital transformation" in their annual reports.

In this paper, we draw on Wu Fei (2021) to measure the word frequency of corresponding keywords in the annual reports published by A-share listed companies in Shanghai and Shenzhen Stock Exchanges as a proxy indicator for the degree of digital transformation of enterprises. The annual reports of all A-share listed companies in Shanghai Stock Exchange and Shenzhen Stock Exchange are summarized and organized through Python crawler function, and all text contents are extracted through Java, PDF, and box libraries, and this is used as a data pool for subsequent feature word screening.

3.2.2 Explained variables

Drawing on Barton (1988), Luo Danglun et al. (2016), and Xu Yude et al. (2019), this paper uses BETA coefficients to measure firms' systematic risk, with liquidity market capitalization weighted by average market monthly returns based on systematic risk.

3.2.3 Control variables

In order to improve the precision of the study, drawing on Zhang Yongshen et al. (2021), Wu Fei et al. (2021), Wu Wuqing et al. (2022), and Insana (2022), this paper adds a series of control variables. These include gearing ratio (LEV), return on equity (ROE), equity concentration (S-D), cash holdings (Cash), age of the firm (AGE), book-to-market ratio (BM, the ratio of total owner's equity to market capitalization), dual (Dual, 1 for the two positions of chairman and general manager, 0 otherwise), audit opinion (Audit), current ratio (CR), and quick ratio (Quick) are used as control variables and are defined in detail in Table 1.

Table 1 Definition of variables

variable	*Variable definition*
BETA	Systemic risk based on liquid market capitalization-weighted average monthly market returns
DCG	Degree of corporate digital transformation, measured by the frequency of corresponding keyword terms in annual reports published by listed companies
SIZE	Firm size, with the firm's total assets for the year taken as a logarithmic figure
LEV	Gearing ratio, total liabilities at the end of the year/total assets at the beginning of the year
ROE	Earnings on net assets
S_D	Concentration of largest shareholders
Cash	Cash flow intensity, equal to the ratio of cash and its cash equivalents to total assets
AGE	The number of years the firm has been on the market, and the time the firm has been on the market is taken as a logarithmic number
BM	Book-to-market ratio, total owners' equity to market capitalization
Dual	Combination of two positions, chairman and general manager of the Board of Directors
Audit	Audit opinion, 0 if the accounting firm issues a standard unqualified opinion, otherwise 1
CR	Current ratio
Quick	Quick ratio
Industry	Industry fixed effects
Year	Annual fixed effects

3.3 Model setup

Based on the above theoretical assumptions and drawing on Xu Yude et al. (2019), we constructed the following OLS model to test it:

$$BETA = \beta_0 + \beta_1 DCG_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 ROE_{i,t} + \beta_5 S\_D_{i,t} + \beta_6 Cash_{i,t}$$
$$+ \beta_7 AGE_{i,t} + \beta_8 BM_{i,t} + \beta_9 Dual_{i,t} + \beta_{10} Audit_{i,t} + \beta_{11} CR_{i,t} + \beta_{12} Quick_{i,t} + \varepsilon_{i,t} \quad (1)$$

Model (1) investigates the impact of the degree of digital transformation (DCG) on firms' systemic risk, where BETA is used to measure firms' systemic risk, and DCG is used to portray the degree of firms' digital transformation. β_1 reflects the impact of digital transformation on firms' systemic risk, and if $\beta_1 < 0$, the digital transformation reduces the firms' systemic risk; and vice versa. Industry and Year are also controlled to absorb the unobservable factors of time and industry.ε_i ,t is the random error term.

4 Results

4.1 Descriptive statistics

The descriptive statistics of the main variables are shown in Table 2.The mean value of the explanatory variable systematic risk (BETA) is 1.108, the median is 1.114, the maximum value is 1.945, and the minimum value is 0.381, which indicates that different firms are exposed to different systematic risks due to the differences in their industries, production and operations, and the nature of their property rights, and the differences are large, which is in line with Xu Yude (2019) which is largely consistent with the existing literature. The explanatory variable enterprise digital transformation degree (DCG) has a mean of 0.573, a standard deviation of 1.09, a median of 0, a maximum value of 4.369, and a minimum value of 0. The difference in the values is large and the contrast is more pronounced, which provides good data support for the study of the degree of digital transformation. The maximum value of enterprise size (SIZE) among the control variables is 25.969, and the minimum value is 19.124, indicating that different enterprises face different systemic risks due to the differences in their enterprise size, and the difference is large. The average value of cash holdings (CASH) is 0.15, indicating that the sample firms basically have the cash needed to satisfy daily production and operation, the minimum value is 0.004, and the maximum value is 0.569, indicating that the cash holdings of different firms also vary greatly. It is basically consistent with the existing literature.

Table 2 Descriptive statistics

variable	*N*	*mean*	*sd*	*min*	*p50*	*max*
BETA	37779	1.108	0.275	0.381	1.114	1.945
DCG	37779	0.573	1.09	0.00	0.00	4.369
SIZE	37779	21.922	1.338	19.124	21.77	25.969
LEV	37779	0.473	0.214	0.066	0.47	1.141
ROE	37779	0.047	0.206	-1.318	0.067	0.604
S_D	37779	0.37	0.16	0.091	0.349	0.758
Cash	37779	0.15	0.116	0.004	0.119	0.569
AGE	37779	2.341	0.877	0.00	2.708	3.135
BM	37779	0.657	0.242	0.112	0.674	1.144
Dual	37779	0.183	0.387	0.00	0.00	1.00

Audit	37779	0.07	0.255	0.00	0.00	1.00
CR	37779	1.935	1.776	0.214	1.414	11.638
Quick	37779	1.469	1.589	0.131	0.987	10.292

4.2 Benchmark regression analysis

Table 3 reports the results of the core test of the "digital transformation-firm systemic risk" relationship. In the benchmark regression, this paper adopts a progressive regression strategy. Model (1) controls for firm size (SIZE), gearing ratio (LEV), return on equity (ROE), shareholding concentration (S-D), cash holdings (Cash), and time and industry fixed effects, and the regression coefficient of the firm's digital transformation gauge (DCG) is -0.006 and passes the statistical significance test of 1%. In model (2), the control variables of enterprise age (AGE) and book-to-market ratio (BM) are included on the original basis, and the related regression coefficients remain unchanged, and the significance remains unchanged (t-value of -2.50); in model (2), the control variables of dual position (Dual) and audit opinion (Audit) are included on the original basis, and the related regression coefficients are reduced (0.001), which is probably due to the fact that This may be due to the fact that after the inclusion of control variables, some of the factors affecting the systemic risk of enterprises have been absorbed, but the significance remains unchanged; finally, the set of control variables is included on the basis of the original model (3), the relevant regression coefficients remain unchanged, and the significance remains unchanged (t-value of -2.88), and the coefficients of the control variables are basically the same as in the existing literature. This means that a higher degree of enterprise digital transformation significantly reduces enterprise systemic risk, and the two show a significant negative correlation. Thus, the hypothesis of this paper is supported by empirical evidence.

Table 3 Enterprise digital transformation and systemic risk

	(1) *BETA*	(2) *BETA*	(3) *BETA*	(4) *BETA*
_cons	0.956^{***}	1.172^{***}	1.243^{***}	1.245^{***}
	(17.63)	(20.33)	(21.72)	(21.73)
DCG	-0.006^{***}	-0.006^{**}	-0.007^{***}	-0.007^{***}
	(-2.59)	(-2.50)	(-2.87)	(-2.88)
SIZE	0.002	-0.009^{***}	-0.012^{***}	-0.012^{***}
	(0.84)	(-3.11)	(-4.08)	(-4.09)
LEV	-0.109^{***}	-0.096^{***}	-0.065^{***}	-0.070^{***}
	(-8.21)	(-7.42)	(-5.08)	(-4.68)

ROE	-0.060***		-0.051***	-0.071***	-0.071***
	(-7.67)		(-6.58)	(-8.96)	(-9.03)
S_D		-0.011	-0.032**	-0.036***	-0.036***
		(-0.75)	(-2.31)	(-2.60)	(-2.63)
Cash		-0.032*	-0.019	-0.023	-0.014
		(-1.66)	(-1.02)	(-1.25)	(-0.73)
AGE			-0.019***	-0.018***	-0.018***
			(-6.73)	(-6.46)	(-6.51)
BM			0.134***	0.125***	0.125***
			(9.88)	(9.35)	(9.34)
Dual				0.001	0.001
				(0.23)	(0.24)
Audit				-0.083***	-0.082***
				(-11.41)	(-11.15)
CR					0.003
					(0.80)
Quick					-0.005
					(-1.05)
Indutry FE		Yes	Yes	Yes	Yes
Year FE		Yes	Yes	Yes	Yes
N		37779	37779	37779	37779
Adjusted R-squared		0.196	0.206	0.210	0.210

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

4.3 Further testing

4.3.1 Intermediate mechanisms

In order to better understand the differences in the effects of digital transformation, this section provides a holistic picture of "digital transformation - enterprise systemic risk" and examines the black box of the mechanisms involved. In this section, we focus on identifying and examining the channel mechanism of the impact between digital transformation and enterprise systemic risk. For this purpose, two types of channels, analysts' attention (Naqvi et al., 2022) and positive news reports (Du Jinmin et al., 2020), are selected for validation.

With the rapid development of the media industry, the influence of news media on the capital market has become increasingly obvious (Shao, Zhihao and Cai, 2020). In reality, due to the limited ability to collect and process information, investors are easily influenced by news reports, and enterprises undergoing digital transformation tend to have greater development potential, which not only brings stronger attention from the market, but also effectively improves market expectations. It is found that the digital transformation of enterprises is in line with the requirements of the development of the digital economy era, and is also consistent with the orientation of the national policy, the digital transformation of enterprises, its positive news reports gradually increased (coefficient of 0.020 and passed the statistical significance test of 1%), and this positive market expectations will lead to precise decision-making by the management and reduce systemic risk (Table 4). As a result, a positive path of "enterprise digital transformation → (promotion of) positive news coverage → (reduction of) systemic risk" is formed.

As an important information intermediary in the capital market, analysts play a pivotal role in improving information transparency, guiding value investment, optimizing resource allocation, etc., and their research reports are increasingly becoming the source of information and the basis of decision-making for many investors (Ma Lijun et al., 2022). At the same time, an important feature of enterprise digital transformation lies in the significant improvement of the ability to process information and data to alleviate the problem of information asymmetry. In Table 5, the regression coefficient of enterprise digital transformation (DCG) on analysts' attention (Analysis) is positive and highly significant, which means that digitized enterprises are more likely to release information with standardized and structured characteristics, which is easier to be recognized by outsiders, and thus drives the increase of analysts' attention, which can alleviate the information asymmetry problem to a certain extent (Pan Yue et al., 2011). It can be seen that the higher degree of analysts' attention brings about the reduction of systemic risk of enterprises (the regression coefficient of Analysis is positive and highly significant), forming a positive path of "enterprise digital transformation → (promote) analysts' attention → (reduce) systemic risk".

Table 4 Identification of mechanisms by which enterprise digital transformation affects systemic risk: positive news coverage

	(1)	(2)	(3)	(4)
	Pnews	*Pnews*	*Pnews*	*Pnews*
_cons	-6.355***	-7.263***	-7.307***	-7.306***
	(-21.34)	(-23.33)	(-23.41)	(-23.21)
DCG	0.020***	0.020***	0.020***	0.020***
	(4.31)	(4.35)	(4.36)	(4.36)
SIZE	0.315***	0.382***	0.384***	0.384***
	(26.11)	(27.85)	(27.71)	(27.69)
LEV	-0.118*	-0.099*	-0.108*	-0.119*
	(-1.96)	(-1.65)	(-1.78)	(-1.69)
ROE	-0.085***	-0.134***	-0.130***	-0.131***
	(-2.96)	(-4.69)	(-4.49)	(-4.52)
S_D	-0.516***	-0.532***	-0.525***	-0.527***
	(-6.48)	(-6.74)	(-6.68)	(-6.70)
Cash	0.187*	0.071	0.075	0.101
	(1.86)	(0.72)	(0.77)	(0.95)
AGE		-0.035**	-0.031**	-0.032**
		(-2.33)	(-2.08)	(-2.12)
BM		-0.560***	-0.553***	-0.554***
		(-9.51)	(-9.43)	(-9.45)
Dual			0.047**	0.047**
			(2.14)	(2.14)
Audit			0.025	0.029
			(0.64)	(0.73)
CR				0.012
				(0.50)

	(1)	(2)	(3)	(4)
Quick				-0.017
				(-0.64)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	31808	31808	31808	31808
Adjusted R-squared	0.217	0.225	0.225	0.225

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

Table 5 Identification of mechanisms by which enterprise digital transformation affects systemic risk: analyst focus

	(1)	(2)	(3)	(4)
	Fxs	*Fxs*	*Fxs*	*Fxs*
_cons	-9.684***	-14.133***	-14.212***	-14.096***
	(-31.76)	(-42.87)	(-43.07)	(-42.51)
DCG	0.077***	0.048***	0.047***	0.046***
	(7.58)	(5.05)	(4.95)	(4.82)
SIZE	0.519***	0.766***	0.768***	0.768***
	(43.61)	(54.66)	(54.76)	(54.71)
LEV	-1.140***	-0.905***	-0.887***	-1.014***
	(-14.80)	(-12.43)	(-12.10)	(-12.25)
ROE	3.692***	2.573***	2.535***	2.514***
	(31.52)	(25.84)	(24.95)	(24.74)
S_D	-0.565***	-0.578***	-0.573***	-0.574***
	(-6.55)	(-7.06)	(-7.00)	(-7.01)

Cash	0.482***	0.500***	0.493***	0.543***
	(5.60)	(6.04)	(5.95)	(5.99)
AGE		-0.223***	-0.213***	-0.215***
		(-14.08)	(-13.36)	(-13.49)
BM		-2.158***	-2.162***	-2.157***
		(-35.82)	(-35.87)	(-35.84)
Dual			0.110***	0.112***
			(4.53)	(4.61)
Audit			-0.135**	-0.137**
			(-2.24)	(-2.28)
CR				-0.073***
				(-2.65)
Quick				0.062**
				(2.14)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	27644	27644	27644	27644
Adjusted R-squared	0.358	0.426	0.427	0.428

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

4.3.2 Heterogeneity test

In the previous test, this paper examines the impact of firms' digital transformation on systemic risk based on a full-sample perspective. It is worth noting that there may be asymmetric effects on the impact of firms' digital transformation on systemic risk under different differences in firm attributes, and the exploration of such cases can help to develop a differentiated policy orientation.

In China's capital market, there are significant differences in resource endowment and governance mechanisms between SOEs and non-SOEs (Song Chang et al., 2020), which leads to some differences in the degree of digital transformation between SOEs and non-SOEs, and the impact of digital transformation on systemic risk may be different. For this reason, this paper adds the cross-multiplier term (DCG_SOE) of the nature of state-owned property rights and digital transformation to the model for testing, and the regression results are shown in Table 6. The results show that the regression coefficients of the cross-multiplier term between the nature of state-owned property rights and digital transformation (DCG_SOE) and systemic risk (BETA) are significantly positive at least at the 1% level, indicating that the negative correlation between digital transformation and enterprise systemic risk is more pronounced in non-state-owned enterprises than in state-owned enterprises. This paper argues that state-owned enterprises are able to rely on their own national credibility chain embedded in the advantages of natural advantages in the field of resource acquisition, market share, etc. This type of enterprises tend to face less competitive pressure in the market, and they also tend to be less motivated in the field of innovation and transformation, with a relatively weak focus on cutting-edge digital science and technology technologies, and inherently lack a strong willingness to promote digital transformation. As a result, it is difficult for the digital transformation change behavior of such enterprises to form an effective feedback in systemic risk. In contrast, non-state-owned enterprises are facing the pressure of market competition, and in order to achieve sustainable development, these enterprises have a stronger subjective will to engage in innovation and transformation activities, and their digital transformation behaviors are more capable of forming an effective feedback in the systemic risk. Based on this, non-state-owned enterprises have stronger incentives to promote digital transformation, so that systemic risk can be reduced.

Table 6 Corporate digital transformation and systemic risk: a test of differences in the nature of property rights

	(1)	(2)	(3)	(4)
	BETA	*BETA*	*BETA*	*BETA*
_cons	0.973***	1.203***	1.270***	1.272***
	(18.01)	(20.87)	(22.20)	(22.22)
DCG_SOE	0.010**	0.013**	0.013***	0.013***
	(2.04)	(2.57)	(2.67)	(2.68)
DCG	-0.008***	-0.008***	-0.009***	-0.009***
	(-2.97)	(-3.04)	(-3.42)	(-3.43)
SOE	0.009	0.017**	0.015**	0.015**
	(1.42)	(2.56)	(2.34)	(2.34)
SIZE	0.001	-0.011***	-0.013***	-0.013***
	(0.56)	(-3.47)	(-4.39)	(-4.40)
LEV	-0.111***	-0.097***	-0.067***	-0.071***
	(-8.33)	(-7.53)	(-5.20)	(-4.81)
ROE	-0.060***	-0.051***	-0.070***	-0.070***
	(-7.62)	(-6.54)	(-8.90)	(-8.97)

S_D	-0.015	-0.041***	-0.044***	-0.045***
	(-1.08)	(-2.95)	(-3.20)	(-3.23)
Cash	-0.034*	-0.023	-0.026	-0.018

	(-1.79)	(-1.23)	(-1.45)	(-0.91)
AGE		-0.021***	-0.020***	-0.020***
		(-7.41)	(-7.06)	(-7.11)
BM		0.136***	0.127***	0.127***
		(10.00)	(9.47)	(9.46)
Dual			0.003	0.003
			(0.70)	(0.72)
Audit			-0.082***	-0.080***
			(-11.28)	(-11.02)
CR				0.003
				(0.74)
Quick				-0.005
				(-1.01)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	37779	37779	37779	37779
Adjusted R-squared	0.197	0.207	0.211	0.211

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

The process of digital transformation requires firms to be consistently profitable in order to ensure the implementation of digital transformation and thus reduce systemic risk. Based on this, this paper hypothesizes that profitable firms tend to face less systemic risk than loss-making firms. In order to verify this conjecture, the cross-multiplier term (DCG_Loss) of corporate profitability and digital transformation is added into the model for testing, and the regression results are shown in Table 7. The results show that the regression coefficients of the cross-multiplier term of corporate profitability and digital transformation (DCG_Loss) and systemic risk (BETA) are significantly negative at the 10% level, which indicates that the negative correlation between digital transformation and systemic risk will be more pronounced in the case of profitable firms, which is in line with the expectation of this paper.

Table 7 Corporate digital transformation and systemic risk: a test of differences in profitability profiles

	(1)	(2)	(3)	(4)
	BETA	*BETA*	*BETA*	*BETA*
_cons	0.952***	1.165***	1.241***	1.243***
	(17.72)	(20.34)	(21.74)	(21.74)
DCG_Loss	-0.005*	-0.003*	-0.003*	-0.002*
	(-1.89)	(-1.90)	(-1.90)	(-1.91)
DCG	-0.002	-0.004	-0.008	-0.008
	(-0.37)	(-0.60)	(-1.37)	(-1.39)
Loss	-0.031***	-0.023***	-0.006	-0.006
	(-5.35)	(-3.98)	(-1.12)	(-1.05)
SIZE	0.001	-0.010***	-0.012***	-0.012***
	(0.37)	(-3.33)	(-4.12)	(-4.13)
LEV	-0.098***	-0.088***	-0.064***	-0.068***
	(-7.18)	(-6.64)	(-4.84)	(-4.47)
ROE	-0.082***	-0.068***	-0.075***	-0.076***
	(-9.28)	(-7.78)	(-8.69)	(-8.72)
S_D	-0.012	-0.033**	-0.036***	-0.036***
	(-0.82)	(-2.34)	(-2.61)	(-2.64)
Cash	-0.034*	-0.021	-0.023	-0.015
	(-1.80)	(-1.14)	(-1.28)	(-0.77)
AGE		-0.019***	-0.018***	-0.018***
		(-6.64)	(-6.43)	(-6.47)
BM		0.132***	0.125***	0.124***
		(9.73)	(9.31)	(9.30)
Dual			0.001	0.001
			(0.24)	(0.25)
Audit			-0.081***	-0.080***
			(-11.24)	(-11.00)
CR				0.003
				(0.79)
Quick				-0.005
				(-1.03)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	37779	37779	37779	37779
Adjusted R-squared	0.197	0.206	0.210	0.210

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

As professional investment institutions, institutional investors have wider information channels and stronger data analysis capabilities, and are able to obtain information in various ways and are adept at analyzing and utilizing various unstructured information generated in the process of digital transformation of enterprises, and releasing processed information to other investors as well as the capital market. Therefore, it can alleviate information asymmetry to a certain extent, help obtain more high-quality information, improve the information transparency of enterprises, and reduce the systemic risk of enterprises. Based on the above analysis, this paper expects that institutional investor shareholding will strengthen the negative correlation between digital transformation and systemic risk. For this reason, this paper adds the cross-multiplier term (DCG_QFII) of institutional investor shareholding ratio and digital transformation to the model for testing, and the regression results are shown in Table 8. The results show that the regression coefficients of the cross-multiplier of institutional investors' shareholding and digital transformation (DCG_QFII) and systemic risk (BETA) are significantly negative at the 1% level, which suggests that the negative impact of digital transformation on systemic risk will be more pronounced in firms with a high proportion of institutional investors' shareholding, and the results of the regression are in line with the expectations of this paper.

Table 8 Corporate digital transformation and systemic risk: a differential test of institutional investor holdings

	(1)	(2)	(3)	(4)
	BETA	*BETA*	*BETA*	*BETA*
_cons	0.955***	1.171***	1.242***	1.244***
	(17.62)	(20.29)	(21.68)	(21.69)
DCG_QFII	-0.001***	-0.002***	-0.003***	-0.003***
	(-3.09)	(-3.17)	(-3.21)	(-3.20)
DCG	-0.005	-0.004	-0.004	-0.004
	(-0.36)	(-0.27)	(-0.29)	(-0.31)
QFII	-0.050***	-0.048***	-0.047***	-0.046***
	(-4.32)	(-4.18)	(-4.06)	(-4.04)
SIZE	0.002	-0.009***	-0.012***	-0.012***
	(0.84)	(-3.10)	(-4.07)	(-4.08)
LEV	-0.109***	-0.096***	-0.065***	-0.069***

	(1)	(2)	(3)	(4)
	(-8.18)	(-7.39)	(-5.06)	(-4.66)
ROE	-0.061***	-0.052***	-0.071***	-0.071***
	(-7.76)	(-6.67)	(-9.03)	(-9.09)
S_D	-0.010	-0.032**	-0.036**	-0.036***
	(-0.73)	(-2.28)	(-2.57)	(-2.60)
Cash	-0.032*	-0.019	-0.023	-0.015
	(-1.66)	(-1.03)	(-1.25)	(-0.76)
AGE		-0.019***	-0.018***	-0.018***
		(-6.71)	(-6.45)	(-6.50)
BM		0.134***	0.125***	0.125***
		(9.86)	(9.33)	(9.32)
Dual			0.001	0.001
			(0.18)	(0.19)
Audit			-0.082***	-0.081***
			(-11.36)	(-11.11)
CR				0.003
				(0.73)
Quick				-0.005
				(-0.97)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	37779	37779	37779	37779
Adjusted R-squared	0.197	0.206	0.211	0.211

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

In Table 9, the test was conducted for the differences in the characteristics of firms'

technology attributes, and the cross-multiplier term of high-tech technology attributes with digital transformation (DCG_HIGHTECH) was added to the model for the test, and the regression results are shown in Table 9. The results show that the regression coefficients of the cross-multiplier of high-tech technology attributes and digital transformation (DCG_HIGHTECH) and systemic risk (BETA) are significantly positive at least at the 5% level, indicating that high-tech technology attributes can significantly strengthen the negative relationship between digital transformation and systemic risk. This paper argues that, on the one hand, the innovation and transformation of digital technology, as a frontier in the new era, is a key area of concern and investment for high-tech enterprises; on the other hand, digital transformation requires strong innovation foundation support, and high-tech enterprises are able to effectively satisfy the required innovation and technology conditions, and are able to practically embed digital transformation into their own organizational structure, decision-making system and production process, and are more capable of subjectively and objectively integrating digital transformation into their own organizational structure, decision-making system, and production process. They can effectively embed digital transformation into their organizational structure, decision-making system and production process, and can better handle the impact of digital transformation on enterprises subjectively and objectively, thus reducing systemic risk. Therefore, the negative impact of digital transformation on systemic risk will be more obvious in high-tech enterprises.

Table 9 Enterprise digital transformation and systemic risk: a test of differences in technology attributes

	(1)	(2)	(3)	(4)
	BETA	*BETA*	*BETA*	*BETA*
_cons	0.962***	1.178***	1.249***	1.251***
	(17.75)	(20.46)	(21.87)	(21.87)
DCG_HIGHTECH	0.050**	0.052**	0.052**	0.052**
	(2.35)	(2.48)	(2.41)	(2.42)
DCG	-0.007***	-0.007***	-0.008***	-0.008***
	(-2.97)	(-2.89)	(-3.27)	(-3.27)
HIGHTECH	0.070	0.072	0.074	0.075
	(1.07)	(1.06)	(1.07)	(1.01)
SIZE	0.002	-0.010***	-0.012***	-0.012***
	(0.75)	(-3.19)	(-4.16)	(-4.17)
LEV	-0.109***	-0.096***	-0.066***	-0.070***
	(-8.24)	(-7.45)	(-5.10)	(-4.72)
ROE	-0.060***	-0.051***	-0.070***	-0.070***
	(-7.61)	(-6.53)	(-8.90)	(-8.97)
S_D	-0.010	-0.032**	-0.036***	-0.036***
	(-0.72)	(-2.29)	(-2.59)	(-2.62)
Cash	-0.033*	-0.021	-0.024	-0.016
	(-1.76)	(-1.12)	(-1.35)	(-0.79)
AGE		-0.019***	-0.018***	-0.019***
		(-6.79)	(-6.53)	(-6.58)

BM		0.134***	0.125***	0.125***
		(9.89)	(9.35)	(9.34)
Dual			0.001	0.001
			(0.20)	(0.22)
Audit			-0.083***	-0.081***
			(-11.38)	(-11.11)
CR				0.004
				(0.88)
Quick				-0.006
				(-1.14)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	37779	37779	37779	37779
Adjusted R-squared	0.197	0.206	0.211	0.211

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

Drawing on the research of Deng, Fang et al. (2017), this paper argues that, relative tonon-top 10 firms, the top 10 firms, because of their large size, are more likely to invest more in specialization, unify practice standards, and strengthen quality control, their audit quality is higher, and the systemic risk of the audited firms is lower, whereas the non-top 10 firms are more impacted by the digital transformation, and are more able to reduce the systemic risk of the audited firms. For this reason, this paper adds the cross-multiplier term of firm size and digital transformation (DCG_BIG10) to the model for testing, and the regression results are shown in Table 10. The results show that the regression coefficient of the cross-multiplier term of firm size and digital transformation (DCG_BIG10) with systemic risk (BETA) is significantly positive at the 1% level, indicating that the negative effect of digital transformation on systemic risk is more effective among the non-top 10 firms.

Table 10 Corporate digital transformation and systemic risk: a test of firm size variability

	(1)	(2)	(3)	(4)
	BETA	*BETA*	*BETA*	*BETA*
_cons	0.981***	1.207***	1.263***	1.264***
	(17.95)	(19.98)	(21.14)	(21.10)
DCG_BIG10	0.003***	0.002***	0.002***	0.002***
	(4.04)	(4.06)	(4.09)	(4.09)
DCG	-0.002	-0.001	-0.002	-0.002
	(-0.65)	(-0.43)	(-0.71)	(-0.71)
BIG10	-0.008**	-0.005	-0.005	-0.005
	(-1.99)	(-1.23)	(-1.31)	(-1.32)
SIZE	0.002	-0.010***	-0.013***	-0.013***

	(1)	(2)	(3)	(4)
	(0.66)	(-3.42)	(-4.38)	(-4.38)
LEV	-0.106***	-0.097***	-0.067***	-0.070***
	(-8.00)	(-7.49)	(-5.18)	(-4.73)
ROE	-0.062***	-0.052***	-0.071***	-0.072***
	(-7.87)	(-6.68)	(-9.03)	(-9.09)
S_D	-0.014	-0.031**	-0.035**	-0.035**
	(-1.01)	(-2.25)	(-2.54)	(-2.57)
Cash	-0.038**	-0.020	-0.024	-0.016
	(-1.97)	(-1.11)	(-1.33)	(-0.82)
AGE		-0.019***	-0.018***	-0.018***
		(-6.41)	(-6.18)	(-6.23)
BM		0.137***	0.128***	0.128***
		(10.04)	(9.53)	(9.52)
Dual			0.001	0.001
			(0.24)	(0.25)
Audit			-0.082***	-0.081***
			(-11.27)	(-11.02)
CR				0.004
				(0.86)
Quick				-0.005
				(-1.08)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	37779	37779	37779	37779
Adjusted R-squared	0.196	0.205	0.210	0.210

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

4.4 Robustness testing

The digital transformation and even systemic risks of enterprises are highly correlated with major financial shocks on a global scale. For example, in the wake of a major adverse financial event, the likelihood of a firm's systemic risk arising or being exacerbated increases, and the process of its own digital transformation may face stagnation, and neglecting to explore these types of factors is likely to result in a certain amount of endogenous disruption. In the time series of the sample data in this paper, there is one important financial shock, namely the financial crisis (2008). From an objective point of view, it is difficult for the existing literature to absorb the impact of such factors by way of variable construction. Based on this, this paper draws on the study of Tang Song et al. (2020) to exclude the financial crisis factor, and this paper deletes the sample of firms in 2008 and intercepts the sample of the remaining data for the regression test. The empirical regression results in Table 11 show that there is no change in the core conclusion that "digital transformation helps reduce systemic risk of enterprises".

Table 11 Robustness testing: deletion of some samples (2008)

	(1) BETA	(2) BETA	(3) BETA	(4) BETA
_cons	0.983***	1.192***	1.260***	1.261***
	(18.05)	(20.50)	(21.77)	(21.77)
DCG	-0.005**	-0.005**	-0.006**	-0.006**
	(-2.26)	(-2.19)	(-2.56)	(-2.56)
SIZE	0.001	-0.010***	-0.013***	-0.013***
	(0.27)	(-3.41)	(-4.32)	(-4.33)
LEV	-0.104***	-0.091***	-0.061***	-0.065***
	(-7.81)	(-7.02)	(-4.75)	(-4.33)
ROE	-0.064***	-0.055***	-0.074***	-0.075***
	(-8.03)	(-7.02)	(-9.37)	(-9.42)
S_D	-0.009	-0.030**	-0.033**	-0.034**
	(-0.60)	(-2.12)	(-2.39)	(-2.41)
Cash	-0.026	-0.014	-0.018	-0.011
	(-1.36)	(-0.74)	(-0.96)	(-0.55)
AGE		-0.019***	-0.018***	-0.018***
		(-6.74)	(-6.42)	(-6.46)
BM		0.129***	0.121***	0.121***
		(9.43)	(8.93)	(8.92)
Dual			0.002	0.002
			(0.49)	(0.50)
Audit			-0.079***	-0.078***
			(-10.90)	(-10.69)
CR				0.003

				(0.66)
Quick				-0.004
				(-0.85)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	36362	36362	36362	36362
Adjusted R-squared	0.200	0.208	0.213	0.213

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

China's accounting standards were revised in 2007, considering that accounting standards are closely related to enterprises and the characteristics of digital transformation and enterprise systemic risk may be quite different, based on this, this paper deletes the sample of enterprises in 2007, and intercepts the sample of the remaining data for the regression test. The empirical regression results in Table 12 show that there is no change in the core finding that "digital transformation helps reduce enterprise systemic risk".

Table 12 Robustness tests: deletion of some samples (2007)

	(1)	(2)	(3)	(4)
	BETA	BETA	BETA	BETA
_cons	0.959^{***}	1.108^{***}	1.184^{***}	1.181^{***}
	(15.98)	(16.90)	(18.46)	(18.36)
DCG	-0.007^{***}	-0.007^{***}	-0.009^{***}	-0.009^{***}
	(-2.79)	(-2.96)	(-3.62)	(-3.62)
SIZE	0.000	-0.006^{*}	-0.009^{***}	-0.009^{***}
	(0.17)	(-1.69)	(-2.94)	(-2.92)

LEV	-0.095***	-0.080***	-0.042***	-0.044**
	(-6.08)	(-5.18)	(-2.79)	(-2.54)
ROE	-0.032***	-0.029***	-0.055***	-0.055***
	(-3.26)	(-2.96)	(-5.57)	(-5.60)
S_D	-0.021	-0.045***	-0.052***	-0.052***
	(-1.25)	(-2.71)	(-3.12)	(-3.14)
Cash	-0.057***	-0.048**	-0.048**	-0.041*
	(-2.68)	(-2.33)	(-2.39)	(-1.86)
AGE		-0.020***	-0.018***	-0.018***
		(-6.89)	(-6.41)	(-6.43)
BM		0.085***	0.075***	0.075***
		(6.03)	(5.39)	(5.38)
Dual			0.000	0.000
			(0.06)	(0.06)
Audit			-0.125***	-0.124***
			(-12.66)	(-12.50)
CR				0.005
				(0.97)
Quick				-0.006
				(-1.10)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	28590	28590	28590	28590
Adjusted R-squared	0.220	0.227	0.235	0.235

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

The difference equation replaces all the variables with the difference between period t and period t-1 to analyze the impact of the degree of digital transformation on the systemic risk of enterprises, and this treatment can make the random error term reduce and shrink, so that the regression model error is reduced.

The results of the differential equations are shown in Table 13: the results are also basically consistent with the main test, which shows that the conclusions of thispaper are still valid even if the method of differential equations is used.

Table 13 Robustness tests: difference equations

	(1) BETA	(2) BETA	(3) BETA	(4) BETA
_cons	0.027***	0.029***	0.030***	0.031***
	(2.66)	(2.89)	(2.97)	(3.00)
DCG	-0.035***	-0.035***	-0.035***	-0.035***
	(-10.10)	(-10.11)	(-10.10)	(-10.10)
SIZE	0.023***	0.029***	0.033***	0.033***
	(3.80)	(4.45)	(4.98)	(5.03)
LEV	-0.030*	-0.034*	-0.048***	-0.030
	(-1.66)	(-1.83)	(-2.64)	(-1.51)
ROE	-0.063***	-0.064***	-0.060***	-0.059***
	(-8.03)	(-8.13)	(-7.54)	(-7.48)
S_D	-0.006	-0.004	-0.001	0.000
	(-0.17)	(-0.10)	(-0.02)	(0.01)
Cash	-0.008	-0.008	-0.006	-0.028
	(-0.36)	(-0.39)	(-0.28)	(-1.22)
AGE		0.000	0.000	0.000
		(.)	(.)	(.)
BM		-0.038**	-0.039**	-0.040**
		(-2.43)	(-2.50)	(-2.51)
Dual			-0.007	-0.007
			(-1.06)	(-1.06)
Audit			0.042***	0.041***
			(5.23)	(5.08)
CR				-0.005
				(-0.84)
Quick				0.011*
				(1.72)
Indutry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
N	33708	33708	33708	33708
Adjusted R-squared	0.192	0.192	0.193	0.193

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

In the main test, all the continuous variables were trimmed (top and bottom 1%), and this part replaces the trimming method to trim the sample in the 2% range, and the regression results are shown in Table 14: the regression results are still significant, and the results also show that the digital transformation of the enterprise is negatively correlated with the systemic risk. This is generally consistent with the results of the main test.

Table 14 Robustness tests: 2% tailing

	(1)	(2)	(3)	(4)
	BETA	BETA	BETA	BETA
_cons	0.916***	1.119***	1.188***	1.185***
	(17.16)	(19.73)	(21.18)	(21.12)
DCG	-0.007***	-0.007***	-0.007***	-0.007***
	(-2.85)	(-2.81)	(-3.22)	(-3.20)
SIZE	0.004	-0.007**	-0.009***	-0.009***
	(1.55)	(-2.30)	(-3.17)	(-3.16)
LEV	-0.099***	-0.087***	-0.058***	-0.058***
	(-7.31)	(-6.61)	(-4.48)	(-3.74)
ROE	-0.107***	-0.089***	-0.121***	-0.121***
	(-9.22)	(-7.78)	(-10.50)	(-10.53)
S_D	-0.010	-0.031**	-0.035**	-0.035***
	(-0.71)	(-2.24)	(-2.55)	(-2.59)
Cash	-0.013	-0.004	-0.009	-0.004
	(-0.70)	(-0.20)	(-0.51)	(-0.22)
AGE		-0.017***	-0.017***	-0.017***
		(-6.45)	(-6.18)	(-6.19)
BM		0.124***	0.112***	0.112***
		(9.37)	(8.61)	(8.59)
Dual			0.001	0.001
			(0.29)	(0.28)
Audit			-0.086***	-0.086***
			(-12.36)	(-12.15)
CR				0.005
				(1.13)
Quick				-0.006
				(-1.15)
Indutry FE	Yes	Yes	Yes	Yes

Year FE	Yes	Yes	Yes	Yes
N	37779	37779	37779	37779
Adjusted R-squared	0.193	0.202	0.207	0.207

Note: Standard deviations of coefficients are in parentheses, all regression coefficients standard deviations are at the firm level CLUSTER treatment, ***, **, * indicate that the regression coefficients are significant at the 1%, 5%, and 10% levels, respectively.

1 Conclusion

This paper focuses on the impact of digital transformation of firms on systemic risk in the context of the digital economy, and delves into the moderating effects of the nature of firms' property rights, profitability, institutional investors' shareholding, technology attributes, and firm size. The paper finds that digital transformation of enterprises can significantly reduce systemic risk. The paper further finds that: digital transformation reduces the systemic risk of non-state-owned firms more than state-owned firms; digital transformation reduces the systemic risk of profitable firms more than loss-making firms; digital transformation reduces the systemic risk of firms with a high percentage of institutional investor ownership; digital transformation reduces the systemic risk of high-technology firms more than high-technology firms; and the comparison of firm size reveals that that the reduction of systemic risk by digital transformation is more obvious in companies audited by non-top ten firms. The findings of this paper suggest that the process of corporate digital transformation can reduce the information asymmetry between investors and firms and enable management to make more accurate decisions, thus significantly reducing corporate systemic risk.

2 Policy recommendations

With the arrival of the digital era, the deep integration of the digital economy and the real economy has become the future development trend and inevitable result. Both manufacturing enterprises and service enterprises are widely promoting the construction of information systems, and China's government and society, market and enterprises have deeply recognized that digital construction is the driving force to ensure long-term economic growth and an important driving factor for the survival and development of enterprises (Scott and Orlikowski, 2022; Peng and Tao, 2022). This paper explores the impact of digital transformation on enterprise systemic risk from both theoretical and empirical perspectives, and the findings have the following policy implications:

(1) Enterprises should pay attention to the impact of digital transformation on the systemic risk of enterprises and promote the in-depth application of digital technology in enterprise development. Enterprises can take digital transformation as an opportunity to accelerate the formation of a digital governance system centered on data mining, analysis, and application, driving the scientific, standardized, and precise management decisions of enterprises and reducing the risks faced by enterprise development (Wang et al., 2022). In addition, enterprises should deeply integrate digital technology into every department and every link to realize the comprehensive application of digital technology in enterprise development and provide all-round information support for enterprise management (Li, 2020).

(2) The government should help enterprises successfully implement digital transformation (Zhao and Chen, 2022). First, the government should reform and improve the existing market management system and administrative approval process, which may hinder the digital

transformation of enterprises, so as to create an excellent regulatory environment for the digital transformation of enterprises; second, timely introduction of relevant support policies (such as tax incentives, government subsidies, and talent introduction policies, etc.), to address the difficulties and needs that may be faced by enterprises in the pain of transformation, and to help enterprises accurately apply digital technology, smoothly resolve the potential risks of not adapting to the transformation, and smoothly realize digital transformation; finally, attach importance to the construction and improvement of digital infrastructure, and lay out the new infrastructure in a targeted and forward-looking manner, especially to increase the investment in and construction of information infrastructure, create a digital development platform (Kim et al., 2022), and widely pool resources from all walks of life, so as to assist enterprises in the transition from individual transformation to collaborative transformation. digital transformation from individual transformation to synergistic transformation, from closed transformation to open transformation, fully releasing the dividend advantages of digital technology on the high-quality development of enterprises.

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The Influence of Family Cultural Capital on Depression Tendency of College Student

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Abstract

In order to explore the internal relationship between parents' education level, family cultural habits, family cultural expectations and college students' depressive tendencies in family cultural capital, 1089 Chinese college students were investigated with PHQ-9 depression screening scale and family cultural capital scale, and regression analysis was carried out. The results found that: parents' education level can negatively predict the depression tendency of college students; the better the family culture habits, the less the chance of college students' depression tendency; the higher the expectation of family culture, the negatively promote the depression tendency of college students. Based on this, it can be seen that generous family cultural capital can alleviate the depression tendency of college students, so it is recommended that parents should pay attention to the creation and accumulation of family cultural capital in their children's early stages; colleges and universities should increase the degree of attention to the mental health of students who are relatively lacking in family cultural capital; The government needs to strengthen the publicity of depression to promote the correct understanding of depression among the public.

Keywords: Family Cultural Capital; Depression Tendency; Parents' Education Level; Family Cultural Habits; Family Cultural Expectations

1 Introduction

"If you have trouble in your heart, you will be depressed if you keep silent." Depression, which is called "the disease of the century", is mainly manifested in a mental state of persistent emotional depression that is difficult to alleviate, while those who have this state but have not yet reached the standard of clinical certified depression are called depressive tendencies. From the actual survey, most patients with depression tend to only pay attention to physical diseases and go to general hospitals, often ignoring the problem of mental emotion. But "form and spirit are inherent". Mental and psychological experts have said that chronic depressive tendencies and emotions may produce dysthymia for a long time, which may evolve into severe depression.

In 2018, the World Health Organization released a set of data, which showed that China ranked first in mental and mental diseases, of which the incidence rate of depression reached five percent. In 2020, the detection rate of depression among young Chinese adolescents was 24.6%, of which the detection rate of severe depression was 7.4%, and this set of data did not include people with depressive tendencies. Based on this, as a group with a high incidence of mental diseases, college students' mental health problems have been highly valued by the Communist Party and the government. From 2001, when the Ministry of Education issued the basic construction standards for mental health education in general colleges and universities (for Trial Implementation) to 2018, when the guiding outline for mental health education in Colleges and universities was issued and implemented, All of them show that the Chinese government attaches great importance to the psychological problems of college students.

At the same time, this issue has also aroused widespread concern in the academic community. Related studies mainly focus on two aspects: the causes of depression and coping strategies.In terms of causes, the research shows that family relations and parental rearing concepts in childhood have a significant impact on adolescents' psychology and behavior. Emotional interaction ignored, rejected or ineffective coping by parents will eventually lead to depression (Gallo et al., 2018; Xiao and Zheng, 2022); Some studies based on the perspective of interpersonal relationship have found that, as the smallest relationship unit in the campus, good interpersonal relationship in this environment can effectively reduce the probability of suffering from depressio (Ye et al., 2021); Other studies have shown that real social exclusion can have a direct impact on depression (Li et al., 2021); In addition, some studies are carried out from the perspective of College Students' own psychology, and it is believed that the shyness of college students is directly related to the formation of depression (Gao et al., 2020);Similarly, individuals with low self-esteem and high self-criticism have a greater risk of depression (Ozimek and Bierhoff, 2020; Doyle and Catling, 2022); However, adolescents who are willing to present themselves on social networks have a relatively lower risk of depression (Frison and Eggermont, 2020); If adolescents have strong negative emotion regulation ability, they are less likely to form depression (Wu, 2020); Of course, adolescent depression is often not caused by a single factor, but is more likely to be the product of the combined action of internal and external factors such as social environment, family structure, interpersonal relationships and psychological factors (Kim et al., 2020).

In terms of coping with depression, the literature has described a variety of depression inhibition mechanisms: For example, parents' education for their children, such as high tolerance, open education concept, and willingness to listen to their children's voice, can improve teenagers' self-esteem and effectively inhibit depression (Nie et al., 2022); Setting up a mental health education team in Colleges and universities and carrying out active psychological intervention on students with mental health problems are effective ways to reduce the level of depression of college students (Li et al., 2021); If it can help students to establish interpersonal self-reliance so as to mitigate the negative impact of social comparison, it can also significantly reduce the risk of depression (Geng et al., 2021); In addition, effective social support can improve college students' coping with stress and also have a significant effect on reducing the risk of depression (Chen et al., 2021).

2 Literature review

An overview of the research status and development trends of family cultural capital and depression tendency of college students shows that: Firstly, at present, this field is a common topic in the field of education and psychology, but the academic theoretical research is still insufficient, and the relevant empirical research is scarce.

Second, although a small number of literatures have explored the impact of family background on students' behavior from the perspective of family cultural capital, they only focus on the hard conditions of parents' education level, and rarely involve the hidden capital in family cultural capital - family cultural habits and family cultural expectations. It can be seen that, in addition to the significant external manifestation of parents' education as family cultural capital, family cultural capital also includes internal manifestations such as family cultural habits and expectations, which can lay the tone for the healthy psychological growth of college students and have a far-reaching impact.

Thirdly, most of the empirical studies on this topic use questionnaires, and then use least square regression. This method is easy to cause sample selection bias when selecting samples, thus affecting the final results of the empirical research. Therefore, these three aspects provide broad research space and opportunities. This paper intends to deepen, improve, expand and extend these three aspects, and comprehensively explore the impact mechanism of College Students' family cultural capital on their depressive tendencies by using the propensity score matching analysis method.

3 Research assumptions

Depression refers to a kind of psychological state in which an individual shows continuous melancholy, weakness, sadness, lack of interest and other similar states in the environment (Friedman et al., 2014). It will promote the individual to be tired of things, low self-esteem, insomnia, overeating or unwilling to eat, and even initiate self mutilation, self killing and other behaviors (Felger et al., 2015; Wetherall et al., 2019).

When the WHO read the fact that the existing data on depression were gradually rising, it predicted that depression, a non significant disease, would become an important influencing factor for human death and disability in the future (McIndoo and Hopko, 2014). However, in Chinese universities, the probability of college students with depressive symptoms being detected is already very high (Ritvo et al., 2021). At this time, the college students with depressive tendencies who have some depressive symptoms but have not yet reached the clinical standard of depression can not be ignored.

However, there are factors that promote depression tendency both at the individual level and the environmental level (Alasmawi et al., 2020): At the individual level, shyness, low-level self-esteem and high-level self-criticism can provide a catalyst for depression (Gao et al., 2020; Ozimek and Bierhoff, 2020); At the environmental level, there are also seeds of depression from the perspectives of competition in study and work, interpersonal relationship between dormitories, family growth atmosphere, etc (Yu et al., 2015; Ye et al., 2021; Ventura et al., 2022). As the most elementary social setting, family is the most primitive and important system and group form of human beings. Family relations and parental rearing concepts have a significant impact on adolescents' psychology and behavior (Tani et al., 2018; Yao et al., 2022). While cultural capital is inherited and acquired by individuals from their families in the process of socialization, which can promote academic achievement, language and culture (Tan and Liu, 2018), in which family cultural capital is the performance of cultural capital in family education. Therefore, it is necessary to explore whether the shaping of family cultural environment, one of the controllable environments, can affect the depression tendency of college students.

According to Bourdieu's cultural capital theory, family cultural capital mainly has three forms: concrete cultural capital, objective cultural capital and institutionalized cultural capital (Bourdieu, 1986; Miller and Weller, 2019). The research also shows that family cultural capital is composed of three factors: parents' education, family cultural habits andfamily cultural expectations.

3.1 Institutionalized cultural capital: parents' educational level

A 29 year follow-up studies in the United States found that family cultural background has a significant impact on the probability of depression after children grow up (Quesnel and Taylor, 2018). It is said that "parents are the most direct people to preach and solve puzzles for their children". In the process of growing up, the family is their big classroom, in which high-quality resources (Tan and Liu, 2018; Liu, 2022) and rational education methods (Tan, 2021) are conducive to promoting the healthy psychological growth of children.

On the one hand, parents with higher education are more likely to obtain better jobs, posts and higher social status, which can provide their children with relatively high-quality material resources in the growth and learning environment (Zhang and Xie, 2016; Liu and Yang, 2022). When sufficient financial support is given to children, it can promote their overall life satisfaction (Kokkinos et al., 2022), which is conducive to reducing the mental pressure of college students (Cho et al., 2021). At the same time, in an atmosphere of abundant conditions, college students' concept of material in life is more rational, promoting them to establish a proper concept of consumption and avoiding bad mentality caused by impulse or comparison (Wu and Zhao, 2022). In addition, under good conditions, we can have more opportunities to experience, broaden our horizons, encourage college students to be willing to express themselves in the external environment, and reduce the inner sensitivity caused by lack of expression ability or cowardice when fighting for their own interests, which will lead to self questioning and even depression and anxiety (Cosma et al., 2021). Therefore, families with highly educated parents can negatively affect the depression tendency of college students economically. On the other hand, different levels of education affect the way parents educate their children, and the atmosphere created has different effects on the growth of College Students' mental health.

First, parents with lower education are more likely to be autocratic or doting. When the child's behavior is more rejected, direct, ignored and criticized (Berla et al., 2022), and the child is in a more sensitive growth stage, and is more eager to be encouraged and affirmed by his parents, this method will positively promote the child's inner sense of lack, easily attack the child's confidence and courage to face problems and challenges, and promote him to have negative emotions. And as children grow up, the cognitive differences between parents and children expand, which is more likely to lead to differences in viewing things, which is not conducive to the development of parent-child relations and the improvement of children's inner security. At the same time, under the influence of the old educational thought - "filial sons are born under sticks", parents with low education are prone to take extreme handling methods when facing intensification of contradictions with their children, depriving their children of the autonomy to judge things and deal with contradictions, which are not conducive to cultivating their children's independent and independent ability. As college students, they are more reluctant to express their ideas and show a shy attitude outside their families, so as to form depressed emotions and even depressive tendencies (Salavera et al., 2022). In addition, parents with a low level of education are also prone to show love for their children. Due to the obedience in the family environment, their children's ability to deal with things independently is lower than that of non doting families (Yu et al., 2015), and the more they are affirmed in the family environment, the more vulnerable they will be to bear negation, resulting in a greater possibility of setbacks for college students in their campus life or learning process, The impact of a negative emotion may also be more profound, thus promoting the formation of depression.

Second, when parents are highly educated, they tend to be more rational in the process of educating their children. All problems and contradictions in life will be solved in a gentle way. They are good at respecting children's opinions, leaving a certain self space for children, encouraging children to make decisions by themselves, and cultivating children's self-confidence and autonomy (Lavrič and Naterer, 2020). These behaviors can promote college students to be more assertive in the face of external difficulties or in dealing with the world, improve their stress resistance, and correspondingly reduce their negative impact on the environment, it can effectively reduce the tendency of depression. In addition, because parents have received good education, they can give more help to their children in learning, promote parent-child communication, improve the quality of parent-child relationship, help parents understand their children's psychological state in time, help children digest negative emotions, and reduce their negative impact on the body and mind of college students. It can be seen from the above analysis that authoritarian education tends to have more restrictions on children's behavior, which will lead to college students' depressive tendencies such as low self-esteem and cowardice in dealing with things, while indulgent education will also significantly increase the probability of depressive tendencies (Ebrahimi et al., 2017; Konopka et al., 2018); On the contrary, the higher level of parental education and the preference for rational education can promote the emotional expression of all members in the family environment, enhance the intimacy between parents and children, enhance the cohesion of family groups, have a low probability of conflicts, have a high degree of solvable contradictions, and have strong self-confidence and self-esteem. Under this background, college students have negative emotions, which significantly reduce the possibility of forming depression (Li et al., 2022).

Through the analysis of the influence of economic ability and education mode, it can be found that the higher the education level of parents, the stronger their economic ability, which can meet the growth needs of college students materially and reduce the mental pressure; The higher the education level is, the more rational the education method for children will be, and the better the family atmosphere will be created, which is conducive to cultivating college students' self-confidence and self-determination ability and improving their pressure resistance ability. Therefore, we put forward the following assumptions based on the analysis:

Hypothesis 1: under other conditions, the educational level of parents is negatively correlated with the depression tendency of college students.

3.2 Specific cultural capital: family cultural habits

Imitation is the best way to learn in childhood. As the closest and far-reaching group of college students, their words and deeds naturally become the most influential model of college students. The intergenerational transmission of their cultural habits and the atmosphere they create have a strong impact on the development of College Students' mental health (Park, 2020).

First of all, family culture and habits can give children an example of habits, and intergenerational transmission can help children develop habits. Childhood is a golden time for children to develop their habits (Mikus et al., 2020). At this time, college students have strong plasticity, poor self-control ability, and are very sensitive to the surrounding environment. They are easy to leave a deep impression in the brain. They can easily accept the influence of good habits, but they will also be infected with bad habits without discrimination. As the saying goes, "like father, like son" can effectively promote children to develop good habits under the influence of high-quality habits and the promotion of children's imitation ability: To establish a correct attitude and good character, to keep working or studying quickly and efficiently in dealing with affairs, so that college students can maintain a good state in life and study outside the family, and have a stronger defense and resistance in the face of external pressure and frustration, thus negatively affecting the tendency to depression. For example, when parents keep reading habits for a long time, their positive attitude towards reading can promote children's interest in reading (Yeo et al., 2014) and encourage college students to form reading habits. Through reading, you can often calm your heart, expand your horizons and thinking between pages, and expand the tolerance of worry. More studies have shown that the rational use of reading skills can significantly and effectively assist college students in the treatment of depression (Milaré et al., 2021). On the contrary, if students are exposed to bad family habits, they will help them identify with their bad habits. When college students' bad habits are questioned or denied by the public in the collision of different habits, they will easily reject their own habits, trigger negative emotions, and promote the formation of depression

Secondly, the cultural habits of the family are not only the role models of skills for college students, but also the atmosphere created by their habits is a powerful push for the development of children's mind. When the parents adhere to the mental habits of tolerance and responsibility, understand and understand each other, and hold different opinions on events, they are more inclined to seek common ground while reserving differences, and calmly solve contradictions, rather than prevaricating and complaining to each other, resulting in a tense family atmosphere and weak cohesion (Han et al., 2022). Under the influence of this atmosphere, college students who are growing up gradually will be more willing to learn to take responsibility when they get along with others outside the family, Have a sense of responsibility and collective honor, actively integrate into the collective life, and calmly deal with problems in both study and life. At this time, the problems for them are more challenges and self-improvement than obstacles.

Therefore, these abilities and qualities will promote them to love life and study more, reduce the impact of negative emotions and the environment, and help to negatively guide the occurrence of depression. To sum up, it can be seen from two perspectives: the transmission of family habits and the family atmosphere shaped by habits: Good habit transmission effectively inhibits the influence of negative emotions such as impetuosity and depression on college students from the individual level; The atmosphere created by good habits makes the environment outside the family become a platform for college students' self realization. They have a stronger ability to resist the difficulties and setbacks, which are conducive tocollege students' maintaining a good state when they get along with others, thus reducing thepossibility of inducing depression. Therefore, we put forward the following assumptions:

Hypothesis 2: under other conditions, family cultural habits are negatively correlated with college students' depressive tendencies.

3.3 Concrete cultural capital: family cultural expectation

Every family has diversified accumulation and precipitation of cultural capital to vary degrees. With the strong support of the state for education, as well as the continuous improvement of families' attention to knowledge power and their own economic ability, more and more families are more inclined to invest capital in family education culture, and continue to raise the highest threshold of expectation for educational achievements. Therefore, when studying the relationship between family education and cultural capital investment and depression tendency, in addition to parents' education level and family cultural habits, we should also consider the educational and cultural expectations in combination with China's national conditions.

On the one hand, family cultural expectation is an important link between family capital and learning outcomes. Family cultural expectation not only contains parents' expectation for children's educational achievements and spiritual encouragement to children, but also expresses through economic resources and actual behavior investment (Parcel and Dufur, 2001). When parents have higher expectations for their children's culture, they are more inclined to invest more cultural and educational capital in their children, and show a higher degree of participation in their children's cultural education. These will guide parents not only to pay attention to their children's academic achievements, but also to pay attention to the cultivation of interests and abilities, and encourage parents to actively guide their children to participate in activities and the cultivation of interests after learning, so as to improve their children's interpersonal skills. Good interpersonal relationships in college life can help college students eliminate the loneliness caused by their first integration into the social environment after leaving home, so that they can maintain a stable and positive psychology in campus life, enhance their courage and confidence in facing setbacks, meet their interpersonal needs, and reduce the possibility of depression (Spínola et al., 2020).

On the other hand, family culture expectation is conducive to promoting college students' investment in learning (Hu and Wu, 2021). This will help college students realize their self-worth and improve their academic strength and self-confidence. Even without sufficient financial support and parental education, under the conditions of reasonable family cultural expectations, the students' Union will make more active use of campus resources, maintain good learning habits and attitudes, actively communicate with teachers and classmates, improve their enthusiasm for communication, and reduce the continuous impact of negative emotions such as anxiety and sense of falling behind, So as to negatively predict depression tendency. From the above analysis, it can be seen that family culture expectation can help cultivate students' positive mentality and interpersonal communication ability by influencing parents' capital investment and participation in college students' cultural education, improving parents' material and spiritual support for their children, and also promoting students' own learning investment, so as to promote students' academic self realization, enhance self-confidence, and reduce the tendency of depression caused by negative emotions. Therefore, We propose the following assumptions:

Hypothesis 3: under other conditions, family culture expectation is negatively correlated with depression tendency of college students.

4 Model building

4.1 Research tools

This paper uses a questionnaire composed of demographic variables, PHQ-9 questionnaire and family cultural capital questionnaire to explore the relationship between family cultural capital and depression tendency of college students. Among them, PHQ-9 questionnaire was used to measure the depression tendency of college students. The patient health questionaire-9 (PHQ-9) is a simple and effective self-assessment scale for depression based on 9 items of DSM-IV (Diagnostic and Statistical Manual of mental disorders developed by the American Psychiatric Association) diagnostic criteria. It has good reliability and validity in the auxiliary diagnosis of depression and the assessment of symptom severity (Kroenke et al., 2001). The upper limit of the time for the 9 tests is set as the past week, and the scores of each option are as follows: absolutely not (the current situation will not occur for more than one day) =0; Several days (1-3 days for this condition) =1 point; More than half of the days (about 4 days in this state) =2 points; Almost every day (there are 5-7 days of such cases) =3 points. Therefore, the higher the score of PHQ-9, the more serious the depression tendency of the student. In addition, according to Bourdieu's cultural capital theory, the questionnaire related to family cultural capital is used, and the problem options are quantified. Taking 1 as the starting value, the more favorable the conditions for optimizing family cultural capital are, the higher the value is. Therefore, it can be seen that the higher the score is, the better the family cultural capital is.

The questionnaire mainly includes 29 questions. In order to make the data analysis more convenient and facilitate the interpretation of the results, this study quantifies the questions and uses exploratory factor analysis. Two methods are mainly used. First, all questions of the same dimension are averaged, that is, multiple questions are converted into a variable. Secondly, the method of factor extraction is principal component analysis, and the method of factor rotation is skew rotation method. Multiple problems are integrated into a scoring variable by factor analysis.

4.2 Research object

This research adopts the method of random sampling, and carries out a questionnaire survey with the undergraduates of five universities (The five universities include East China Jiaotong University, Jiangxi University of Finance and economics, Jiangxi Normal University, Nanchang University and Jiangxi Agricultural University) enrolled from 2016 to 2020 as the survey objects. In this survey, 1150 questionnaires were distributed and 1094 questionnaires were recovered, of which 1089 were valid. The validity date of the questionnaires reached 99.5%. The questionnaires were distributed mainly through two ways: paper version; Use the questionnaire star website to build a questionnaire link and distribute the questionnaire through various channels on the Internet (Data source: questionnaire star website, https://www.wjx.cn/.)

4.3 Research model

Using propensity score matching analysis to verify the influence mechanism of family cultural capital on College Students' depressive tendencies. Taking the depression tendency of college students as the explanatory variable, the educational level of parents, family cultural habits, family cultural expectations and control variables were introduced into the model.

In order to test the relationship between the education level of a parent and the depression tendency of college students, the following OLS regression model is adopted:

$$DEPRESS_i = \delta_0 + \delta_1 EDULEVEL_i + \delta_2 Controls_i + \varepsilon_i \quad (1)$$

In the above model, DEPRESSi refers to the depressive tendency of student i. The higher the score, the more serious the depressive tendency of the student is. EDULEVELi indicates the educational level of the parents of college student i. The higher the value, the higher the educational level of the parents; Controlsi represents the characteristic variables of college students as the control variables of the model, such as gender, grade, residential area, family registered residence/address, discipline category, etc., as shown in Table 1. In the process of hypothesis verification, we focus on the coefficient of EDULEVELi δ1, if the coefficient is positive and significant, it indicates that there is a significant positive correlation between parents' education and college students' depressive tendencies, which positively promotes the possibility of College Students' forming depressive tendencies; If the coefficient value of this value is negative and significant, it indicates that the education level of parents has a significant negative impact on the depression tendency of college students, that is, the higher the education level of parents, the probability that college students will suffer from the negative impact of depression tendency can be alleviated.

In order to test the influence of family culture and habits on depression tendency of college students in hypothesis 2, we adopt the following regression equation:

$$DEPRESS_i = \delta_0 + \delta_1 HABIT_i + \delta_2 Controls_i + \varepsilon_i \quad (2)$$

In the above model, DEPRESSi refers to the depressive tendency of student i. The higher the score, the more serious the depressive tendency of the student is; HABITi refers to family cultural habits. The higher the value, the better the cultural habits of the family tend to be; Controlsi, as the control variable of this model, is the same as the previous model. In the regression test, we focus on the coefficient of explanatory variable δ1, when the result value is greater than 0 and significant, it indicates that there is a significant positive correlation between family cultural habits and college students' depressive tendencies, that is, good family cultural habits will promote the formation of College Students' depressive tendencies; If the result value is significantly less than 0, it can be seen that there is a negative correlation between family cultural habits and college students' depressive tendencies, that is, good family cultural habits are conducive to reducing the probability of College Students' depressive tendencies.

In order to test the influence of three hypotheses on the depression tendency of college students, we adopt the following regression equation:

$$DEPRESS_i \square \square_0 \square \square_1 EDUEXPECT_i \square \square_2 Controls_i \square \square$$

In the above model, DEPRESSi refers to the depressive tendency of student i. The higher the score, the more seriou depressi s the depressive tendency of the student is; EDUEXPECTi indicates the family's cultural expectation. The higher the value, the higher the family's cultural expectation for their children; Controlsi, as the control variable of the model, is the same as the above model (1). In the regression test, we focus on the coefficient of explanatory variable δ1, when the result value is greater than 0 and significant, it indicates that there is a significant positive correlation between family culture expectation and college students' depressive tendencies, that is, the higher family culture expectation will promote the formation of College Students' depressive tendencies; If the result value is significantly less than 0, it can be seen that the family culture expectation is negatively correlated with the depression tendency of college students. That is, the higher the family culture expectation is, the better the depression tendency of college students can be inhibited.

In order to test the influence of family cultural capital on depression tendency of college students, we adopt the following regression equation:

$$DEPRESS_i \square \square_0 \square \square_1 FCCAPITAL_i \square \square_3 Controls_i \quad (3)$$
$$\square \square$$

In the above model, depress DEPRESSi refers to the depressive tendency of student i. The higher the score, the more serious the depressive tendency of the student is; FCCAPITAL refers to the family cultural capital of student i. The higher the value of this explanatory variable, the better the family cultural capital of the student is; Controlsi, as the control variable of the model, is the same as the above model (1). In the process of hypothesis verification, we focus on the coefficient value of the explanatory variable FCCAPITAL δ1. When the value is positive and significant, it indicates that there is a positive correlation between family cultural capital and depression tendency, that is, the probability that family cultural capital promotes college students to have depression tendency; When the negative value is significant, it indicates that the family cultural capital is negatively correlated with the depression tendency of college students, that is, the higher the family cultural capital is, the less likely the college students are to suffer from the negative emotion erosion of depression tendency.

Proceedings ISSN 2617-8028
8th International Conference on Banking, Insurance & Business Management – CBIBM 2023

4.4 Descriptive statistics and correlation analysis results

The descriptive statistical results of the main variables are shown in Table 2. From the results of Table 2, the variables are basically within the normal range and normally distributed. The mean and standard deviation of College Students' depressive tendencies is 0.6 and 0.634 respectively, but the median value is 0.333, which means that nearly half of college students have depressive tendencies, and more of them have serious depressive tendencies. It can be seen that among many college students, the impact of their mental health on life and learning can not be underestimated; The average educational level of parents is 2.49, and the standard deviation is 1.691. It can be seen that the educational level of parents is low on the whole; The average value of family cultural habits is 2.531, and the standard deviation is 0.647. It can be seen that with the popularization of education, families' attention to children's education is gradually increasing, and family cultural habits are also constantly improving; The average value and standard deviation of family cultural expectation are 5.632 and 0.976 respectively. It can be seen that the score of family expectation for children's education is generally high, which is consistent with the above analysis of family cultural expectation, indicating that parents now pay more attention to their children's educational achievements, and the maximum threshold of expectation for their children's education level is also gradually rising.

Next, we explored the relationship between family cultural capital and depression tendency of college students through correlation analysis. The results are listed in Table 3. The table takes the diagonal value 1 as the dividing line, the lower left triangle is the pearson correlation coefficient result, and the upper right triangle is the spearman correlation coefficient value. It can be seen from the table that parents' education level (EDULEVEL), family cultural habits (HABIT), family cultural expectations (EDUEXPECTi) are negatively correlated with college students' depressive tendencies (DEPRESSMEAN) at the statistical level of 1%, indicating that higher parents' education level, good family cultural habits and higher family cultural expectations are more helpful to inhibit college students' depressive tendencies. The results of correlation coefficient preliminaries proved the relationship between family cultural capital and depression tendency of college students from three dimensions. The better the family cultural capital, the lower the possibility of depression tendency of college students. However, this is only the result of correlation coefficient, which is only preliminary evidence. More accurate results need to be tested by regression analysis. In addition, the coefficient values of other control variables are within a reasonable range, and there is no potential multicollinearity.

Table 1 variable definition table

Variable symbol	Variable name	Variable definition
DEPRESS	Depressive tendencies	Take the average value according to the score of each problem in phq9 Depression Scale
EDULEVEL	Education level of parents	It is divided into junior high school and below, senior high school, technical secondary school, college, undergraduate, master and doctor, and the value is 1-7 in turn
HABIT	Family cultural habits	For questions 19-29 in the questionnaire, the assignment of the subject starts from 1. The more favorable the condition, the higher the assignment, and then take the average value
EDUEXPECT	Family Culture Expectation	It is divided into junior high school and below, senior high school, technical secondary school, college, undergraduate, master and doctor, and the value is 1-7 in turn
FCCAPITAL	Family cultural capital	Total parents' education level, family cultural habits and family cultural expectations
GENDER	Gender	Dummy variable, gender is female, value is 1, otherwise it is 0

GRADE	Grade	Dummy variables, from the first to the third, take values of 1, 2 and 3, and the fourth and other values take values of 4
AGE	Age	Dummy variable, the value of 17-20 years old is 1, and the value of ≥ 21 years old is 0
LIVPLACE	Residential area	Virtual variable, 1 if the place of residence belongs to the East, and 0 for others
CHARACTER	Character	Dummy variable, 0 for introversion and 1 for extroversion
DOMICILE	Registered residence	Dummy variable: 0 for registered residence in rural areas and 1 for cities
SUBJECT	Subject category	Dummy variable, 0 for liberal arts and 1 for Science

Table 2 Descriptive Statistics

variable	**N**	**mean**	**sd**	**min**	**p50**	**max**
DEPRESS	1089	0.6	0.634	0	0.333	3
EDULEVEL	1089	2.49	1.691	1	2	7
HABIT	1089	2.531	0.647	0	2.545	4.091
EDUEXPECT	1089	5.632	0.976	1	6	7
FCCAPITAL	1089	10.653	2.439	2	10.182	17.909
GENDER	1089	0.616	0.487	0	1	1
GRADE	1089	2.896	0.745	1	3	4
AGE	1089	0.612	0.488	0	1	1
LIVPLACE	1089	0.52	0.5	0	1	1
CHARACTER	1089	0.424	0.494	0	0	1

DOMICILE	1089	0.459	0.499	0	0	1
SUBJECT	1089	0.52	0.5	0	1	1

Table 3 Correlation Analysis

	DEPRESSMEAN	EDULEVEL	HABIT	EDUEXPECT	FCCAPITAL	GENDER
DEPRESSMEAN	1.000	-0.234***	-0.254***	-0.112***	-0.290***	0.099**
EDULEVEL	-0.143***	1.000	0.412***	0.256***	0.861***	-0.049
HABIT	-0.229***	0.423***	1.000	0.198***	0.639***	0.052
EDUEXPECT	-0.209***	0.160***	0.209***	1.000	0.576***	0.005
FCCAPITAL	-0.244***	0.870***	0.642***	0.567***	1.000	-0.018
GENDER	0.040	-0.075*	0.048	0.039	-0.024	1.000
GRADE	0.039	0.059	0.021	0.073*	0.075*	-0.046
AGE	-0.098**	0.081**	0.153***	0.070*	0.125***	0.115***
LIVPLACE	-0.120***	0.011	0.091**	0.048	0.051	-0.078**
CHARACTER	-0.084**	0.152***	0.194***	0.094**	0.194***	0.085**
DOMICILE	-0.038	0.405***	0.330***	0.102***	0.409***	0.030
SUBJECT	0.040	0.124***	0.014	-0.029	0.078**	-0.260***
DEPRESSMEAN	0.049	-0.086**	-0.108***	-0.112***	-0.034	-0.010
EDULEVEL	0.042	0.095**	0.021	0.144***	0.410***	0.102***
HABIT	-0.024	0.133***	0.074*	0.200***	0.321***	0.000
EDUEXPECT	0.003	0.068*	0.020	0.107***	0.097**	0.010
FCCAPITAL	0.020	0.117***	0.045	0.186***	0.414***	0.060*
GENDER	-0.053	0.115***	-0.078**	0.085**	0.030	-0.260***
GRADE	1.000	-0.588***	-0.022	-0.052	0.057	0.127***
AGE	-0.556***	1.000	0.048	0.093**	0.122***	-0.004
LIVPLACE	-0.004	0.048	1.000	0.040	-0.018	0.062*

CHARACTER	-0.037	0.093**	0.040	1.000	0.126***	-0.008
DOMICILE	0.064*	0.122***	-0.018	0.126***	1.000	0.122***
SUBJECT	0.132***	-0.004	0.062*	-0.008	0.122***	1.000

Note: "* p<0.05 ** P<0.01 * * * p<0.001 ", pearson correlation coefficient in the lower left corner and spearman orrelation coefficient in the upper right corner.

4.5 Regression result analysis

The results are shown in Table 4. Table 1 shows the results of the influence of parents' education on the depression tendency of college students. From the results, it can be seen that, δ1 value is -0.053, and the T value is -4.26, indicating that there is a significant negative correlation at the level of 1%, that is, the higher the education level of parents can effectively inhibit the depression tendency of college students, and hypothesis 1 has been verified; Table 2 shows the regression results between family cultural habits and depression tendency of college students. The correlation value is -0.214, t value is -6.84, and is negatively correlated at the 1% statistical level, indicating that the better the family cultural habits are, the better the depression tendency of college students can be alleviated, which verifies hypothesis 2; Table 3 shows the effect of family culture expectation on the depression tendency of college students. The coefficient value is -0.125, and the T value is -6.45, which is significant at the statistical level of 1%. It can be seen that the higher the family culture expectation of college students can significantly reduce the possibility of breeding negative depression. Hypothesis 3 is true; Table 4 shows that the variables of parents' education level, family cultural habits and family cultural expectations are aggregated as independent variables, and the depression tendency is regressed as the dependent variable. The result coefficient is -0.066, and the T value is -7.80, which is significant at the level of 1%. This further proves the reliability of the results from the above three perspectives, and also directly verifies that excellent family cultural capital can reduce the depression tendency of college students. Therefore, it supports the overall conclusion of this paper.

In order to ensure the robustness and reliability of the conclusion, this paper also uses the other three methods to measure the independent variables and carry out regression analysis. Among them, the principal component analysis method is used to process explanatory variables, and the scores of multiple options of the depression tendency scale and family cultural habits are converted into a comprehensive index through an orthogonal transformation. The regression analysis is shown in Table 5. It can be seen that the results are consistent with the main analysis results and the absolute value of the correlation coefficient is higher.

It shows that family cultural capital can effectively and negatively affect the generation of depression tendency of college students, whether from a single dimension or from the whole. This conclusion coincides with the results of the main test, indicating that the results are robust. In addition, regression analysis was carried out on the samples after cluster treatment and 1% tailing treatment. It can be seen from the results in Table 6 and table 7 that the results are consistent with the results of the main test, which further verifies that the test results mentioned above are robust and reliable.

Table 4 average regression results of family cultural capital and depression tendency

	(1) ***DEPRESSMEAN***	(2) ***DEPRESSMEAN***	(3) ***DEPRESSMEAN***	(4) ***DEPRESSMEAN***
_cons	0.841^{***}	1.175^{***}	1.372^{***}	1.298^{***}
	(7.56)	(9.52)	(9.60)	(10.21)
EDULEVEL	-0.053^{***}			
	(-4.26)			
HABITMEAN		-0.214^{***}		
		(-6.84)		
EDUEXPECT			-0.125^{***}	
			(-6.45)	
FCCAPITAL				-0.066^{***}
				(-7.80)
GENDER	0.072^{*}	0.092^{**}	0.091^{**}	0.070^{*}
	(1.77)	(2.29)	(2.26)	(1.76)
GRADE	-0.014	-0.004	0.003	0.007
	(-0.46)	(-0.15)	(0.09)	(0.22)
AGE	-0.122^{**}	-0.092^{*}	-0.102^{**}	-0.087^{*}

	(-2.55)	(-1.94)	(-2.13)	(-1.84)
LIVPLACE	-0.142***	-0.118***	-0.131***	-0.129***
	(-3.74)	(-3.14)	(-3.49)	(-3.46)
CHARACTER	-0.073*	-0.053	-0.075*	-0.046
	(-1.89)	(-1.38)	(-1.95)	(-1.21)
DOMICILE	0.032	0.047	-0.016	0.085**
	(0.77)	(1.16)	(-0.42)	(2.06)
SUBJECT	0.098**	0.080**	0.075*	0.090**
	(2.46)	(2.03)	(1.91)	(2.30)
N	1089	1089	1089	1089
Adjusted R^2	0.044	0.069	0.064	0.080

Note: "* p<0.05 ** p<0.01 *** p<0.001"

Table 5 regression results of family cultural capital and depression tendency by principal component analysis

	(1)	(2)	(3)	(4)
	DEPRESS	***DEPRESS***	***DEPRESS***	***DEPRESS***
_cons	0.440*	-0.000	1.615***	1.084***
	(1.88)	(-0.00)	(5.38)	(4.36)
EDULEVEL	-0.105***			
	(-4.04)			
HABITMEAN		-0.547***		
		(-6.73)		
EDUEXPECT			-0.274***	
			(-6.72)	
FCCAPITAL				-0.142***
				(-7.66)
GENDER	0.119	0.130	0.157*	0.105
	(1.38)	(1.54)	(1.86)	(1.25)
GRADE	-0.008	0.030	0.030	0.040
	(-0.12)	(0.47)	(0.48)	(0.63)
AGE	-0.250**	-0.183*	-0.202**	-0.177*
	(-2.48)	(-1.82)	(-2.02)	(-1.78)
LIVPLACE	-0.305***	-0.256***	-0.281***	-0.280***
	(-3.82)	(-3.24)	(-3.57)	(-3.57)

CHARACTER	-0.143*	-0.098	-0.142*	-0.087
	(-1.75)	(-1.20)	(-1.77)	(-1.07)
DOMICILE	0.060	0.068	-0.034	0.165*
	(0.68)	(0.81)	(-0.41)	(1.91)
SUBJECT	0.221***	0.169**	0.174**	0.202**
	(2.64)	(2.04)	(2.10)	(2.46)
N	1089	1089	1089	1089
Adjusted R^2	0.043	0.067	0.067	0.078

Note: "* p<0.05 ** p<0.01 *** p<0.001"

Table 6 regression results of family cultural capital and depression tendency cluster treatment

	(1)	(2)	(3)	(4)
	DEPRESSMEAN	***DEPRESSMEAN***	***DEPRESSMEAN***	***DEPRESSMEAN***
_cons	0.841***	1.175***	1.372***	1.298***
	(8.04)	(10.15)	(7.78)	(9.82)
EDULEVEL	-0.053***			
	(-3.32)			
HABITMEAN		-0.214***		

		(-7.46)		
EDUEXPECT			-0.125***	
			(-4.11)	
FCCAPITAL				-0.066***
				(-5.55)
GENDER	0.072*	0.092**	0.091**	0.070*
	(1.73)	(2.26)	(2.23)	(1.74)
GRADE	-0.014	-0.004	0.003	0.007
	(-0.51)	(-0.16)	(0.10)	(0.25)
AGE	-0.122**	-0.092**	-0.102**	-0.087*
	(-2.55)	(-2.00)	(-2.19)	(-1.83)
LIVPLACE	-0.142***	-0.118***	-0.131***	-0.129***
	(-3.73)	(-3.12)	(-3.47)	(-3.40)
CHARACTER	-0.073*	-0.053	-0.075*	-0.046
	(-1.86)	(-1.37)	(-1.94)	(-1.20)
DOMICILE	0.032	0.047	-0.016	0.085**
	(0.76)	(1.18)	(-0.43)	(1.98)
SUBJECT	0.098**	0.080**	0.075**	0.090**
	(2.48)	(2.06)	(1.98)	(2.34)
N	1089	1089	1089	1089
Adjusted R^2	0.044	0.069	0.064	0.080

Note: "* p<0.05 ** p<0.01 *** p<0.001"

Table 7 regression results of 1% winsorize treatment between family cultural capital and depression tendency

	(1) DEPRESSMEAN	(2) DEPRESSMEAN	(3) DEPRESSMEAN	(4) DEPRESSMEAN
_cons	0.835***	1.184***	1.378***	1.302***
	(7.27)	(9.28)	(9.39)	(9.95)
EDULEVEL	-0.053***			
	(-4.26)			
HABITMEAN		-0.214***		
		(-6.85)		
EDUEXPECT			-0.125***	
			(-6.46)	
FCCAPITAL				-0.066***
				(-7.81)
GENDER	0.072*	0.092**	0.091**	0.071*
	(1.77)	(2.29)	(2.27)	(1.77)
GRADE	-0.012	-0.007	0.001	0.005
	(-0.38)	(-0.23)	(0.02)	(0.17)
AGE	-0.121**	-0.095**	-0.103**	-0.089*
	(-2.48)	(-1.97)	(-2.14)	(-1.84)
LIVPLACE	-0.142***	-0.118***	-0.131***	-0.128***
	(-3.75)	(-3.14)	(-3.49)	(-3.45)
CHARACTER	-0.073*	-0.053	-0.075*	-0.046
	(-1.89)	(-1.38)	(-1.95)	(-1.21)
DOMICILE	0.032	0.047	-0.016	0.085**

	(0.76)	(1.17)	(-0.42)	(2.06)
SUBJECT	0.098^{**}	0.080^{**}	0.076^{*}	0.090^{**}
	(2.45)	(2.04)	(1.92)	(2.31)
N	1089	1089	1089	1089
Adjusted R^2	0.044	0.069	0.064	0.080

Note: "* p<0.05 ** p<0.01 *** p<0.001"

5 Conclusion and Enlightenment

College students with high incidence of depression have always been the focus of attention of the ministry of education and the academic community. The academic community generally believes that their family factors have a significant impact on their children's depressive tendencies(Tani et al., 2018; Yao et al., 2022; Gil and Kim, 2022; Slater et al., 2022). Many studies have shown that the parents' education level and explicit cultural capital have a negative impact on their children's depressive tendencies, but there are few studies on the "cultural habits" and "cultural expectations" of the implicit cultural capital in the family. Using the methods of literature research, questionnaire survey and statistical analysis, this paper not only discusses the impact of institutionalized family cultural capital - parents' education level on College Students' depressive tendencies, but also explores the impact of specific family cultural capital - "habit" and "expectation" on College Students' depressive tendencies, in order to provide some enlightenment on family capital related to college students' mental health education.

The results show that: (1) the higher the education level of College Students' parents, the more attention they can give to their children, increase the communication with their children in study and life, improve the intimacy between parents and children, timely understand their children's psychological state, promote their sense of security and trust, help cultivate their children's self-esteem and self-confidence (Li et al., 2020), reduce the probability of breeding their own negative emotions, and promote the negative impact on depression; (2) Family cultural habits are transmitted from parents' behavior to children in the growth process of college students, promoting the cultivation of College Students' personality and behavior characteristics, improving their self initiative (Raudenská and Bašná, 2021), so that college students can maintain good habits and learning status in both learning and life on campus, enhance their sense of self utility, and negatively guide their depression tendency; (3) Reasonable family culture expectation can improve parents' understanding of the importance of family cultural capital, positively affect the investment of family cultural capital and provide spiritual support to children, which are conducive to cultivating college students' positive mentality and interpersonal skills, so as to negatively predict depression. At this time, improving the attention to the psychological impact of children in the process of education is conducive to creating a better environment for the healthy growth of children.

First of all, the impact of family cultural capital on College Students' mental health is subtle. Parents should pay more attention to the conditions of family cultural capital at the early stage of their children's training, and try their best to lay a good tone for their children's mental health growth. The education level of parents is a hard condition in the family cultural capital, and it is not difficult to improve their education level in the social environment where the existing learning opportunities are everywhere. Therefore, parents can create favorable conditions for their children's mental health growth through continuous self-improvement. If the education level can not occupy a significant advantage, but if parents can pay attention to the promoting effect of "habits" and "expectations" in the family cultural capital on the mental health growth of college students, and by maintaining a reasonable expectation threshold and consciously guiding their children to form good habits, they can still have a positive impact on the healthy psychological construction of their children. Therefore, in the construction and accumulation of family cultural capital, both parents' education level and family cultural habits or expectations can promote children's mental health growth from the two levels of educational methods and family atmosphere. In terms of education methods: family education for children should not only pay attention to children's physical health and intellectual training, but also pay attention to the education of children's psychological construction. They should not only speak but also set an example, actively adopt democratic education methods, and give children due care, respect, understanding, trust, love but not get used to, and be strict but not harsh. Learning habits - punctuality, politeness, tidiness, reading, writing, etc. create a high-quality life and learning atmosphere.

However, in addition to the family, the school is also an important place for college students' life and learning. As the promoter of social development, the government is the environment for college students' growth. Both of them can not ignores.

First of all, as an important place for college students' activities, colleges and universities plays an indispensable role in promoting mental health growth of vulnerable groups who lack family cultural capital. Compared with the dominant group of college students who have sufficient family cultural capital, the vulnerable group of college students who have less family cultural capital is more dependent on colleges and universities, and they are more significantly affected by the campus environment. Studies have shown that encouragement, care and interaction between teachers and students also have a great influence on students (González and Ayuga, 2021; Raudenská et al., 2022). In many school tests, in order to appear "gregarious", some college students will deliberately hide their true state when they show signs of depression. Therefore, in addition to setting up psychological counseling rooms and offering psychological counseling courses in schools, colleges and universities should also pay more attention to the mental health of groups lacking family cultural capital, provide counseling for their concept of excluding psychological counseling, and provide some supply policies to individuals who are relatively lacking to help them overcome the psychological obstacles caused by the lack of family cultural capital and reduce the pressure brought by the school environment, Mobilize their enthusiasm for study and life, stimulate their positive and sunny mood, and alleviate their depression tendency.

Finally, the progress of the general social situation can not be separated from the promotion of the government. In the current situation of widespread depression, the public's cognition of depression is still not objective and specific. Sometimes inadvertent words or behaviors are likely to push patients with depressive tendencies to the marsh of depression, or push patients with depression to a deeper quagmire. At this time, the government should hold up a protective umbrella for them, increase publicity in the society, improve the correct understanding of depression among the masses, urge them to face up to depression patients, give them some social care, and reduce the influence of depression on their life, work or study. In addition, it is suggested that the government should increase investment in psychological construction, encourage medical universities to set up psychological majors, train more relevant medical talents, build psychological research teams, deepen and speed up the understanding of depression and the pace of treatment technology, and reduce the erosion of depression on the public.

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Analysis of the new audit report's effects on Chinese corporate risk-taking

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Abstract

Enterprise risk-taking is crucial to enhancing its own value. China has also accelerated the implementation of the new audit requirements while maintaining pace with the rest of the world. This study examines the disclosure of significant audit problems and its effects on the level of risk-taking of listed businesses by starting with the implementation of the new audit standards. The empirical findings demonstrate that there is a significant positive correlation between the exposure to critical audit matters and the degree of enterprise risk-taking, which results in the enterprises choosing projects with high expected income when making investment and financing decisions following the implementation of the new audit reporting standards; And the positive relationship of the enterprises audited by "non-top ten" firms is more obvious; Additionally, the report will contain more data and have higher-quality information if more significant audit problems are disclosed. the more effectively it can encourage risk-taking inside the business; Further investigation will likely demonstrate that by encouraging businesses to take risks, their value grows as a result of the exposure of important audit problems. This study has aided in completing the pertinent literature on the financial effects of important audit issues and also serves as a theoretical guide for future firm value development.

Introduction

The audit report is an essential means of information communication between auditors and users. However, the traditional audit report can only give standardized audit opinions such as "qualified" and "unqualified", which is challenging to meet the needs of information users to understand the audit process and the risks of the auditee [1,2]. Given the urgent needs of information users for the audit process and the risks of auditees, international organizations have gradually updated the applicable standards, forcing businesses to improve audit communication quality, increase disclosure and information content in audit reports, and raise audit process transparency[3] . China's new audit report was released by the Ministry of Finance in December 2016. The revised requirements went into effect for A+H-share corporations and other listed companies on January 1st, 2017 and 2018, respectively. The main goals of this reform are to expand the quantity of information in the audit report, add crucial audit items, and enhance the accessibility of the statements. As we move into the new audit age, academic study on the new audit report is becoming more and more successful. Liao et al.[4] studied its impact on stock investors, Ria et al.[5] studied it from the perspective of creditors, and the audit responsibility, audit quality[6,7] and corporate earnings [8] are also involved; at the same time, we can find that the existing research ignores the effect of the new audit report on an essential internal factor of enterprise risk-taking. As the mainstay of the social economy, enterprises' risk-taking level will directly affect their value and productivity, and even the economic development of the whole country[9]. In order to examine the impact of the new audit reports' performance from the standpoint of corporate risk-taking, this article uses the audit reports of businesses that were audited both before and after the implementation of the new audit reporting standards.

The risk-bearing of an enterprise refers to the amount of risk or cost that the company is willing to bear in order to obtain high profits[10]. Ensen[11] pointed out that with the separation of company ownership and control, the interests of firms are not always aligned with those of managers. Managers intervene in the company's investment based on maximizing personal interests, such as investing in projects with a net current worth less than zero or abandoning projects with a net present value greater than zero, enterprise Empire behavior, resulting in inefficient investment. Currently, low risk also means low income. Nevertheless, some research indicates that the greater the production efficiency, the greater the economic growth advantage in nations and regions with a higher level of risk-taking[12]; in addition, in the current period of economic reform, it is more and more critical for China to optimize the economic structure through innovation, take this means to maintain sustained and high-quality economic development, and improve the level of risk-taking of enterprises. Because of this, how to improve the risk tolerance of enterprises has always been a concern of theoretical and practical circles.

First, the new audit report may guide investors to pay attention to more critical information in the annual report, such as high-risk items in the financial statements[13]. Compared with company information, market information and industry information are easier to get investors' attention. In this way, the new audit report can guide investors to allocate their limited attention more reasonably, and the proportion of their attention to company information will be relatively increased. Second, important audit issues show how open management is to sharing information with auditors, which influences how independent auditors are seen to be as well as how honest management is seen to be[14]; moreover, the significant audit matters reveal the auditor's professional judgment and audit response strategies, which influence how investors perceive the auditor's legal liability[15]; to summarize, the adoption of the new audit report raises the level of corporate risk-taking, enables enterprise information consumers better apply company-level information, and improves the information content of the audit report. However, on the other hand, auditors may be subject to the content templating of key audit matters disclosed by management and governance or due to audit responsibility considerations; In addition, investors can lack the necessary knowledge or comprehension of the audit techniques indicated in the new audit report. Due to their lack of clear understanding of professional terms and audit procedures, the information content is reduced. Therefore, it is necessary to conduct empirical studies to determine the relationship between the application of the new audit report and its new content and corporate risk-taking.

This paper takes the new audit report as the main body, based on the double-difference model, through the perspective of enterprise risk-taking, to test whether there is a connection between the new audit report and enterprise risk-taking and the specific relationship. This paper limits the research period to 2015 and 2016. The treatment group is made up of the (A+H) shares that played a leading role in putting the new auditing standards to use by disclosing important audit concerns. The A shares that have not yet implemented the measures are selected as the control group. The findings demonstrate that the new audit report's adoption significantly affects the sample companies' risk appetite, and that this beneficial effect is especially pronounced in the audit of "non-top ten" enterprises. It is discovered through the intermediary inspection mechanism that the new audit report's deployment boosts enterprise information disclosure and encourages the improvement of enterprise risk-taking level by encouraging the decrease of information asymmetry; In the economic consequence test, it is pointed out that key audit matters promote the improvement of enterprise risk-taking level and improve enterprise value; additional research demonstrates that the effect of encouraging enterprise risk-taking improves with the number of important audit items disclosed in the audit report.

The following are the paper's contributions: First, it improves the pertinent research on important audit topics. This paper examines the micro-market response to the new key audit matters from the standpoint of enterprise risk-taking and empirically demonstrates the gain effect of the disclosure of key audit matters due to the increment of information. It also responds to Defond and Zhang's[16] call for understanding the new audit reform and key audit matters and their value. Second, deepen and expand research related to enterprise risk-taking. Most of the existing literatures analyze the problem of enterprise risk-taking from the perspective of ownership structure, manager characteristics, corporate governance mechanism, and so on. This study methodically explains the beneficial effect of the disclosure of key events on enterprise risk-taking based on the significant reform of the new audit report. It then provides a new idea for understanding the changes in the level of enterprise risk-taking. Third, strengthen the application of the new audit report in enterprise activities. This article investigates the various effects of different business sizes on enterprise risk-taking, starting from the unique content of significant audit problems, which provides some insight to encourage enterprise risk-taking.

Materials and Methods

1. Journals Reviewed

Around the research topic of this paper, the closely related literature mainly includes two categories: the first category is to study the influencing factors of enterprise risk-taking level; studying the financial effects of the new audit report falls under the second category.

Most current studies examine the elements that influence business risk-taking from the perspectives of internal corporate governance and the external environment in the first category of literature. The study of ownership structure, the nature of property rights, management incentives, executive traits, and other aspects of corporate internal governance. In terms of ownership structure and property right nature, Lewellyn and Muller Kahle[17] found that when the ownership structure and the decision-making power of the management are decentralized, the decision-making results of enterprises tend to be reconciled and compromised by the decision-making opinions of different managers, so they often make more conservative decisions and reduce the level of risk-taking. In terms of management incentives, the model built by Devers et al.[18] decomposes the impact of equity incentives, and believes that various incentives with equity compensation as the core have different effects on enterprise risks. Overall, restricted stock options and short-term incentives will lower management's risk commitment, whereas remuneration based on share presentation rights will raise it. Sihvonen et al.[19] conducted study on executive traits and found that female CEOs and CFOs are less risk-averse than their male counterparts. Schoar and Zuo[20] believe that the macroeconomic environment of managers at the time of their first entry has an imprinting effect, which will potentially and permanently affect their career planning and risk propensity. The experience of an economic crisis will make their decision-making choices conservative. Ahmed et al. [21] believe that executives and directors who have led the bank through the crisis may have unique abilities to recognize risks and identify warning signals as soon as possible. From the perspective of the impact of the external environment of enterprises, the research is roughly from the perspective of the macroeconomic environment, institutional constraints, and cultural constraints. As a basic component of the external environment, the macroeconomic environment is the influencing factor that researchers pay most attention to. The paper of Mclean and Zhao[22] provides evidence for the relationship between the macroeconomic environment and the risk-taking level of micro individuals. They believe that in the period of economic prosperity, enterprises can expand production and increase income because they can more easily obtain the support of external funds and are generally at a relatively high level of investment; However, when enterprises are in the period of economic recession, the cost of obtaining external capital becomes higher, and enterprises must adopt conservative investment strategies to reduce the level of enterprise risk-taking. In the research on institutional constraints, the current research is roughly divided into the impact on investor protection, taxation, law, and other related systems. John et al.[12] believe that a market or country with better protection for investors can inhibit the management from acquiring personal interests, thereby increasing the investment efficiency of enterprises, and improving the level of enterprise risk-taking. In addition to institutional constraints, unrelated external supervision mechanisms will also significantly improve the level of enterprise risk-taking. Connelly et al.[23] believed that external supervision such as institutional investors and analysts played a role in promoting enterprise risk-taking. Langenmayr and Lester[24] studied the role of the corporate tax system in promoting venture enterprise investment and believed that because of the loss offset tax regulation, which transferred a portion of the investment risk to the government, the risk-taking of businesses was positively correlated with the time of tax loss period and the government could change the risk-bearing level of enterprises by adjusting the rule. The research of Armstrong et al.[25] shows that the income tax of management will affect their decision on enterprise venture capital, and believes that senior executives' company risk-taking and personal tax rates are positively correlated, with the latter relationship being stronger in businesses with higher investment opportunities per unit of risk-return. Some researchers also discussed the impact of law on enterprise risk-taking. In the study of cultural constraints, some scholars have discussed the impact of informal systems such as culture, religion, and social trust. Li et al.[26] demonstrated the influence of national culture on business risk-taking and that culture influences business risk-taking via influencing management choices and the formal state structure. Xiao's[27] research found that the performance volatility of Chinese listed companies is more stable, the more traditional the Buddhist culture is. The Buddhist traditional culture's negative impact on the erratic functioning of the firm becomes increasingly apparent as it matures. Li and Cai [28] contend that firms with headquarters in areas with strong religious convictions exhibit higher levels of risk-taking and that religion, as a system of societal standards, aids in reducing managers' pursuit of privacy.

The implementation impact of the new audit report is a second category of literature that is directly related to the topic of this essay. Lennox[29] used the UK's 2013 audit report as a representative sample to examine how the capital market will be impacted by important audit-related issues. The results showed that investors did not respond effectively to this, indicating that they did not provide useful details. It may be impossible to produce incremental information, because the majority of the risk information is disclosed through the announcement released prior to the annual report, at which point investors are already aware of the risk. According to Inês and Morais' research[30], the auditee's operational circumstances and business complexity can be accurately reflected by the volume of critical audit concerns that are disclosed. Kelton[31] found through research that key audit matters are important and unique matters for auditors to communicate with the management through their professional judgment on the high risks of the company. The higher the key audit matters are, the more investors may question the company's profitability, and investors may reduce or even refuse to reinvest. For auditors, pertinent research have shown that the disclosure of important audit problems will be crucial in identifying their obligations in the event of an audit failure[32], which may turn into a "Disclaimer" to lessen auditors' obligations[33,34]. As a result, the quality of audit reports may be indirectly improved by the disclosure of key audit matters[35]. Additionally, the more key audit matters that are disclosed, the more important the auditor's role in overseeing the audit work is, and the more likely it is that the auditor will feel more accountable. Cade and Hodge[36] conducted empirical analysis and found from the linear relationship of relevant data that the estimation of major accounting events will enable the management to communicate more with the auditors of accounting firms and increase information communication excitement. Key audit matters were determined by Brown et al.[37], Kachelmeier et al.[38] and others to not raise the lawsuits that firms encountered or would face, but rather to decrease their obligations to auditors. Phillips[39] also conducted research in this regard and believed that key audit matters can reduce their legal liability risks to auditors.

To sum up, the disclosure of significant audit issues can strengthen the unique information in the audit report, enable users of the report to do more thorough and accurate analyses of the company's risks, and boost investor confidence. The new audit report's implementation also focuses on how the enterprise's risk-taking may be impacted by the change in audit report criteria. The literature study reveals that numerous academics have examined corporate risk-taking and important audit issues to various degrees, but it is unknown whether there is a close connection between the two. This article aims to investigate the effectiveness of critical audit matters disclosure and if it affects business risk-taking.

2. Theoretical Analysis and Research Hypothesis

According to the existing research, on the one hand, many academics hold that business risk-taking results from investments in high-risk projects with positive net present values (NPV), which show that businesses are making the most of their investment opportunities and contributing to value creation. Based on this point of view, the existing literature has investigated the impact of major shareholders' shareholding[40], salary incentives[41], and promotion incentives[42] on enterprise risk-taking from the perspective of corporate governance and management incentives, but on the other hand, some scholars have pointed out that a high level of risk-taking may lead to enterprise management crisis and financial risks (such as over-investment), which may damage the value of the enterprise. These documents demonstrate that the agency problem of businesses is a significant factor affecting the level of enterprise risk-taking and that management risk-taking based on different interest motives may have heterogeneous economic consequences. The research on enterprise risk-taking in the theoretical community has not yet developed a consistent view.

The disclosure of important audit matters strengthens the oversight influence of shareholders on management from the internal perspective of the business, or from the standpoint of the shareholders. The goal of management is different from that of shareholders. For managers, the benefits that managers can obtain in the company are only limited to their human labor benefits, and other additional benefits of the company have nothing to do with it. Therefore, when they manage the company, they usually only seek stability. "Stability" means low returns for the company, but shareholders are not satisfied with this. Shareholders want to choose some projects with relatively high risks to pursue high returns. Therefore, the conflict between the board of directors and the management is getting worse every day as a result of the objectives' discrepancy. In most cases, the board of directors lacks effective supervision over the management, and the degree of information asymmetry is very high, which gives the management a lot of self-interest space; that is, in terms of enterprise risk-taking, it is difficult for shareholders to form effective constraints on the management's risk aversion behavior. In addition, senior executives rarely receive stock incentives from companies, which causes a conflict between the management's goals and the company's long-term interests. Under the background of salary restriction, the management lacks the motivation to bear risks, making the enterprise's risk-bearing insufficient. The main goal of the new audit report is to boost the audit report's openness by include important audit items and their associated audit methods. This will close the information gap between shareholders and management. Shareholders have a clearer understanding of the company's management results during this period and improve the comprehensiveness and reliability of shareholders' access to the company's information, once some decisions made by the management will damage the interests of shareholders, shareholders can find out in time and take corresponding countermeasures. At this time, the shareholders' ability to supervise the management has been improved, which fundamentally makes the management must obey the company's goals and must take the maximization of enterprise value as the consideration standards to inhibit the risk aversion behavior of the management. As a result, the disclosure of important audit concerns can effectively lower the degree of information asymmetry[43-45], boost the governance layer's ability to supervise the management, and subsequently raise the enterprise's risk-taking level.

The disclosure of significant audit concerns lowers investor risks, boosts investor trust, and encourages the enterprise's external financing from the standpoint of external investors, or from the external aspect of the business. The higher the uncertainty of the external environment, the higher the degree of information asymmetry between listed companies and investors, the more likely it is to produce adverse selection[46]. That is, listed companies use information advantages to damage the interests of investors who are at an information disadvantage. Therefore, investors often require higher necessary rate of return to safeguard individual or collective interests by improving risk prediction in the investment process. Following the 2016 revision of the audit report, important financial and non-financial information of the enterprise will be published, which can predict risks, explain known risk factors and some emergencies, increase information transparency[47], and enhance the understanding of external investors on risks and the confidence of the enterprise in facing risks[48]. In addition, the improvement of the requirements of the audit standards has increased the requirements for certified public accountants. Auditors need to ask themselves with more cautious professional skepticism and higher professional ethics standards, improve their professional competence, and even make more use of expert work, and conduct a comprehensive review of the auditee by paying attention to a wider range of risk areas in the audit process and implementing stricter audit procedures. Disclose higher quality information for investors, reduce the difficulty of investors' evaluation of project returns, help investors better estimate future earnings at low cost, to reduce the threshold of investment in enterprises, create more abundant conditions for enterprises to carry out various financing and investment activities, and improve the level of risk-taking of enterprises. Therefore, the disclosure of important audit matters will contribute to raising the quality of the information in the report, improving investors' risk perception, boosting investor confidence, lowering the investment requirements for businesses, encouraging external financing of businesses, and ultimately raising the level of risk-taking by businesses. In conclusion, this paper advances the following presumptions:

H1: The new audit report's adoption and the exposure of important audit issues have increased the enterprise's willingness to take risks.

The requirement for the audit drives the disclosure of important audit matters. In light of audit requirements, there may be differences in the audit services provided by accounting firms of different sizes (the "top ten" and "non-top ten"), which will lead to different risk-taking levels of enterprises. First, compared with the non-top ten, the top ten have more vital professional competence. Large scale firms often invest more resources in staff training and industrial, professional audit[49], and have more professional audit techniques and more mature audit procedures. Therefore, the "top ten" have always adopted more professional audit techniques to reduce their audit risks in the face of risk items. Secondly, the "top ten" firms are more independent. On the one hand, the "top ten" firms pay more attention to reputation. Once the crisis starts, the firms' reputation will unavoidably suffer if they compromise with their clients and release poor audit reports; On the other hand, the "top ten" have stronger compensation ability. According to the "deep pocket" hypothesis[50], once the audit fails and causes losses to stakeholders, the "top ten" often suffer more compensation. Because of the above factors, we can know that the quality of information disclosed

by the "top ten" before the implementation of the new audit report is relatively high, and its degree of prudence has also been at a high level, so the supervision on the audited enterprises is relatively strong. The disclosed key audit concerns have little effect on the audited firms at this time because their capacity for risk-taking has reached a particular level. In contrast to the "non-top ten", the auditors were lax prior to the introduction of the new audit report, resulting in ineffective external oversight and risk avoidance on the part of the audited enterprise's management; After the implementation, the supervision on auditors will be enhanced, so as to improve the professional competence and independence of auditors, strengthen their supervision on the management of the audited enterprise, so that the management can better perform their duties and improve the risk-taking level of the enterprise for the overall interests of the company. To sum up, this paper proposes hypothesis 2:

H2: the implementation of the new audit report and the disclosure of key audit matters have a more obvious effect on promoting the enterprise risk-bearing of the "non-top ten" audit.

3. Research Design

3.1. Data and samples

This study chooses China's A+H-share and A-share listed businesses from 2015 to 2016 as the research object and utilizes the did model to explore the impact of important audit matters on enterprise risk-taking during the key audit matters' launch phase. On the basis of whether they disclosed important audit concerns, the initial samples were split into an experimental group and a control group. Further processing of the data is as follows: eliminate the financial and insurance companies; in order to avoid the interference of the missing samples to the verification results, the missing values of the samples are eliminated. Additionally, the pertinent financial data used in this study came from the CSMAR database, where essential information on particular traits like the quantity of important audit matters was manually sorted by going through each company's audit reports. There are 4315 valid observations in the final sample. Additionally, this paper winsorizes the maximum or minimum deviation values at both ends of all continuous variable data by 2% in order to lessen the interference of extreme values on the empirical results.

3.2. Modeling and defining variables

To determine whether there is a connection between corporate risk-taking and the disclosure of important audit problems, this paper uses the research of Krishnagopal et al.[51] for reference, and uses the double-difference model to verify hypothesis 1 of this paper:

$$\text{RISK}={}_0 + {}_1OT + {}_2A \times OT + otos + usty + \text{(1)}$$

In the above model, the RISK is expressed as enterprise risk-bearing, which is measured by the volatility of enterprise profitability in this paper; the POST is a virtual variable, it will be 1 if the event year is 2016, otherwise it will be 0; a dummy variable called KAM (key audit matters) groups listed organizations according to whether or not they disclose important audit matters. The experimental group's value is 1, while the control group's value is 0. This paper controls the company size (SIZE), return on net assets (ROE), asset-liability ratio (LEV), independent director ratio (INDIR), marketization index (MARKET), market to book ratio (MB), operating cash flow (CFO), income growth rate (GROWTH), systemic risk (BETA), DUAL, company age (AGE), and company value(TobinQ) in accordance with

Cravet and Muslu's research[52]. This paper also regulates the elements specific to the sector. For further definitions of the variables, see Table 1.

Table 1: Table of variable definitions.

Variable code	Variable name and definition
RISK	The volatility of business profitability is a gauge of enterprise risk-taking. In more detail, the rolling calculation of the standard deviation and extreme Deviation of the operating profit margin of total assets adjusted by the yearly industry average from year t-2 to year t+2 results in RISK1 and RISK2 being recorded, respectively.
POST	Following the introduction of the new auditing reporting standard policy, the virtual variable of the event year is 1, otherwise it is 0.
KAM	Key audit matters, dummy variables, KAM of the first A+H-share companies implementing the new standards is 1, otherwise it is 0
SIZE	The natural logarithm of a company's total assets determines its size.
ROE	The ratio of net profit to net assets is known as return on net assets.
LEV	The ratio of total assets to total liabilities at the conclusion of the period is known as the asset-liability ratio.
TobinQ	Company value
INDIR	The independent director ratio compares the number of independent directors to the total number of board members.
MARKET	Marketization index, using the corresponding figures in the report on marketization index by province in China (2018)
MB	The percentage of market value in book value at the conclusion of the term is the market value to book value ratio.
CFO	Operating cash flow, proportion of operating cash inflow in total assets
GROWTH	Income growth rate refers to the ratio of income growth to the total income of the previous year
BETA	Systematic risk, which is the beta value of the company's stock
DUAL	Virtual variable: 1 if the same individual serves as both the chairman and

general manager;	else, 0
AGE	The age of the company is the number since the company was listed
Industry	Industry fixed effect

Results and Discussion

1. Evaluative Analysis

1.1. Comparative analysis and descriptive statistics

The descriptive statistical findings for the key research variables are shown in Table 2.

The RISK1 mean and standard deviation of 0.027 and 0.029, and the RISK2 mean and standard deviation of 0.051 and 0.055 respectively, are essentially consistent with the literature at hand. In addition, the standard deviation is close to its corresponding mean value, revealing that the enterprise's risk-taking level is relatively stable. The KAM mean is equal to 0.06, indicating that approximately 60% of the samples belong to the treatment group.

Table 2: Descriptive statistics.

variable	N	mean	sd	min	p50	max
RISK1	4315	0.027	0.029	0	0.017	0.225
RISK2	4315	0.051	0.055	0	0.032	0.398
KAM	4315	0.06	0.238	0	0	1
SIZE	4315	22.315	1.267	19.706	22.169	26.465
ROE	4315	0.057	0.111	-0.4	0.061	0.321
LEV	4315	0.547	0.345	0.07	0.494	2.086
INDIR	4315	0.376	0.054	0.333	0.364	0.571
MARKET	4315	8.155	1.64	3.49	9.08	9.78
MB	4315	5.682	4.7	1.757	4.376	30.852
CFO	4315	0.053	0.089	-0.238	0.05	0.329
GROWTH	4315	0.21	0.6	-0.522	0.073	3.383
BETA	4315	1.198	0.179	0.631	1.227	1.597
DUAL	4315	0.252	0.431	0	0	1
AGE	4315	18.211	5.185	7	18	29

This study uses a sample mean test to determine whether there is a preliminary association between important audit issues and company risk-taking. Depending on whether the company has disclosed important audit problems, we divide the enterprise into two sub-samples. We next evaluate the levels of risk-taking in the two sub-samples to see if there is a discernible difference. As shown by the results in Table 3, the mean value of RISK1, the standard deviation of operating profit margin of total rolling assets of enterprises that have disclosed key audit matters, is 0.025; the mean value of extreme RISK2 is 0.042; and the mean value of RISK1, the standard deviation of operating profit margin of total rolling assets of enterprises that have not disclosed key audit matters is 0.022; At a threshold of 5%, the mean value difference is considerable. The primary hypothesis 1 of this research is preliminary verified by the significant disparities between the two groups.

Table 3: difference test.

Variables	control group	mean	Processing group	mean	Mean difference
RISK1	4133	0.022	182	0.025	-0.003**
RISK2	4133	0.042	182	0.048	-0.005**
SIZE	4133	22.267	182	23.731	-1.463***
ROE	4133	0.06	182	0.055	0.005
LEV	4133	0.537	182	0.607	-0.070***
INDIR	4133	0.375	182	0.384	-0.009***
MARKET	4133	8.128	182	8.75	-0.622***
MB	4133	5.451	182	4.974	0.478*
CFO	4133	0.054	182	0.059	-0.005
GROWTH	4133	0.204	182	0.128	0.076**
BETA	4133	1.208	182	1.117	0.091***
DUAL	4133	0.257	182	0.167	0.091***
AGE	4133	17.951	182	21.322	-3.371***

1.1. correlation analysiser explores the research hypothesis through correlation analysis. The key findings are shown in Table 4. The relationship between the enterprise risk-bearing indicators (RISK1 and RISK2) and the company size (SIZE), return on net assets (ROE), asset-liability ratio (LEV), marketization index (MARKET), operating cash flow (CFO), and income growth rate (GROWTH) is significantly negative at the level of 1 percent; it has a significant positive correlation with market value to book. This is evident from the correlation coefficient among the variables in the table. Since there is no significant multicollinearity issue between the variables in this study, the correlation coefficient between the two variablesis less than 0.6.

1 Table 4: correlation test of main variables.

2	RISK1	RISK2	SIZE	ROE	LEV	INDIR	MARKET	MB	CFO	GROWTH	BETA	DUAL	AGE
RISK1	1.000	0.999***	-0.193***	-0.140***	-0.071***	0.014	-0.051***	0.105***	-0.074***	-0.077***	-0.005	0.005	0.038**
RISK2	0.998***	1.000	-0.193***	-0.138***	-0.071***	0.015	-0.051***	0.104***	-0.072***	-0.076***	-0.006	0.005	0.038**
SIZE	-0.211***	-0.212***	1.000	0.172***	0.517***	-0.027	-0.052***	-0.344***	0.060***	0.061***	-0.138***	-0.139***	0.159***
ROE	-0.250***	-0.248***	0.124***	1.000	0.067***	-0.044**	0.174***	-0.040**	0.399***	0.371***	-0.145***	0.025	-0.027
LEV	-0.015	-0.014	0.429***	0.047**	1.000	-0.012	-0.057***	0.177***	-0.113***	0.205***	-0.011	-0.046**	0.156***
INDIR	0.017	0.017	-0.008	-0.031*	-0.018	1.000	0.003	0.037*	-0.021	-0.001	-0.033*	0.103***	-0.066***
MARKET	-0.072***	-0.074***	-0.030*	0.178***	-0.041**	0.013	1.000	0.013	0.061***	0.090***	0.047**	0.082***	-0.080***
MB	0.234***	0.235***	-0.314***	-0.193***	0.141***	0.041**	-0.032*	1.000	-0.105***	-0.013	0.005	0.050***	0.018
CFO	-0.050***	-0.049***	0.057***	0.330***	-0.059***	-0.018	0.037*	-0.112***	1.000	0.095***	-0.096***	0.000	-0.046**
GROWTH	0.042**	0.042**	0.044**	0.225***	0.410***	-0.000	0.035*	-0.019	0.060***	1.000	0.017	0.076***	-0.083***
BETA	-0.011	-0.013	-0.190***	-0.119***	-0.020	-0.019	0.033*	-0.004	-0.101***	-0.000	1.000	-0.010	0.013
DUAL	-0.004	-0.004	-0.138***	0.038*	-0.026	0.104***	0.092***	0.013	0.006	0.045**	0.002	1.000	-0.118***
AGE	0.065***	0.065***	0.124***	-0.034*	0.145***	-0.083***	-0.083***	0.097***	-0.044**	-0.003	-0.018	-0.126***	1.000

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1.3. Regression results of key audit items and enterprise risk-bearing

Table 5 summarizes the regression results of hypothesis 1 and hypothesis 2 above based on the test results of all samples from 2015 to 2016. The regression analysis of the association between the firms' risk-taking and the disclosure of significant audit matters yielded the portion of hypothesis 1 in the table. The hypothesis 1 in this paper is confirmed by the coefficient of multiplicative term (KAM_POST), which indicates that after the implementation of the new auditing standards, the disclosure of key audit matters can promote enterprise risk-taking. This coefficient is 0.010, which is significant at the level of 1 percent.

To determine how different firm sizes affect the enhancement of corporate risk-taking in significant audit problems, we divided the samples into two groups (non-top ten groups vs top ten groups) according to whether the "top ten" audit was conducted, and still conducted regression according to model (1). The part of hypothesis 2 in Table 5 is the regression result of the regulatory effect of transaction type. The result shows that only in the non-top ten samples, the coefficient of KAM_POST is positive and significant, stating that following the disclosure of important audit concerns, companies not audited by the top ten firms are more willing to improve their corporate risk-taking, while KAM_POST, the firm audited by the top ten firms, had a negative coefficient, which tends to weaken the risk-taking.

The results in Table 5 comprehensively show that the key audit matters section provides incremental information and improves the enterprise's risk-taking, and this positive correlation is more obvious in non-top ten firms.

Table 5: Regression results of key audit matters and enterprise risk-bearing.

	Hypothesis 1		Hypothesis 2			
	RISK1	RISK2	RISK1 (Non-top ten groups)	RISK1 (Top Ten groups)	RISK2 (Non-top ten groups)	RISK2 (Top Ten groups)
POST	0.005***	0.009***	0.004***	0.005***	0.008***	0.010***
	(8.63)	(8.69)	(4.92)	(6.93)	(4.93)	(7.00)
KAM	0.005**	0.010**	0.011**	0.005**	0.022**	0.010**
	(2.24)	(2.42)	(2.10)	(2.09)	(2.18)	(2.13)
KAM_POST	0.010***	0.014**	0.026**	-0.001	0.050**	-0.002
	(2.60)	(2.07)	(2.13)	(-0.28)	(2.13)	(-0.34)
SIZE	-0.006***	-0.011***	-0.005***	-0.006***	-0.010***	-0.011***
	(-9.12)	(-9.39)	(-5.28)	(-7.06)	(-5.30)	(-7.23)
ROE	-0.045***	-0.086***	-0.049***	-0.046***	-0.094***	-0.086***
	(-7.26)	(-7.46)	(-5.63)	(-5.65)	(-5.78)	(-5.67)
LEV	0.007***	0.014***	0.003	0.011***	0.005	0.021***
	(2.85)	(3.00)	(0.96)	(3.48)	(0.94)	(3.62)
INDIR	0.006	0.011	0.008	0.011	0.015	0.019
	(0.66)	(0.65)	(0.60)	(0.84)	(0.59)	(0.81)
MARKET	-0.000	-0.000	-0.000	-0.000	-0.001	-0.000
	(-0.49)	(-0.60)	(-0.85)	(-0.35)	(-0.91)	(-0.45)
MB	0.001***	0.002***	0.001***	0.001***	0.002***	0.002***
	(6.91)	(7.17)	(4.92)	(5.22)	(5.04)	(5.36)
CFO	0.004	0.011	0.010	0.003	0.018	0.006
	(0.58)	(0.79)	(1.05)	(0.27)	(1.08)	(0.31)
GROWTH	0.005***	0.010***	0.004***	0.005***	0.008***	0.009***
	(4.45)	(4.64)	(2.78)	(3.49)	(2.90)	(3.47)
BETA	-0.020***	-0.039***	-0.015***	-0.024***	-0.028***	-0.047***
	(-5.94)	(-6.11)	(-2.80)	(-5.83)	(-2.83)	(-5.88)

DUAL	-0.001	-0.001	-0.001	-0.001	-0.002	-0.001
	(-0.56)	(-0.71)	(-0.61)	(-0.35)	(-0.57)	(-0.36)
AGE	0.000**	0.000**	0.000	0.000	0.000*	0.000
	(2.28)	(2.29)	(1.64)	(1.14)	(1.65)	(1.18)
_cons	0.179***	0.342***	0.154***	0.187***	0.290***	0.356***
	(10.13)	(10.33)	(5.71)	(8.24)	(5.78)	(8.27)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
N	4315	4315	1655	2660	1655	2660
Adjusted R-squared	0.201	0.206	0.243	0.198	0.247	0.200

Note: the standard deviation of coefficients is in brackets, and all the standard deviations of regression coefficients are treated in the cluster at the company level, * * *, **, * respectively show that the regression coefficients are significant at the level of 1%, 5% and 10%, and the following tables are the same.

2. Intermediate Mechanism, Economic Consequence Test and Further Test

2.1. Intermediate mechanism test: information asymmetry

According to the assumption and inference above, the improvement of enterprise risk-taking through the disclosure of significant audit matters by reducing information asymmetry. Therefore, we directly test whether this mechanism is established. Referring to the research design of Kim and Zhang[53], we introduced the manipulation accrual (Cscore) as a measure of information asymmetry. The model is constructed as follows:

$$Cscore=\beta_0+\beta_1 POST+\beta_2 KAM+\beta_3 KAM\times POST+Controls+Industry+\varepsilon \quad (2)$$

The findings are shown in Table 6, and the coefficient of KAM POST is -0.02, which is significant at the 1% level, showing that the disclosure of important audit problems can lessen the degree of information asymmetry and boost corporate risk-taking.

Table 6: Analysis of intermediate mechanism: information asymmetry.

	(1)
	Cscore
POST	-0.00**
	(-2.57)
KAM	-0.01
	(-1.29)
KAM_POST	-0.02***
	(-2.66)
SIZE	0.00
	(0.02)
ROE	0.32***
	(26.70)
LEV	0.01***

(3.08)

INDIR 0.00

(0.10)

MARKET -0.00

(-0.18)

MB -0.00***

(-3.72)

CFO -0.70***

(-42.99)

GROWTH 0.01**

(2.19)

BETA -0.02***

(-3.82)

DUAL	0.00
	(0.93)
AGE	-0.00**
	(-2.00)
_cons	0.06**
	(2.15)
Industry	Yes
N	4007
Adjusted R-squared	0.67

2.2. Economic consequences: enterprise value

The improvement of an organization's economic value is the ultimate goal of implementing major audit matters. Therefore, it is worthwhile to investigate whether the CSRC's requirement that critical audit concerns be disclosed will help businesses.

According to the existing literature, the high level of risk-taking reflects a higher enthusiasm for innovation, which is conducive to enhancing the competitive advantage of enterprises, and the level of risk-taking of enterprises is positively related to the growth rate of assets and sales revenue, which shows that risk-taking can enhance the value of enterprises and promote the long-term development of enterprises. This study looks at the financial effects of disclosing important audit information from the standpoint of enterprise value.

Concerning the above analysis, this paper takes enterprise value as the explained variable to construct a double-difference model for further test:

$$\text{TobinQ} = \beta_0 + \beta_1 POST + \beta_2 KAM + \beta_3 KAM \times POST + \sum Controls + \sum Industry + \varepsilon \quad (3)$$

The key variables and control variables of this model are the same as those of the main test. For a detailed definition of each variable, refer to the previous variable definition table; Table 7 contains the findings of the regression analysis. The test findings for Table 7 illustrate if the primary audit issues can boost the enterprise's market value by enhancing risk-taking. The enterprise value and key audit matters have a 0.48 correlation coefficient that is positive at a 10% level, demonstrating that the key audit matters can increase enterprise value through increasing enterprise risk-taking capacity.

Table 7: Economic consequences: enterprise value.

	(1)
	TobinQ
POST	-0.26***
	(-2.63)

KAM 0.71**

(2.13)

KAM_POST 0.48*

(1.85)

SIZE -1.12***

(-16.55)

ROE 4.31***

(4.17)

LEV -1.32***

(-5.30)

INDIR 3.39***

(3.43)

MARKET -0.02

	(-0.51)
MB	0.27***
	(6.12)
CFO	0.04
	(0.04)
GROWTH	0.40***
	(3.33)
BETA	-1.59***
	(-4.69)
DUAL	0.43***
	(2.92)
AGE	-0.02**
	(-1.97)
_cons	27.50***
	(15.96)
Industry	Yes
N	4072
Adjusted R-squared	0.50

2.3. Further test: the impact of the difference in the number of specific projects **of key audit matters on enterprise risk-taking**

The impact of the number of significant audit concerns disclosed on enterprise risk-taking is shown by the regression results in Table 8. The coefficients of kAMnum1 are 0.121 and 0.010, respectively, which are significant at the levels of 10% and 5%, respectively, and show that the effect of encouraging enterprise risk-taking is improved by increasing the number of key audit matters disclosed in the audit report and by increasing the amount of information the auditor can convey through the report.

Table 8: Differences in the number of specific projects of key audit matters and enterprise risk-bearing.

	(1) RISK1	(2) RISK2
KAMnum1	0.121*	0.010**
	(1.90)	(2.20)
SIZE	-0.008	-0.002
	(-0.67)	(-0.93)
ROE	0.102	0.012
	(1.56)	(0.90)
LEV	-0.035	-0.002
	(-0.94)	(-0.18)
INDIR	0.094	0.021

	(0.55)	(0.39)
MARKET	-0.000	0.003*
	(-0.01)	(1.87)
MB	-0.000	-0.000
	(-0.15)	(-0.25)
CFO	-0.025	0.019
	(-0.16)	(0.34)
GROWTH	-0.011	0.000
	(-0.33)	(0.08)
BETA	0.024	0.000
	(0.37)	(0.02)
DUAL	0.003	-0.003
	(0.10)	(-0.63)
AGE	-0.002	-0.000
	(-0.92)	(-0.55)
_cons	-0.030*	-0.004
	(-1.80)	(-1.44)

Industry	Yes	Yes
N	80	80
Adjusted R-squared	0.116	0.239

3. Robustness Test

3.1. Propensity score matching (PSM) test

To ensure that additional unobserved factors aren't the reason for the study's findings, PSM matching is carried out on the samples of enterprises with the above control variables, and a new sample control group with key audit matters is obtained, so as to reduce the interference of other factors on the empirical results and their randomness. The results are shown in Table 9. It is written that there is a substantial positive association at the statistical level of 5% and that the coefficient values of key audit matters (KAM_POST) are 0.014 and 0.027. It is clear that putting important audit requirements into practice encourages businesses to take more risks. The finding is consistent with the prior conclusion after taking the issue of endogeneity into account, demonstrating the strength of this paper's conclusion.

Table 9: Propensity score matching (PSM) regression results.

	(1)	(2)
	RISK1	RISK2
POST	0.005*	0.009*
	(1.84)	(1.80)
KAM	0.005	0.009
	(1.64)	(1.60)
KAM_POST	0.014**	0.027**
	(2.59)	(2.58)
SIZE	-0.002	-0.003
	(-1.01)	(-0.98)
ROE	0.078***	0.147***
	(3.40)	(3.41)
LEV	-0.012	-0.024
	(-1.48)	(-1.53)
INDIR	-0.027	-0.050
	(-1.33)	(-1.33)
MARKET	0.000	0.001
	(0.45)	(0.44)
MB	0.001**	0.003**
	(2.18)	(2.22)

CFO	-0.017	-0.031
	(-0.86)	(-0.86)
GROWTH	0.003	0.006
	(1.24)	(1.35)
BETA	0.014*	0.026*
	(1.79)	(1.85)
DUAL	0.004	0.009
	(0.89)	(0.93)
AGE	0.001	0.001
	(1.40)	(1.49)
_cons	0.022	0.037
	(0.48)	(0.44)
Industry	Yes	Yes
N	364	364
Adjusted R-squared	0.178	0.180

3.2. Equilibrium trend assumption

The balanced trend hypothesis is the basis of the dual difference model. The balanced trend hypothesis is plausible if there is no substantial correlation between the disclosure of important audit problems and the enterprise's risk assumption prior to the implementation of the new audit report. Table 10 displays the results of using Model (1) to regress the three years prior to the adoption of the new audit report. The data in the table demonstrates that the findings are not statistically significant, proving the validity of the equilibrium trend assumption.

Table 10: Equilibrium trend assumption.

	(1) RISK1	(2) RISK2
POST2013_KAM	-0.001	0.003
	(-0.04)	(0.74)
POST2014_KAM	0.036	0.008
	(1.22)	(1.13)
POST2015_KAM	-0.022	-0.003
	(-0.99)	(-0.38)
SIZE	-0.006**	-0.001
	(-2.45)	(-0.97)
ROE	0.079	0.006
	(1.28)	(0.45)
LEV	-0.002*	0.001**
	(-1.87)	(2.23)
INDIR	0.059	0.019
	(1.15)	(1.37)
MARKET	0.007***	0.000
	(3.39)	(0.92)
MB	-0.000**	0.000
	(-2.05)	(0.41)
CFO	0.007	0.001
	(0.66)	(0.44)
GROWTH	0.000*	-0.000*
	(1.88)	(-1.96)
BETA	-0.021	0.000
	(-1.22)	(0.09)
DUAL	0.006	0.002
	(0.80)	(0.68)
AGE	0.000***	0.000*
	(7.70)	(1.94)
_cons	0.152*	0.029
	(1.94)	(1.46)
Industry	Yes	Yes
N	4699	4653
Adjusted R-squared	0.030	0.027

3.3. Placebo test

Additionally, this study conducts a placebo test using Abadie's research[54] as a guide and changes the sample observation interval of key audit matters to the accounting year in which the new audit reporting standards have not been implemented in order to eliminate the influence of other unidentified factors (that is, the time interval is changed from 2015-2016 to 2013-2014 in the main test). From the result table 11, we can see that the correlation coefficient of the implementation of key audit matters (KAM_POST) is not significant. It is clear that the most essential factor in encouraging a change in company risk-taking, rather than temporal patterns, is the implementation of critical audit matters by businesses.

Table 11: Placebo test.

(1)	(2)

	RISK1	RISK2
POST	0.005***	0.010***
	(8.88)	(8.97)
KAM	0.007***	0.013***
	(3.03)	(3.09)
KAM_POST	0.003	0.005
	(1.18)	(1.23)
SIZE	-0.006***	-0.011***
	(-9.12)	(-9.29)
ROE	-0.047***	-0.088***
	(-7.56)	(-7.67)
LEV	0.007***	0.014***
	(2.82)	(2.95)
INDIR	0.008	0.014
	(0.87)	(0.83)
MARKET	-0.000	-0.000
	(-0.46)	(-0.56)
MB	0.001***	0.002***
	(7.06)	(7.23)
CFO	0.004	0.008
	(0.48)	(0.53)
GROWTH	0.006***	0.010***
	(4.65)	(4.72)
BETA	-0.022***	-0.042***
	(-6.61)	(-6.69)
DUAL	-0.001	-0.002
	(-0.73)	(-0.73)
AGE	0.000**	0.000**
	(2.27)	(2.30)
_cons	0.179***	0.339***
	(10.26)	(10.35)
Industry	Yes	Yes
N	4012	4012
Adjusted R-squared	0.211	0.213

3.4. Regression of expanded sample size

The time period of the sample lags by one period before being regressed in order to prevent the randomness of the results brought on by the sample interval. Table 12 presents the outcomes. As can be observed, and in line with the primary test, there is still a substantial positive association between the implementation of key audit matters (KAM_POST) and enterprise risk-taking.

Table 12: Lagged regression results.

	Hypothesis 1		Hypothesis 2			
	RISK1	RISK2	RISK1 (Non-top ten groups)	RISK1 (Top ten groups)	RISK2 (Non-top ten groups)	RISK2 (Top ten groups)
POST	0.005***	0.009***	0.004***	0.005***	0.008***	0.010***
	(8.66)	(8.74)	(4.94)	(6.92)	(4.96)	(6.99)
KAM	0.005**	0.010**	0.011**	0.005**	0.022**	0.010**
	(2.26)	(2.42)	(2.09)	(2.02)	(2.17)	(2.07)
KAM_POST	0.009**	0.012*	0.026**	0.000	0.050**	-0.000
	(2.38)	(1.84)	(2.13)	(0.03)	(2.13)	(-0.03)
SIZE	-0.006***	-0.011***	-0.005***	-0.006***	-0.010***	-0.011***
	(-9.10)	(-9.38)	(-5.24)	(-6.87)	(-5.27)	(-7.04)
ROE	-0.045***	-0.086***	-0.050***	-0.047***	-0.095***	-0.088***
	(-7.23)	(-7.49)	(-5.68)	(-5.71)	(-5.82)	(-5.73)
LEV	0.007***	0.014***	0.003	0.011***	0.005	0.020***
	(2.86)	(3.02)	(0.95)	(3.35)	(0.93)	(3.48)
INDIR	0.006	0.012	0.008	0.010	0.015	0.017
	(0.62)	(0.70)	(0.60)	(0.78)	(0.60)	(0.75)
MARKET	-0.000	-0.000	-0.000	-0.000	-0.001	-0.000
	(-0.50)	(-0.61)	(-0.85)	(-0.36)	(-0.90)	(-0.46)
MB	0.001***	0.002***	0.001***	0.001***	0.002***	0.002***
	(6.96)	(7.19)	(4.93)	(5.24)	(5.04)	(5.38)
CFO	0.005	0.011	0.010	0.003	0.019	0.006
	(0.62)	(0.79)	(1.05)	(0.25)	(1.08)	(0.29)
GROWTH	0.005***	0.010***	0.004***	0.005***	0.008***	0.009***
	(4.46)	(4.62)	(2.78)	(3.59)	(2.89)	(3.57)
BETA	-0.020***	-0.039***	-0.015***	-0.024***	-0.028***	-0.046***
	(-6.00)	(-6.14)	(-2.81)	(-5.69)	(-2.85)	(-5.74)
DUAL	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-0.66)	(-0.68)	(-0.56)	(-0.38)	(-0.53)	(-0.39)
AGE	0.000**	0.000**	0.000*	0.000	0.000*	0.000
	(2.21)	(2.24)	(1.67)	(1.00)	(1.67)	(1.04)
_cons	0.180***	0.342***	0.153***	0.185***	0.288***	0.352***
	(10.15)	(10.32)	(5.68)	(8.10)	(5.76)	(8.13)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
N	4101	4101	1548	2553	1548	2553
Adjusted R-squared	0.201	0.207	0.243	0.196	0.247	0.198

3.5. Adjust the tailing degree of the variable

Adopt a 2 percent tail reduction treatment, bolster extreme value treatment, and avert the outcomes that differ when there are too many extreme values. According to result table 13, the coefficient values of KAM_POST in the tail reduction result of hypothesis 1 are 0.008 and 0.010, which are significant at levels of 5 percent and 10 percent, respectively. In the tail reduction result of hypothesis 2, the non-top ten firms still exhibit a significant positive correlation. The conclusion that the execution of the aforementioned major audit matters is favorable to the enterprise's improvement of risk-taking is strong and reliable, and it demonstrates that the result still does not contradict the initial conclusion.

Table 13: 2% tailed regression results.

	Hypothesis 1		Hypothesis 2			
	RISK1	RISK2	RISK1 (Non-top ten groups)	RISK1 (Top ten groups)	RISK2 (Non-top ten groups)	RISK2 (Top ten groups)
POST	0.005***	0.009***	0.004***	0.005***	0.008***	0.010***
	(8.95)	(9.03)	(4.94)	(7.16)	(4.97)	(7.24)

KAM	0.004**	0.008**	0.011**	0.005**	0.022**	0.009**
	(2.01)	(2.13)	(2.13)	(1.97)	(2.21)	(1.99)
KAM_POST	0.008**	0.010*	0.026**	-0.000	0.050**	-0.001
	(2.29)	(1.80)	(2.17)	(-0.05)	(2.17)	(-0.10)
SIZE	-0.005***	-0.010***	-0.005***	-0.005***	-0.009***	-0.010***
	(-9.42)	(-9.65)	(-5.45)	(-7.15)	(-5.49)	(-7.27)
ROE	-0.052***	-0.099***	-0.049***	-0.051***	-0.094***	-0.094***
	(-9.08)	(-9.33)	(-5.82)	(-6.59)	(-5.93)	(-6.63)
LEV	0.006***	0.011***	0.003	0.009***	0.006	0.018***
	(2.81)	(2.90)	(1.13)	(3.25)	(1.08)	(3.40)
INDIR	0.005	0.011	0.009	0.007	0.017	0.013
	(0.58)	(0.68)	(0.71)	(0.60)	(0.70)	(0.63)
MARKET	-0.000	-0.000	-0.000	-0.000	-0.001	-0.000
	(-0.74)	(-0.80)	(-1.00)	(-0.50)	(-1.06)	(-0.56)
MB	0.001***	0.002***	0.001***	0.001***	0.002***	0.002***
	(8.05)	(8.24)	(5.48)	(5.68)	(5.58)	(5.75)
CFO	0.009	0.020	0.009	0.006	0.017	0.012
	(1.41)	(1.62)	(0.99)	(0.67)	(1.05)	(0.69)
GROWTH	0.005***	0.010***	0.004***	0.005***	0.008***	0.009***
	(5.15)	(5.29)	(2.82)	(3.90)	(2.94)	(3.87)
BETA	-0.018***	-0.033***	-0.014***	-0.021***	-0.026***	-0.040***
	(-5.91)	(-5.98)	(-2.77)	(-5.64)	(-2.79)	(-5.67)
DUAL	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
	(-0.50)	(-0.58)	(-0.36)	(-0.45)	(-0.34)	(-0.49)
AGE	0.000**	0.000**	0.000	0.000	0.000	0.000
	(2.32)	(2.41)	(1.61)	(1.02)	(1.61)	(1.08)
_cons	0.160***	0.300***	0.147***	0.169***	0.276***	0.320***
	(10.44)	(10.66)	(5.85)	(8.43)	(5.94)	(8.47)
Industry	Yes	Yes	Yes	Yes	Yes	Yes
N	4315	4315	1655	2660	1655	2660
Adjusted R-squared	0.204	0.209	0.245	0.198	0.249	0.199

Conclusions

In order to evaluate the hypothesis that the new audit report standard has a beneficial impact on corporate risk-taking, this article uses the new audit report as the focal point and data from China's non-financial listed enterprises from 2015 to 2016 as the sample. Through regression analysis, it is finally proved that the hypothesis proposed above is tenable and the following conclusions are drawn:

The amount of enterprise risk-taking can be dramatically increased by the disclosure of major audit matters, and the more obvious this promotion effect is in enterprises not audited by the top ten firms. At the same time, the intermediate mechanism test demonstrates that through eliminating knowledge asymmetry, the disclosure of important audit problems enhances corporate risk-taking. Further research finds that key audit matters promote enterprise risk-taking and thus improve enterprise value. In addition, this paper chooses the propensity matching score method (PSM), the balance trend hypothesis, changing the sample interval, changing the index, and changing the tailing degree to test the robustness. The results do not refute the original conclusion. The conclusion provides a theoretical reference for the audit-related standard setters, corporate executives, and corporate information disclosure regulators. Therefore, the following recommendations are made in this paper:

First, following the discovery of significant audit issues, enterprises still need to reduce template expression, improve the readability of information in the new report, and enhance the use of external statements to obtain effective information, so as to enhance their investment confidence and ease financing constraints; In addition, it should also emphasize the disclosure of high-risk and highly sensitive projects. For the management, they should fully cooperate with the auditors' audit work and seriously implement the relevant policies on the reconstruction of the audit report model. At the same time, the management should also consider the interests of the enterprise and not avoid risks out of self-interest motivation.

Second, smaller accounting firms can learn from the experience of some large institutions. Compared with small accounting firms, large accounting firms have relatively higher requirements for themselves, and will be more specific and appropriate in the disclosure of significant audit issues. Therefore, small-scale firms should keep pace with large-scale firms in all aspects, learn from the experience of large-scale firms, and constantly improve themselves; in terms of key information disclosure, learn from some suitable disclosure methods and other tips, and be sure to make the disclosure of the matter specific and standardized, so that the users of the audit report can quickly and accurately understand the information that the matter wants to show and its importance.

Third, strengthen the follow-up supervision of the disclosure of important audit matters. China's new auditing standards were put forward at the end of 2016. It is a short time ago, and some problems are inevitable. Therefore, government departments need to strengthen the supervision of the implementation of the standards to maximize their role. At the same time, all kinds of problems encountered by firms in the implementation of the standards should also be reported to the government departments in a timely manner, which is also conducive to the further optimization of the formulation of the standards. In addition, relevant government departments should also organize various professional skills training activities to improve the professional competence of auditors, so that they can make more accurate judgments and make the key audit matters disclosed more oriented and persuasive.

Data Availability

The figures and tables used to support the findings of this study are included in the article.

Conflicts of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding Statement

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Financial Ratio Analysis: A Comparative Study of Islamic and Conventional Banks' Performance in Pakistan

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Abstract

Purpose

Over the past few years, the sustainability and growth of Islamic Banks (IBs) have raised a debate among policymakers, regulators, economists, and investors due to these financial institutions' rapid growth and development. The objective of this paper is to analyze the relative financial performance of IBs with Commercial banks (CBs) in Pakistan from 2019 to 2022. To measure the progress of IBs in comparison with CBs.

Approach

To evaluate the financial performance of IBs in comparison with CBs working in Pakistan, this study has considered the financial ratio analysis (FAR). Top-five IBs and top-five CBs, offering Islamic products, are taken as the sample dataset.

Results

The findings show no statistical difference between the profitability level and capital structure of conventional and Islamic Banks. Counter to this Islamic Banks are less risky, have lower liquidity, and are more solvent as compared to CBs.

Research Scops

This study only provides an overview of the financial performance of full-fledged IBs in comparison with CBs (providing both conventional and Islamic services) operating in Pakistan. Moreover, this study only considered sample data instead of considering the whole population of banks operating in Pakistan. Meanwhile, a cross-country analysis can derive more significant information, to compare the financial performance of Islamic and Conventional Banks.

Practical Implications

This study supports that Islamic banking should be augmented in Pakistan. And for this purpose, Islamic literacy should be promoted in Pakistan and IBs should open new branches to expand their business.

Originality/Value

This research would assist debtors, managers, creditors, investors, and other stakeholders in decision-making purposes. Furthermore, this latest information would also be useful to policymakers and regulators (i.e., SBP) for making policies and developing regulations for Pakistan's financial and banking sector.

Key Words:

Islamic Banking Industry, Comparative Financial Performance, Conventional Banking Industry, Financial Ratio Analysis.

Introduction

The rapid and immense growth/development of IBs has raised a debate among policymakers and other stakeholders, about the performance and sustainability of IBs. This is the reason why in different time zones and for different countries, many studied i.e., Suroso *et al*. (2017), Ledhem & Mekidiche (2020), Rosly & Bakar (2003), Tlemsani & Suwaidi (2016), Siraj (2012), Berger *et al*. (2019), Alexakis (2019), Baeshen (2021), Rusydiana & Sanrego (2018), Mustafa (2019), Daoud & Kammoun (2017), Sillah *et al*. (2014), Al-Sartawi (2019), Akram & Rahman (2018), and Elsiefy (2013), made an analysis of the financial performance of IBs.

Nowadays, one could not deny the growth of the Islamic banking industry, according to S&P Global Ratings on a global scale, it is growing by at least 8% annually (*Growing Belief in Southeast Asia's US$290 Billion Islamic Banking Market*, n.d.). Debate on the performance and sustainability of IBs has led the research such as Alexakis (2019), Belkhaoui et al. (2020), Ledhem & Mekidiche (2020), and Berger et al. (2019), with the purpose of analyzing and measuring the performance of IBs by samples taken from different Muslim countries and GCC.

As an Islamic country, Pakistan is also practicing Islamic Banking, therefore the evaluation of its financial performance in Pakistan is also needed. Nevertheless, the latest evaluations are lacking in the literature. As Shahid et al. (2013) evaluate the Islamic banking industry's financial performance from 2008 to 2010 with a sample of four banks (two CBs & two IBs). Undoubtedly, the studies like Siddique & Rahim (2013) and Saeed et al. (2013) covered the assessment of a large data set ranging from 2007 to 2012. However, these studies have analyzed the efficiency of IBs instead of financial performance.

Another study by AziZ (2016) used data from the period 2006 to 2014 and made an analysis to evaluate the performance of IBs. Moreover, the latest study by Majeed and Zainab (2021) evaluated the comparative performance of Islamic and Conventional Banks in Pakistan, using data from 2008-2019. So, it is observed that a study on the latest data is required to be conducted for recent times. Furthermore, it seems that the prior studies did not provide transparent reasoning for their research findings, which is to be considered as their limitations.

To override those limitations this study arises the following questions:

1. Have IBs shown better performance for the period 2019-2022 as compared to CBs in Pakistan?
2. What factors account for the difference in the relative performance of IBs and CBs?

This Paper uses a sample of ten banks (5 IBs & 5 CBs) working in Pakistan, from 2019 to 2021. This study uses the latest data about the financials of banks working in Pakistan. Furthermore, this study uses a different sample of banks i.e., top 5 CBs and top 5 IBs, working in Pakistan. Adding more the comparison is made among the top five full-fledged IBs and CBs (offering the Islamic window).

Lastly, the study assists us to understand and find out the more logical and objective reasons behind findings, instead of just giving us the comparison of effective/lower performance of IBs and CBs.

With the reason that the bank's financial performance is essential for stakeholders in their decision-making strategy, this study has some requisite consequences. It signifies that evaluating financial performance is crucial. As studies related to this problem, in Pakistan, are behind the time. The study offers particulars of challenges, which could undercut the performance of IBs, which are not foregrounded in existing studies in Pakistan. Hence, the study aids investors in making more careful and effective decisions about their investments, and to the depositors, the study is assisting them with when to invest and when to withdraw the money. Besides this, it assists the managers to enhance the value of decisions regarding both finances and deposit services of the bank. Adding more, the findings are helpful for the policymakers and financial regulators in the country, i.e., SBP, to create the right policies and regulations.

Literature Review

Banks take deposits from customers and lend money to earn profit in the form of interest. Banks provide financing to the customer for personal as well as for different business purposes, i.e., to meet the requirement of working capital, acquiring new assets, etc, such type of financing leads to more employment opportunities, higher purchasing power, and reduce poverty in any country. According to Siraj (2012), the banking industry's performance is accountable for a country's economic development. The financial performance of CBs is studied by many previous studies i.e., Berger et al. (2019), Samad (1999), Beck et al. (2013), Ledhem & Mekidiche (2020), Masruki et al. (2023), Reger et al. (1992), Alexakis (2019), Sabi (1996), and Siraj, (2012).

Literature shows that many studies have a comparison between the financial performance of IBs and CBs because the Islamic banking industry is evolving globally. Among these studies, many of them have concluded mixed findings. For example, Ariss (2010) applied Lerner Index and H-Statistics to analyze the financial performance of IBs. This study concluded that IBs are less profitable as compared to CBs, and this makes IBs less competitive, but on the other hand, IBs showed a higher value of the loan-to-asset ratio as well as greater capitalization. Another study by Abu Loghod (2010) has made a comparison of the performance of both types of banks IBs and CBs and reached the result that there is no difference in the performance of both types of banks in terms of internal growth and profitability, but CBs are riskier than IBs, as IBs got more independency from external funds.

Besides this many studies got mixed results comparing the performance of IBs and CBs, through financial ratio analysis, Srairi (2009), Elsiefy (2013), Masruki et al. (2023), and Siraj (2012). Likewise, another study by Adekola Olaitan Onakoya (2013) has performed a comparative analysis of IBs and CBs operating in the UK. This study showed that IBs are less risky and cost-efficient but are making less profit which leads them to be less competitive and inefficient in fulfilling their financial obligations as compared to CBs.

Furthermore, different studies in Pakistan have also concluded mixed results. As Jaffar & Manarvi (2011) find that IBs are less profitable as compared to CBs but IBs have more liquidity and capital adequacy. Ansari & Rehman, (2012), concluded that, as compared to their peers, IBs face insignificant risk, have more liquidity, and show greater operational efficiency. Although CBs are more profitable, IBs could play a better game in operational efficiency, liquidity, and asset turnover & debt to asset performance than CBs, Shahid et al. (2013). Another study, by Majeed & Zanib (2016), concluded that IBs are less scale efficient as compared to CBs, even though they are more dexterous in technical efficiency than CBs.

Many studies revealed that IBs have outperformed their peers. For instance, in 9 Middle East countries, the efficiency of IBs is assessed by Iqbal (2001) from 1990 to 1998. Another study by Bader (2008) compared the financial performance of conventional and Islamic financial industries, in the region of Asia and Middle East countries for the period of 1990-2009. Such studies analysed the financial performance through ratios and concluded that IBs could significantly be more dexterous than their peers CBs.

Likewise, a study assessed the performance of IBs and reached the conclusion that IBs got more “technical efficiency”, and also IBs from Asian countries are performing more efficiently than IBs from Middle East and North African countries, (Ab-Rahim, 2013). Another study Rosman et al. (2014), undertook the same analysis but came with a different result that during crises IBs perform more sustainably, although they seemed like scale inefficient.

Nevertheless, some other studies found lower efficiency of IBs. A study conducted in Malaysia by Rosly & Bakar, (2003) and Tlemsani & Suwaidi, (2016), shows that IBs show slow-going performance as compared to CBs. Same as Hassan (2006), who conducted a study in the Middle East from 1995 to 2001, analysed the competency of IBs and conclude that IBs are less efficient as compared to CBs. Moreover, Saeed et al. (2013) conducted a study in Pakistan and used the techniques like financial ratio analysis (FRA) and data envelopment analysis (DEA) to analyse the competence of IBs from 2007-2011 and conclude less efficiency of IBs than CBs.

The analysis of the financial performance of the Islamic financial sector in Pakistan, particularly beyond 2020, is seen to be lacking in the literature, and even when it is there, the findings are sometimes ambiguous.

Table I. Some other studies evaluating comparative performance of IBs.

Studies References	*Results*	*Methodology Used*	*Study Period*

Studies Involved Cross-country Data			
Bader (2008)	IBs showed better performance as compared to CBs	DEA	1990 to 2005
Ledhem & Mekidiche (2020)	The performance of Islamic financial institutions is determined by their profitability.	CAMEL analysis	2014 to 2018
Iqbal (2001)	IBs showed better performance as compared to CBs.	Trend and ratio analysis	1990-1998
Bahrini, R. (2017).	During crises, IBs showed better performance as compared to CBs.	DEA	2007 to 2012
Haron (1996)	In competitive markets, IBs performed better as compared to CBs	OLS	1982 to 1994
Siraj (2012)	IBs and CBs showed mixed performance.	FRA	2005 to 2010
Zainol, Z. (2014)	During crises, IBs showed better performance as compared to CBs.	DEA	2007 to 2010
Chokri & Anis (2018)	IBs and CBs showed mixed performance.	Regression Analysis	2012 to 2014
Ariss (2010)	IBs and CBs showed mixed performance.	Lerner Index and H-statistics	2000 to 2006
Loghod (2010)	IBs and CBs showed mixed performance.	Logit model and FAR	2000 to 2005
Ab-Rahim (2013)	Asian IBs showed better performance than compared to MENA IBs.	DEA	2006 to 2011
Beck et al. (2013b)	IBs showed better performance as compared to CBs	FRA	1995 to 2009
Tlemsani & Suwaidi (2016)	IBs showed better performance as compared to CBs	FRA	2007 to 2008
Srairi (2009)	IBs showed lower performance as compared to CBs.	SFA	1997 to 2007
Studies Involved Country-specific Data			
Mukhibad & Khafid (2018)	IBs and CBs showed mixed performance.	SEM through WarpPLS	2009 to 2016
Elsiefy (2013)	IBs and CBs showed mixed performance.	FRA	2006 to 2010
Shamsu Uddin (2017)	IBs and CBs showed mixed performance.	CAMEL analysis	2010 to 2014
Mokhtar et al. (2008)	IBs showed lower performance than CBs	DEA	1997 to 2003
Rosly and Bakar (2003)	IBs showed lower performance than CBs	FRA	1992 to 1999

Adekola Olaitan Onakoya (2013)	IBs and CBs showed mixed performance.	FRA	2007 to 2011
Widagdo & Ika (2008)	IBs and CBs showed mixed performance.	FRA	2004
Samad and Hassan (2006)	IBs and CBs showed mixed performance.	FRA	1984 to 1997
Ab-Rahim (2013)	Domestic IBs showed lower performance as compared to foreign IBs.	DEA	2006 to 2011
Studies Involved Data from Pakistan			
Majeed & Zanib (2016)	IBs and CBs showed mixed performance.	DEA	2007 to 2014

Jaffar and Manarvi (2011)	IBs and CBs showed mixed performance.	CAMEL analysis	2005 to 2009
AziZ (2016)	IBs perform better than CBs	FRA	2006 to 2014
Ansari & Rehman (2012)	IBs and CBs showed mixed performance.	FRA	2006 to 2009
Saeed et al. (2013)	IBs showed lower performance than CBs	FRA and DEA	2007 to 2011
Usman and Khan (2008)	IBs showed better performance as compared to CBs	FRA	2007 to 2009
Shahid et al. (2013)	IBs and CBs showed mixed performance.	FRA	2008 to 2010

Note(s): Data Envelopment Analysis (DEA), Capital Adequacy + Assets Quality + Management + Earnings + Liquidity & Sensitivity (CAMEL), Frontier Approach (SFA), Financial Ratio Analysis (FRA),

It is also important to note that the ideas of IB's efficiency and financial performance are two different concepts and must be understood separately. The first one, the efficiency of the bank, is a complex concept to be understood by common people. Although the second one, the financial performance of the bank, is easy to understand, as it provides information in figures which is easy to compare by the bank’s stakeholders i.e., customers, investors, employees, depositors, creditors, shareholders, etc. Thus, to assist financial regulators as well as the bank’s stakeholders, this paper considers the financial ratio analysis from the latest database. Moreover, as Pakistan is a country that is actively involved in Islamic Banking development and its promotion, that is why it is vital to analyse the financial performance of IBs and compare this performance with CB’s financial performance.

Methodology:

Population:

Currently, the banking industry of Pakistan is comprised of Development Financial Institutions (DFIs), and Commercial Banks which include Islamic Banks, Conventional Banks, and Microfinance Banks, most of them are incorporated in Pakistan and some of them are Foreign Banks. The banking industry in Pakistan consists of around 31 banks, which include 22 private banks, 5 public sector banks, and 4 foreign banks.

Sample Technique:

This study aims to compare the top 5 IBs and top 5 CBs in Pakistan in terms of their financial performance, as shown in **Table 2**. Cross-sectional data is used for this purpose. Data was extracted from the annual reports of each bank for the period of 2019-2022, taken from the official websites of those banks.

Table II: List of Conventional and Islamic Banks to be compared.

CBs	***IBs***
Habib Bank Limited (HBL)	Faysal Bank Limited
Bank Alfalah Limited	Dubai Islamic Bank Pakistan Limited
Muslim Commercial Bank Limited (MCB)	Bank al Habib Limited
National Bank of Pakistan (NBP)	Meezan Bank
United Bank Limited (UBL)	BankIslami Pakistan LTD.

Theoretical Framework:

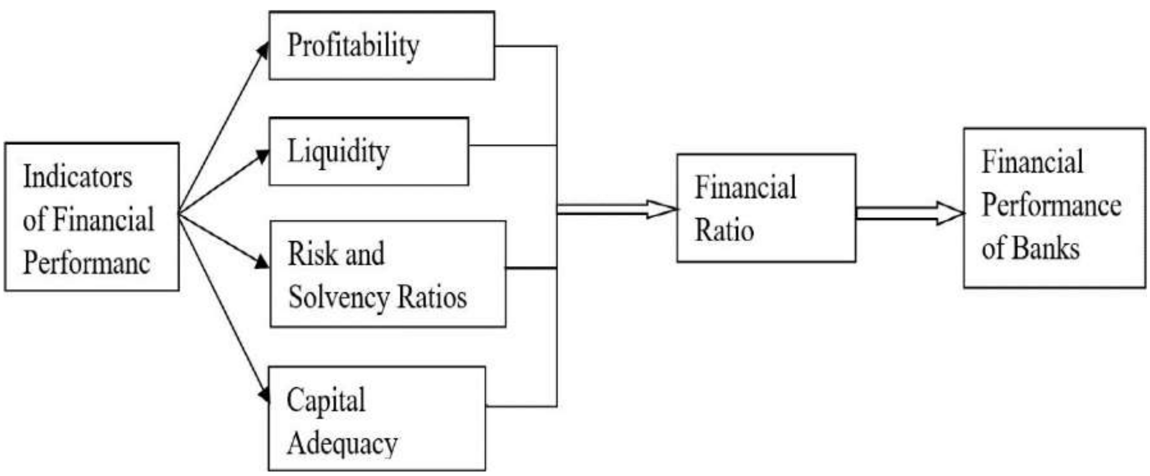


Figure I: Theoretical Framework.

Measurement techniques:

This study uses standard methods of calculating the financial ratios for banks. These financial ratios were introduced by Cole (1972) to determine the financial performance of the banks. Many other studies i.e. Elsiefy (2013), Mukhibad & Khafid (2018), Masruki et al. (2023), Beck et al. (2013), Widagdo & Ika (2008), Siraj (2012), and Usman & Khan (2008) have applied this standard method to determine the financial performance of banks. Generally, this method makes a comparison among different financial ratios i.e., Capital Adequacy (measure soundness of capital structure), Liquidity (measures the ability to repay short-term debts), Risk & Solvency (measures the ability to repay long-term debts) and Profitability (depicts the efficient utilization of resources) .

This paper provides results in the form of descriptive statistics i.e., means and their standard deviations, p-values (two-tailed), and t-values (equality of mean), to examine the importance of these ratios separately for both bank types. **Table 3** provides a clear view of the methodology applied. It provides a theoretical framework for methodology.

Table III: Measurement Techniques.

Indicators for Financial Performance	*Measurement techniques*	*Formulae*
Liquidity	**LAR**	[Borrowings/Total Assets]*100
	LDR	[Borrowings/Deposit and other accounts]*100
Profitability	**ROE**	[Net Profit /Bank's Equity]*100
	ROA	[Net Profit /Total Assets]*100
Capital Adequacy	**LCR**	[High-quality Liquid Assets amount (HQLA)/Total net cash flow over next 30 calendar days]*100
	CAR	Total Eligible Capital/Credit RWA+Market RWA+Operational RWA
	LR	Eligible Tire 1 Capital/Total Exposure
Risk and Solvency Ratio	**DER**	[Total Debts/Bank's Equity]*100
	DAR	[Total Debts/Total Assets]*100

Source(s): Elsiefy (2013), SBP (2015) guidelines, Majeed and Zainab (2021), Masruki et al. (2011).

Liquidity:

It is mandatory for banks in Pakistan to keep 20% of their time and demand liabilities in the form of 15% SLR (statutory liquidity reserves) and 5% CRR (Cash Reserve Ratio), instructed by SBP (State Bank of Pakistan). Liquidity is the ability/capacity of a bank's capital and earnings to timely fulfill the bank's obligations when they become due, without suffering undesirable losses. To secure the interest of the general public i.e., the bank's creditors, borrowers, and other stakeholders, SBP ensure that every bank has maintained the required percentage of liquidity.

As time and demand liabilities could be withdrawn by customers at any time, banks could face more withdrawals than new deposits in the short run. Liquidity crises are to be managed by a bank's liquidity. A bank's failure could be the result of its insufficient liquidity. To estimate a bank's liquidity, many studies i.e. Ansari & Rehman (2012), Adekola Olaitan Onakoya (2013) and Hays et al. (2009), have used liquidity ratios i.e. loan-to-assets (LAR) & loan-to-deposit (LDR).

Profitability:

A bank's revenue can bear all costs incurred and yield financial resources. It estimates the bank's marginal efficiency. To observe this marginal efficiency of the bank, we considered two profitability ratios return-on-equity (ROE) as well as return-on-asset (ROA). The major portion of the bank's earnings comes from the interest and fee it charges on its assets (loans given) and services (LCs establishment, Guarantees issued). The profitability of a bank computes its performance.

The study by Elsiefy (2013), has computed that to measure the performance of banks we can use profitability ratios. This paper computes ROE and ROA to analyse the profitability. Even though ROA is correlated with ROE, both are different from each other in terms of significance and explanation Karr & Jhon (2005), Simpson & Kohers (2002). Some similar studies, by Ansari & Rehman (2012), and Reger et al. (1992) also used these ratios to analyse profitability. The higher the values of these ratios the higher the profit of the bank.

Capital Adequacy and Leverage:

A sufficient amount of capital, prescribed by regulators, that a bank is required to hold, with respect to its risk-weighted assets. For banks in Pakistan, SBP has prescribed a minimum level of these ratios under Basel Accord III i.e., 11% capital adequacy ratio, and 3% leverage ratio.

An adequate amount of these ratios depicts the soundness of the financial structure of the bank and the ability of the bank to meet its financial commitments when the market is under economic strain. If the bank's capital adequacy is sufficient, it would protect the bank against unforeseen failures and the bank will have less risk. To calculate capital adequacy and leverage ratios, this paper follows the guidelines prescribed by SBP.

Risk and Solvency:

It defines, how well a bank could sustain itself in the long run. It depicts a bank's ability to meet up its long-term debts. If the total assets of the bank are more than its equity, the bank would be considered solvent. Liquidity and solvency both are correlated, as liquidity increases solvency decreases. So, the banks have to maintain a sufficient level of solvency to prevent themselves from defaulting. Some studies i.e., Elsiefy (2013), and Samad & Hassan (2006) have also computed risk and solvency in their analysis through ratios i.e., debt-to-equity (DER) and debt-to-asset (DAR).

Empirical Findings:

This part will be the presentation of a graphical and statistical analysis of each ratio. We will consider and analyze each ratio separately.

Table IV: Empirical Data on Comparative Performance of CBs and IBs.

	Mean of IBs	Std-deviation of IBs	Mean of CBs	Std-deviation of CBs	T-Value (equality of means) T-test	T-Critical Value	P-Value Sig. (Two-tail)	(α) Significant level	Inferences
ROA	1.32	0.6	0.99	0.04	2.58	3.355	0.03	0.01	Accept H_0
ROE	18.6	1.8	14.9	1.2	2.65	3.355	0.02	0.01	Accept H_0
LDR	59.5	3.1	46.4	3.04	6.13	3.355	0.0002	0.01	Reject H_0
LAR	45.3	2.5	32.8	2.04	5.55	3.355	0.0005	0.01	Reject H_0
LCR	181.2	10.29	216.4	10.03	-3.48	3.355	0.008	0.01	Reject H_0
CAR	16.3	0.43	18.3	1.07	2.52	3.355	0.03	0.01	Accept H_0
LR	4.9	0.3	4.7	0.4	0.534	3.355	0.6	0.01	Accept H_0
DER	14.81	1.17	11.84	1.51	-3.48	3.355	0.007	0.01	Reject H_0
DAR	86.1	0.57	85.55	1.12	-1.772	3.355	0.1	0.01	Accept H_0

Profitability:

First of all, we considered profitability ratios. The table shows the ROA for IBs is slightly higher than the ROA for CBs.
The efficiency and effectiveness of a bank are represented by ROA in terms of utilizing its resources and managing its operations, indicating better financial performance of the bank (Jewell, 2011). A lower value of ROA could be due to the bank's different administrative costs and operating expenses, indicating the inefficiency of the bank in utilizing its resources and managing its operations, showing bad financial performance.
The mean value of ROA for IBs is 1.3% and for CBs is 0.99%. The study tested the equality of the means t-value at a 0.01% level of significance and got a p-value of 0.03 which means there is no significant difference between the mean values of ROA for both types of banks IBs and CBs. So, in conclusion, we can say that IBs and CBs are equally profitable in terms of ROA.

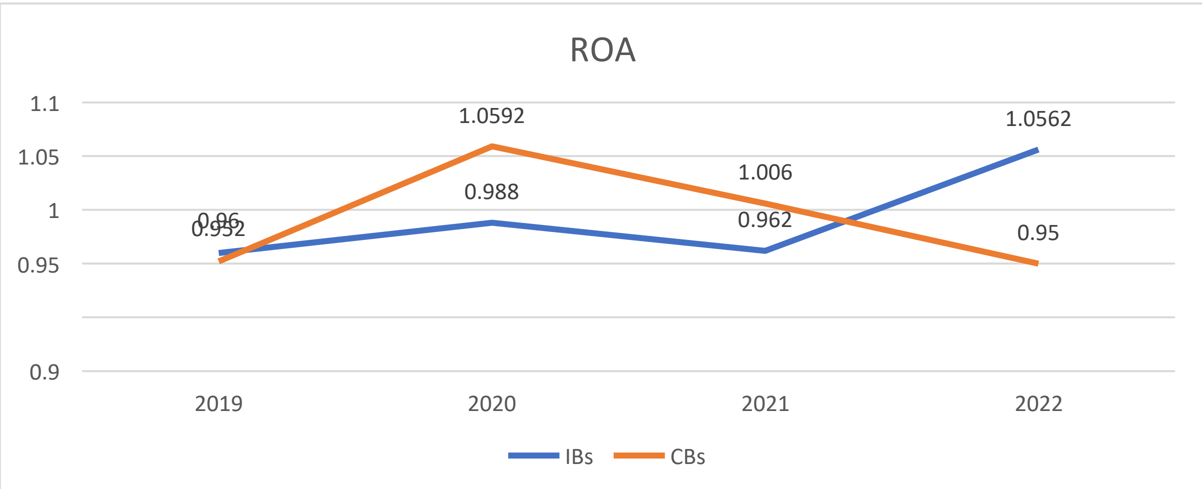


Figure II: Return on Assets.

Likewise, the table shows that the ROE for IBs is higher than the ROE for CBs. ROE shows how much profit is being earned as a percentage of the bank's shareholder's equity. The mean value of ROE for IBs is 18% and for CBs is 14.9%. The study tested the equality of the mean t-value at a significant level of 0.01 and got a p-value of 0.005 which indicates that there is no significant difference between the mean values of both types of banks. So, as a result, we can conclude that the profitability of both types of banks is statistically the same.

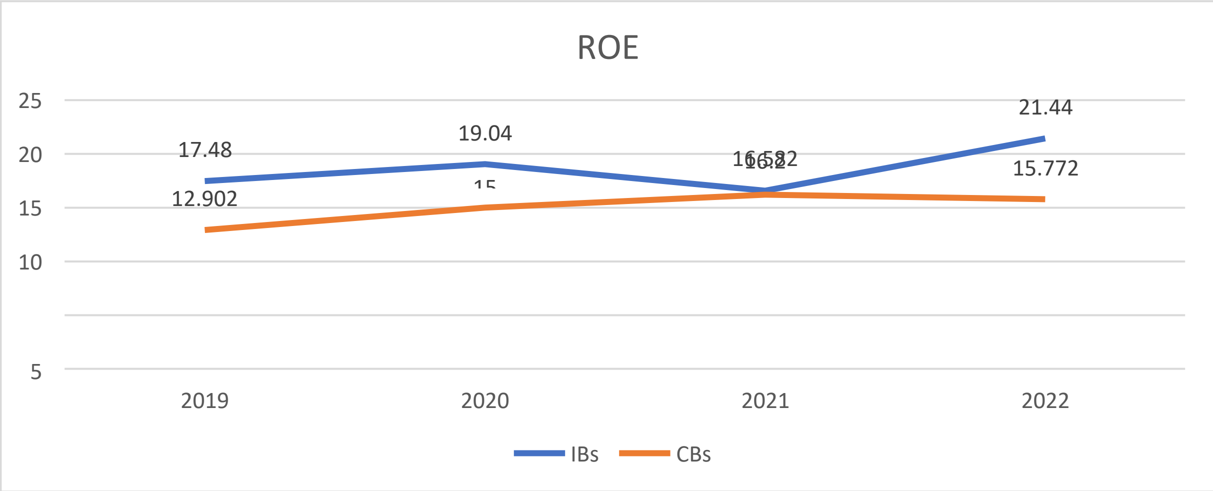


Figure III: Return on Equity.

Previous studies showed that IBs have lower profitability, due to their small size in terms of operations as they were in the early phase in Pakistan, which was a difficulty for them to get benefited from economies of scale of operations. Also (Lindblom & Von Koch, 2002) highlights that we could not calculate Profitability ratios correctly if the comparable banks are different in size. But this study depicts different results by showing higher profitability for IBs, and the reason can be explained as the Islamic banking industry is emerging and is in the immense growth phase, the size of the bank's scale of operation has increased resulting in higher profitability.

Hancock (1985), has observed that the profitability of the bank is dependent upon the interest rate earned, indicating a positive association between them. And as IBs have interest-free transactions such services cause them lower profitability. But we can conclude that due to their operational efficiency, they are still able to have slightly higher profitability.

Liquidity:

Bank's ability to repay its short-term debts and fulfill its obligations, could be estimated through liquidity ratios. The higher the bank's liquidity, the higher the bank's ability to repay its short-term obligations. In other words, higher liquidity suggests a higher financial performance of the bank.

While calculating liquidity, we first considered the Laon-to-Asset ratio (LAR). This ratio shows us a fraction of the assets of the bank which are tied up in loans. A lower value of the loan-to-asset ratio shows higher liquidity for banks. In this study, we observed that LAR remains higher for IBs as compared to CBs. This means IBs have a higher proportion of their assets tied-up with loans as compared to CBs. The mean value of the LAR for Islamic banks over the period of 2019-2022 is 45.3%. which means, on average 45% of the total assets of IBs are tied up with the loans granted by the bank. Meanwhile, the mean value LAR for CBs over the period is 32%, which shows on average 32% of the total assets of CBs are tied up with loans. The lower value of LAR depicts the better position of liquidity of CBs as compared to IBs.

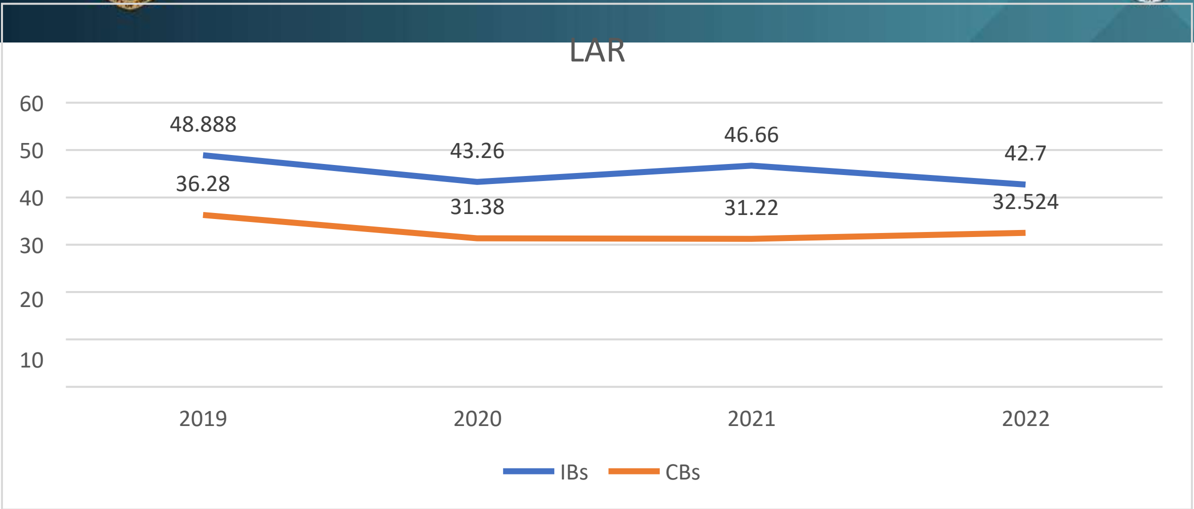


Figure IV: Loan to Asset Ratio.

Likewise, the loan-to-deposit ratio (LDR) shows the fraction of loans that a bank has offered out of its deposits. A lower value of LDR indicates bank has a good liquidity position. Indicating bank has offered fewer loans out of the deposit. Meanwhile, a higher value of LDR indicates a poorer liquidity position for banks. This means the bank has granted more loans out of their deposits.

Empirical data shows that LDR remains at 60% for IBs over the study period. This liquidity management issue faced by IBs is because of the portfolio of several types of assets i.e., Ijarah (Islamic lease) and Murabaha (cost plus) and all other such contracts. Because of their commitment to Shariah-complaint investments and asset-backed financing, IBs have lesser opportunities, while CBs got the option of secondary reserves like short-term government securities and treasury bills. In Pakistan, due to the limited scope and differences of opinion, the option of debt instruments i.e., sukuk is limited. On the other side, LDR remained at 46% for CBs during a period of study. This means CBs have granted fewer loans out of the deposits than IBs. The table shows the mean values of LAR and LDR for IBs are 45.3% and 60, while for CBs these ratios are 32% and 46% respectively. The p-values show a significant difference between the liquidity position of both types of banks, and these values are 0.0005 for LAR and 0.0002 for LDR.

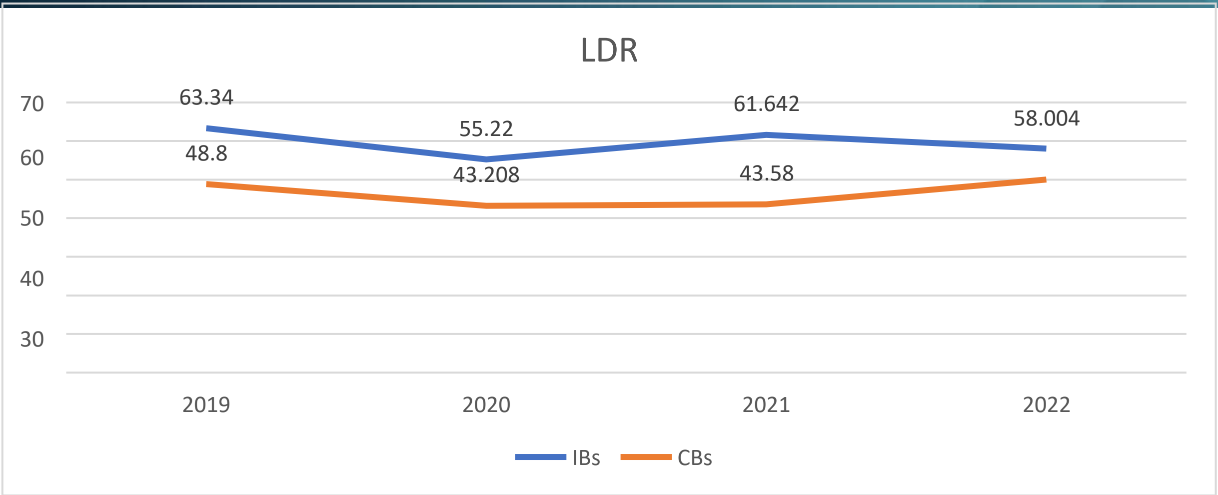


Figure V: Loan to Deposit Ratio.

The higher values of liquidity ratios for IBs show that IBs have granted

significant loans and due to this, they seemed under financial pressure during the period of 2019-2022. In fact, CBs usually offered loans to extremely profitable businesses i.e., the entertainment industry and tobacco, etc. Meanwhile, due to divine restrictions not to invest in immoral activities like gambling, and also businesses such as the tobacco industry. Also, IBs have divine restrictions on investing in interest-based products. Moreover, IBs always grant financing that is backed by real assets. IBs transaction costs are high due to their check and balance. In IBs, surplus funds intensify the liabilities and expenses unless they are not invested. In short, IBs are concerned to follow the limited Shariah-compliant investment option available, while on the other hand, CBs are not restricted to such limited investment options. And also due to the Shariah restriction on IBs, not to sell their debt instruments in the secondary market, IBs got a limited opportunity to sell their debt-based sukuk only in the primary market. So, in conclusion, IBs are less liquid as compared to CBs as they have granted more loans out of their assets and their deposit and also due to their concerned restrictions to Shariah.

The Capital Adequacy and Leverage Ratio:

Capital Adequacy Ratio

The capital adequacy ratio tells us about the bank's financial strength through its capital and assets. It tells us about the bank's soundness and risk to the bank. The soundness of the capital structure of a bank is depicted by an adequate level of this ratio and the lower value of the ratio will picture the possible risk to the bank.

However, the SBP has prescribed a minimum level of Capital Adequacy ratios for banks working in Pakistan, which is 11.50% as of 2022.

Purposes of Managing Capital:

The purposes of a bank behind managing its capital are as followings.

1. To achieve an appropriate capital position, as prescribed by SBP in banking regulations.
2. To obtain a good credit rating, which will enable the bank to obtain liquidity sources at a lower cost and optimize the funding mix.
3. To cover and avoid major risks underlying business activities.
4. To hold the flexibility to join investment opportunities in the future, enabling the bank to be stable in times when the market is strained.

Statutory Minimum Capital Requirement and Capital Adequacy Ratio:

SBP through its BSD Circular No.07 of 2009 dated April 15, 2009, requires the minimum paid-up capital of locally incorporated banks to be raised to PKR. 10 billion. The minimum requirement for the capital adequacy ratio prescribed by SBP is 11.05% subject to the Basel III capital adequacy guidelines through BPRD Circular No.06 of 2013 dated August 15, 2013. SBP revive the minimum requirement of this ratio.

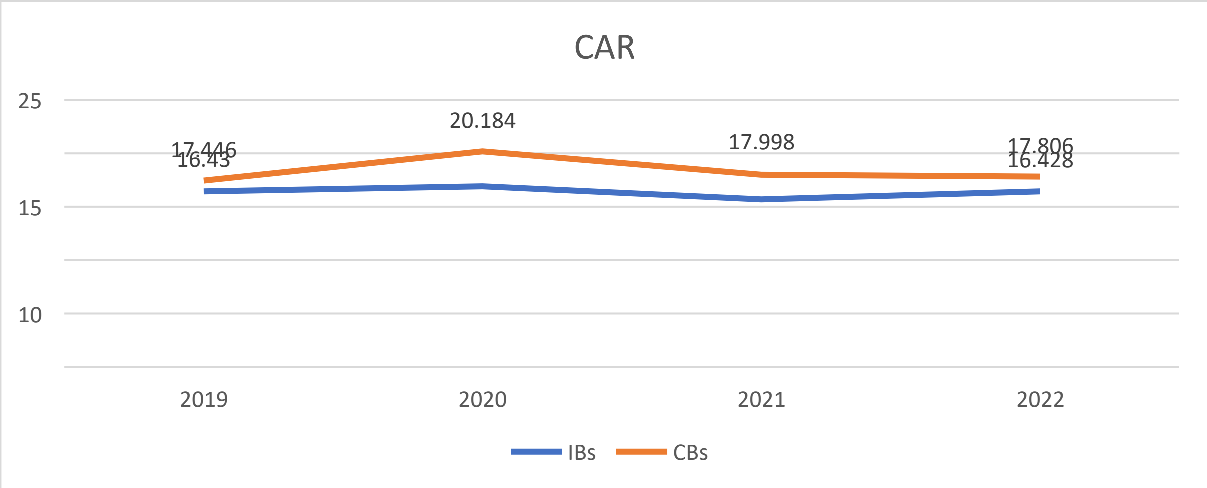


Figure VI: Capital Adequacy Ratio.

Empirical data shows that the mean value of CAR for IBs is 16.3% and for CBs is 18.3% for the study period. Both types of banks have maintained this ratio above the required statutory minimum level. Which shows the capital soundness of them. Although the t-value (equality of means) and p-value at a significance level of 0.01 show that the mean values of both types of banks have no statistical difference.

Liquidity Coverage Ratio:

In order to survive a severe liquidity stress condition a bank has to maintain a prescribed percentage of its burdenless High-Quality Liquid Assets (HQLA). HQLA are burdenless assets of banks as they can easily be converted into cash without a loss of value. That is why this liquidity coverage ratio is known as the ratio between the stock of HQLA and the bank's estimated net cash flow for the upcoming 30 calendar days.

SBP has prescribed banks operating in Pakistan to maintain not less than 100% of this ratio on an ongoing basis. Banks have to compute their LCR ratio monthly following the guidelines issued on 23 June 2016 by SBP.

Empirical data shows the mean value of LCR for IBs is 181.2% and for CBs is 216.4%. The t-value (equality of mean) and p-value at the significance level of 0.01 show that the mean values of both types of banks have a significant statistical difference. As CBs show a higher value of LCR which depicts the higher quality of their liquid assets, indicating better liquidity of CBs as compared to IBs.

But worth noticing point is even the IBs have a lower value of LCR as compared to CBs but they have maintained this ratio almost double, by its minimum required level. Which shows their decent quality of liquid assets and their better liquidity position.

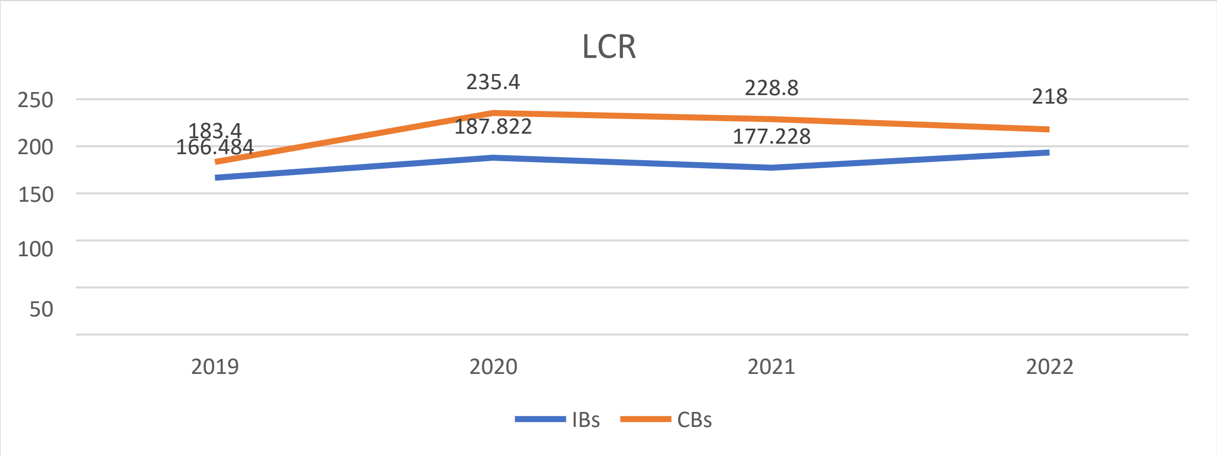


Figure VII: Liquidity Coverage Ratio.

Leverage Ratio:

All banks working in Pakistan have to calculate and report this ratio quarterly as prescribed by SBP. It should be in accordance with the Basel Acord III instructions by SBP, BPRD Circular No.06, dated August 15, 2013. This ratio shows the financial position of the banks concerning their debt, capital, and assets. In other words, this ratio is used to assess the relation between the level of debts of a bank and the bank's capability to repay them.

The reasons behind the calculation of this ratio are to evade disproportionate on-and-off balance sheet leverage in the banking system. So, the following are the objectives.

1. To encourage the banking sector to acquire leverage, which may negatively impact the economy and broad financial system as well.
2. Underpin the standards based upon risk with an uncomplicated and non-risk-based measure.

SBP has prescribed a minimum level of leverage ratio for banks working in Pakistan which is 3%. Empirical results show that the mean value of LR for IBs is 4.9% and for CBs is 4.7%, the t-value (equality of means) and p-value tested at the significance level of 0.01 tell us that the means of both types of banks have no statistical difference. Moreover, both types of banks have maintained LR above the minimum requirement. Which depicts the soundness of their capability to repay their debts.

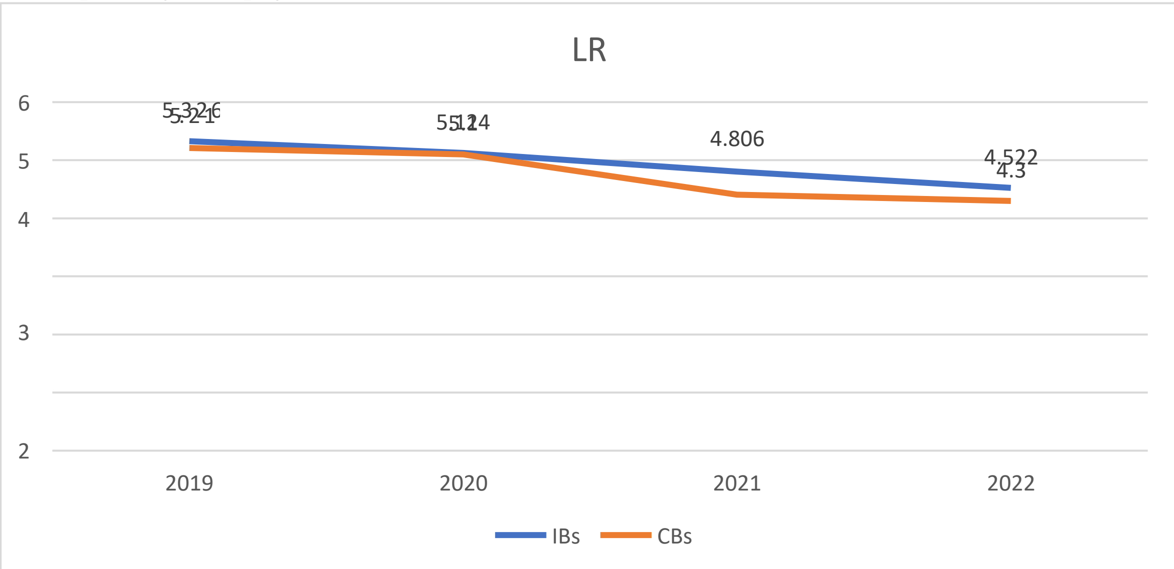


Figure VIII: Leverage Ratio.

Risk and Solvency Ratios:

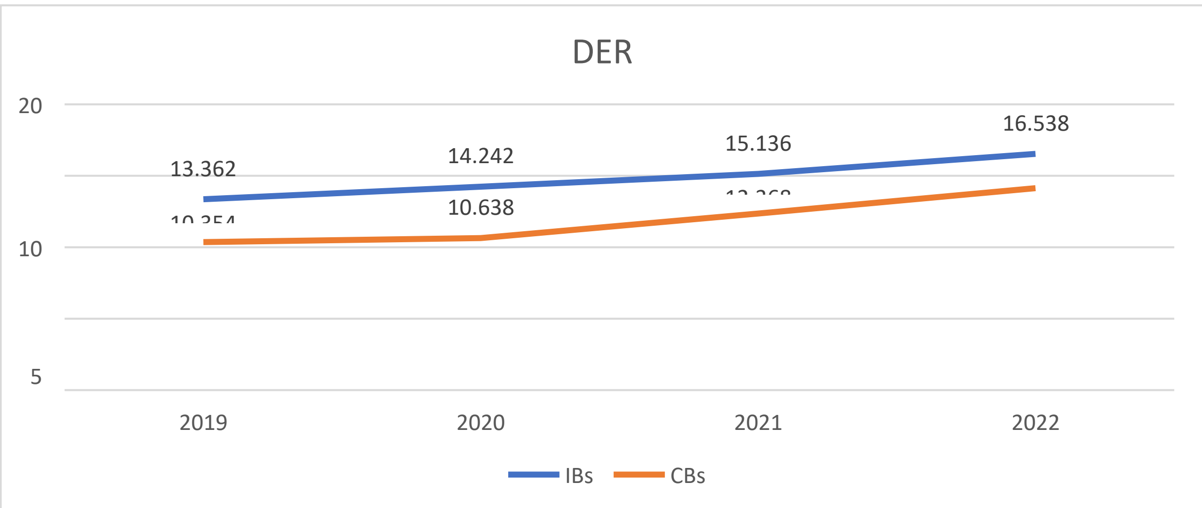
These ratios evaluate the financial stability of a bank and its risk-bearing and risk-handling capacity. They are frequently used to assess the soundness of a bank. These ratios are useful instruments for assessing long-term financial soundness. The debt-to-asset ratio (DAR) shows the extent to which the assets of a bank are being funded by debts and creditors. A higher DAR depicts a significantly high leverage level and a high risk for the bank. On the other side, the debt-to-equity ratio (DER) indicates how much equity is being utilized by the bank for funding its assets. A greater DER suggests the bank is employing debt to finance its expansion. As a result of the higher interest costs, this has a negative impact on profitability. Masruki et al. (2011), Elsiefy (2013)

Debt to Equity Ratio:

The first ratio DER tells us about the fraction of the total debts of a bank to the total equity of a bank. It depicts how much of a bank's funding is provided by debt in comparison to its equity. A higher ratio indicates more reliance on borrowed money, leading to a higher level of financial risk. A lower debt-to-equity ratio depicts that the bank relies more on the equity of its shareholders in order to fund its operations, which indicates a lower risk profile and more financial stability.

Empirical data shows that DER remains higher for IBs as compared to CBs. The mean value of DER for IBs is 14.81, indicating more reliance of IBs on debt in comparison to their equity. Meanwhile, the mean value of DER for CBs is 11.84, indicating less leverage and a strong equity position for CBs as compared to IBs. The t-value (equality of mean) and p-value of 0.007 show that the mean values of both types of banks have no statistical difference. The higher ratio for IBs depicts high leverage for them, indicating their reliance on debt to finance their operations, Adekola Olaitan Onakoya (2013), Elsiefy (2013), Ansari & Rehman (2012), and Samad & Hassan (2006), found.

Figure IX: Debt to Equity Ratio.



Debt to Asset Ratio:

This ratio tells us about the fraction of the overall debts of a bank in comparison to the total assets of a bank. It analyses a bank's debt burden and offers statistics on its solvency and risk profile. A lower value of DAR tells us about the high solvency and low-risk exposure of the bank, indicating that the bank has a smaller fraction of its debts as compared to its assets. The higher DAR depicts a high risk for banks, resulting in possible financial instability.

As empirical data shows the mean value of DAR for IBs is 86.1% and for CBs its mean value is 85.55%, t-value (equality of means) and p-value of 0.01 indicate that the mean values of both types of banks have no statistical difference. These ratios are very high in both types of banks. This implies that both IBs and CBs are facing high risk which results in their low borrowing capacity. These results are aligned with the following studies, Adekola Olaitan Onakoya (2013), Elsiefy (2013), Ansari & Rehman (2012), and Samad & Hassan (2006).

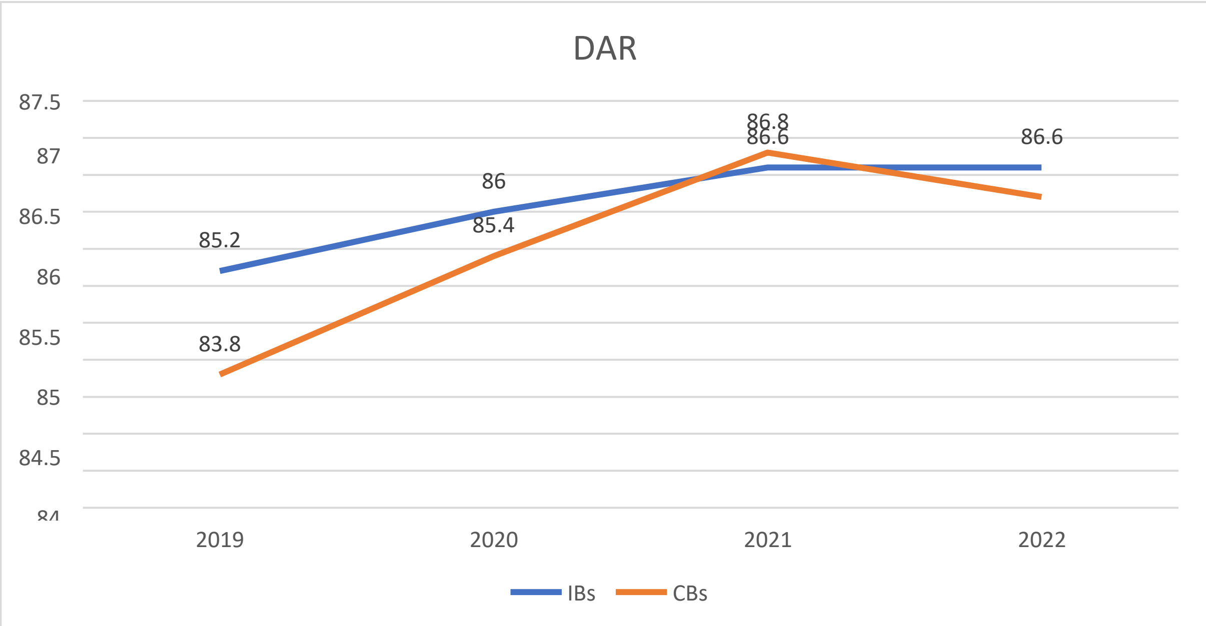


Figure X: Debt to Asset Ratio.

Conclusion:

In the study, IBs show slightly higher profitability as compared to CBs. This is because of the increasing size of IBs in Pakistan. As the Islamic Banking industry is, in its growth phase in Pakistan, people are getting diverged towards Islamic banking, which is the reason for more deposits and larger operational size of IBs resulting in increased profitability of IBs. Meanwhile, Profitability ratios ROA and ROE for CBs are almost the same as IBs. There are several reasons behind CB's profitability, as they lend and invest in interest-based transactions. CBs usually offered loans to highly profitable businesses. i.e., the entertainment industry and tobacco industry, etc. CBs can offer their debt instruments in the secondary market. While on the contrary, IBs are restricted by Shariah-compliant, lending and investing in such types of businesses is prohibited for them. That's why they are more dependent on their deposits to enhance their business resulting in less liquidity of IBs.

Moreover, SBP has taken several steps to improve the role of the Shariah-compliant board of IBs, which is the reason behind the improved performance of IBs. Additionally, SBP has implemented new regulations and policies for the uniformity & effective administration of IBs.

Table V: Discussions on Findings ***Indicators of Financial Performance of Banks***	***IBs***	***Reasons***	***CBs***	***Reasons***
Profitability Position	Higher	The increasing size of IBs in Pakistan, better and more efficient utilization of their resources.	Lower	Facing high risk which affects their profitability.
Liquidity Position	Lower	Granting more loans out of their deposits instead of taking external loans.	Higher	Lend money using external debts more than their deposits.
Capital Adequacy and Leverage Positions	Sound Capital Structure	Having sufficient HQLA and achieving the prescribed amount of capital adequacy ratio as instructed by SBP.	Sound Capital Structure	Having high-quality assets (HQLA) and maintaining capital adequacy level as instructed by SBP.
Risk and Solvency Positions	Low Risk and High Solvency	They don't rely on external debts to finance their operations.	High Risk and Low Solvency	They take more and high debts and have more risk of defaults.

Moreover, both types of banks maintain Capital Adequacy and Leverage ratios as per the requirements of SBP, depicting the soundness of their capital structure. IBs show better performance in the context of these ratios and have better risk management.

The conclusion is, in Pakistan IBs are performing well with the assistance of SBP despite having a small part of the financial sector. This implies that by raising the share of IBs in the financial sector, they would have room to perform better. Based on this, the merging of IBs is recommended in order to expand their asset size. This offers a significant area for future research because annual updates to IB and CB evaluation must be made. Additionally, since IBs still account for less than 5% of all banking assets in Pakistan, the research might be expanded to examine why this growth is not occurring as anticipated.

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The impact of energy consumption on economicgrowth: Based on provincial panel data in China

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Abstract:

Background: The rapid development of human society cannot do without the use of energy. Since China's reform and opening up to the new era, the economy has been growing rapidly, and at the same time, energy consumption is also increasing.

Methods: Based on the Panel data of 30 provinces in China from 2000 to 2019, this paper uses the econometric research method to build a spatial econometric model to explore the impact of energy consumption on economic growth.

Results: This article finds that: (1)There is a significant spatial correlation between energy consumption and economic growth in various provinces and cities, and spatial econometric models need to be used for analysis. (2) There is a strong spatial dependence and spatial scale effect between neighboring provinces. The total output of energy consumption plays a crucial positive role in promoting local economic development, and also has an indirect impact on surrounding provinces, and this indirect effect is a negative spatial spillover effect. (3) Among the four main energy consumption quantities that constitute energy consumption, the four main energy consumption plays different roles, and labor and capital are also important factors.

Keywords: Energy consumption; Economic growth; Spatial econometric model

Introduction

Over the past 40 years of reform and opening up, China's economy has achieved sustained, comprehensive and rapid development. In 2010, China surpassed the United States to become the world's largest energy consumer, according to the BP Statistical Yearbook of World Petroleum. With the rapid development of China's economy, in the near future, energy demand will become the primary factor that must be considered in China's development. China has a large land area, rich terrain, large energy and various types. Since the beginning of the new century, with the continuous development of China, the demand for energy and consumption of various production activities have increased a lot compared with previous years. As the country pays more and more attention to the ecological environment, the policies adopted by the government are more supportive and encouraging the consumption of cleaner and renewable energy, which means that the relevant policy documents are gradually changing the energy consumption pattern.

According to the national energy and economic data, China's total energy consumption and GDP continue to grow year by year, especially from the comparison between the growth rate of China's total energy consumption and economic growth rate (see Figure 1-1), it can be seen that China's total energy consumption and GDP maintain a basically consistent development trend. Although the specific growth rate of total energy consumption and GDP growth are not the same, the change trend and change amount of growth rate have a high degree of cofrequency, and the turning point of growth decline and rise are extremely consistent. For example, the growth rate of total energy consumption and GDP growth reached the maximum value in 2004 and the minimum value in 2016. The growth rate of total energy consumption is slower than that of GDP. After 2011, total energy consumption maintained a relatively stable level, while after 2011, GDP growth rate also gradually decreased, and gradually increased to positive after falling to the minimum value in 2016. That is still less than GDP growth in the early 2000s. Based on the facial data of 30 provinces and cities in China from 2000 to 2019, this paper studies the impact of energy consumption on economic growth and explores the promoting role of energy consumption on economic growth according to the spatial econometric model.

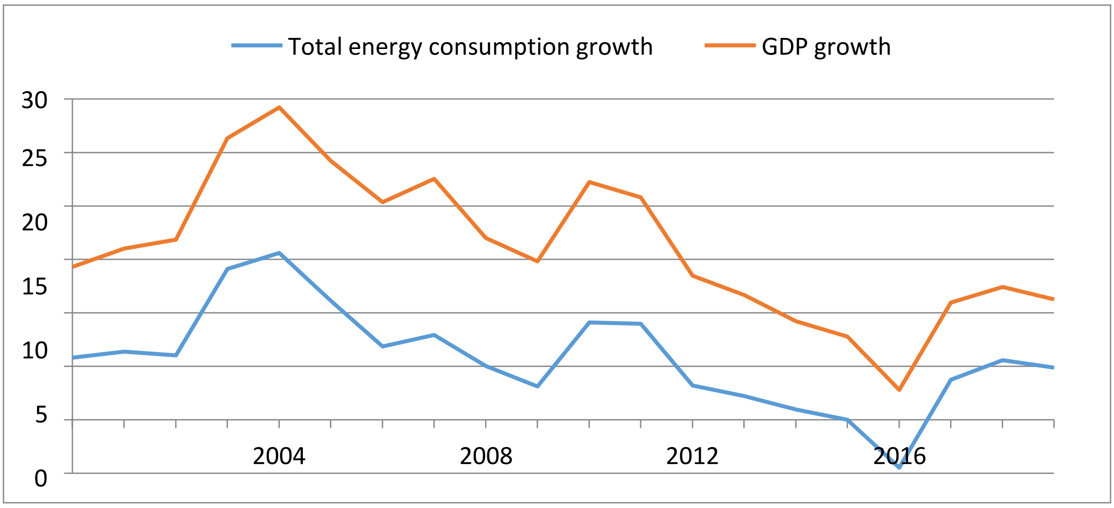

Figure 1-1 : Comparison of total energy consumption growth rate and economic growth rate in China (2000-2019, unit: %)

The rest of this paper is organized as follows: The second part is the main literature review of the impact of energy consumption on economic growth, and describes the mechanism of nonlinear impact; The third part establishes the spatial econometric model, and makes necessary explanation and preliminary processing to the variables and data used in this paper. The fourth part is the empirical research results, and make the basic analysis and test; The fifth part is a summary of the main conclusions of this paper, and puts forward policies and suggestions.

Literature review

(1) Foreign research status

On the empirical analysis of energy consumption and economic growth, scholars around the world have conducted a lot of scientific research. At the beginning, when overseas scholars studied the impact of energy consumption on economic growth, the key focus was on the impact of national energy consumption on economic growth and the Granger causality between them. Most of them chose traditional econometrics to build the impact relationship model based on the logical relationship detection of two variables. For example, Sami Ben (2020) discussed the different impacts of energy consumption on economic growth in the long and short term based on the data information of energy consumption and economic growth in France[1]. According to the empirical research, economic growth promotes energy consumption in the short term, but in the long term, energy consumption will in turn promote long-term economic growth, and then obtain the key result that energy consumption has a significant long-term impact on urbanization development. With the increasing concern of macroeconomists about the impact of energy consumption on economic growth, overseas experts and scholars have gradually introduced the production function and added some other explanatory variables to further study the impact of energy consumption on economic growth. For example, AhdiNoomen etc all, in their study in 2020, introduced energy into the production function as a factor of capital input for production and manufacturing, and created a multi-factor model with asset, human capital and energy factors at the same time [2]. Model regression shows that economic growth is obviously affected by energy input, but in the long term, when manipulating energy consumption, we must consider whether it will inhibit the sustainable growth and development of the economy, and the current policy of environmental protection and energy conservation will have a relatively large constraint on long-term economic growth, which will not be easy and effective and unreasonable. With the prevalence of panel data theory and its advantages of effectively getting rid of the information defects of time series data, overseas experts and scholars have gradually introduced panel data theory to study the impact of energy consumption on economic growth based on a lot of panel data. For example, Themba (2019) conducted an empirical study on the data information of energy consumption and economic growth of 15 SADC countries from 1990 to 2015, and came to the conclusion that energy consumption has a greater impact on economic growth in a short period of time. Based on this, it is proposed to use energy for manufacturing units that must consume a lot of energy according to the countermeasures of environmental protection and energy saving in daily life, so as to promote economic growth [3]. Jaganath et al. (2020) studied the energy consumption represented by coal consumption. Based on the collected data information about coal consumption and economic growth in 15 countries in the past 27 years, they created a panel data entity model and obtained the result that coal consumption has a significant impact on economic growth [4].

(2) Domestic research status

At present, domestic research on the impact of energy consumption on economic growth started later than overseas research. Unlike foreign scholars, who are mainly concerned about the impact of overall energy consumption on economic growth across the country, many Chinese scholars tend to choose some provinces and cities in China as the main research objects, and have also achieved certain research results. For example, Wang Qiuming (2020) used the energy consumption data information and economic growth data of Jiangsu Province from 1990 to 2017 to carry out stability and co-integration testing, and then used Toda-Yamamoto causal testing to discuss the impact of energy consumption in Jiangsu Province on the economic growth of the province [5]. Taking Anhui as the research object, Hao Yuanyuan (2020) selected Anhui's economic growth, total energy consumption, asset capital input, human input in the secondary industry and output value of the secondary industry as explanatory variables of the study, created a VAR model associated with them, and finally conducted an in-depth study based on Anhui's 31-year time series data from 1988 to 2018. Analyze the interaction between variables [6]. Guo Yi (2009) conducted an empirical study on the total energy consumption and gross domestic product of Fujian from 1978 to 2007, and found that the two are the result of one-way causality rather thantwo-way causality [7]. In addition to studying individual provinces, there are also different scholarswho study the impact of energy consumption on economic growth from different aspects such as regions and industries. For example, Xu Xiaobin, Li Chuanzhao, Xu Jinxiu and Xu Xiaofeng (2008) found that the impact of energy consumption on economic growth in the eastern and western regions of China was significantly different based on the analysis of the number of provincial panels in the eastern and western regions of China during 1986-2005. The correlation between energy and economic growth in eastern China is closer than that between energy consumption and economic growth in western China [8].

Data methods and models

(1)Variable selection

With reference to the studies of many scholars on economic growth and energy consumption, this paper takes the nominal GDP of each province in 2000 as the base period, and the GDP value calculated according to the GDP deflator and the nominal GDP of each year as the explained variable to measure economic growth. The core explanatory variables are the total energy consumption, coal consumption, oil consumption, natural gas consumption, and electricity consumption of each province, and labor and capital are selected as control variables. The labor data is measured by the number of employees at the end of each year, and the capital data is measured by the provincial and municipal fixed assets investment in each year.

(2) Data sources

Based on the availability and comparability of data, the data of energy consumption, economic growth and control variables in this study were selected from the panel data of 30 provinces and cities in China from 2000 to 2019. All data and information are derived from China Statistical Yearbook, National Bureau of Statistics, China Population and Employment Statistical Yearbook,

China Provincial GDP Statistical Yearbook and some cities' statistical yearbooks over the years

(3) Space panel model

1.Spatial matrix

The spatial weight matrix is an n-order square matrix Wij (n*n), which is used to distinguish the spatial adjacent levels between different observations (Wang Jufei, 2006) [9]. When measuring whether two provinces are adjacent, a spatial weight matrix W is constructed in the form of an adjacency matrix. After comprehensive consideration, combining data and referring to previous research methods, this paper will choose a binary adjacency matrix as a spatial weight matrix, and then test the spatial correlation.

2.Model setting

Based on the data testing of spatial metrology and the research model of Shao Yanfei et al. (2022), it is determined that the spatial Durbin model [10] is used. The SDM model constructed is set as follows:

$$lny_{it} = \rho W_{it} lny_{it} + \beta lnX_{it} + \delta W_{it} lnX_{it} + \varepsilon_{it}$$

i and t represent the i province (city) and t year respectively. Iny_{it} is the explained variable, derived from the logarithm of provincial GDP. InX_{it} is the explanatory variable after logarithm is taken, including the core explanatory variables, total energy consumption, coal consumption and oil consumption. Natural gas consumption (gas), and electricity consumption (electricity), and the control variables labor (K) and capital (L). ρ is the spatial auto regressive coefficient, W is the spatial weight matrix, ε and μ represent the random error term, λ is the spatial auto correlation coefficient of the error term.

(4)Descriptive statistics of variables

Table 3-1shows the descriptive statistics of explained variables and explanatory variables:

Table 3-1: Descriptive statistics of each initial variable

Variable	Unit	Observation	Average	Standard	Minimum	Maximum
GDP	Hundred million yuan	600	10809	11059	263.6	63297
Total energy consumption	Ten thousand tons Standard coal	600	11511	8176	479.9	41390
Coal consumption	Ten thousand tons	600	11314	9691	182.8	51332
Oil consumption	Ten thousand tons	600	1507	1254	0.174	6443

Hundred million	Hundred million m^3	600	41.14	46.94	0.010	288.1
Electricity consumption	Hundred million kW·h	600	1377	1230	42.23	6831
Labor（L）	Ten thousand perple	600	2539	1688	275.5	7150
Capital（K）	Hundred	600	36487	38267	1511	228702

million

Empirical analysis

(1) Moran index test

This paper uses the global Moran Index to conduct a spatial autocorrelation test on the GDP of 30 provinces from 2000 to 2019, and the results are shown in Table 4-1. As can be seen from Table 3-2, when the adjacency matrix is used, the global Moran's I of 30 provinces in China is all positive, and the P-value is less than 0.05, the significance level is 95%, and the significance level has a trend of increasing year by year, indicating that the economic development level has a positive spatial effect in each year. This means that the economic development level of 30 provinces in China has a significant spatial dependence, and the general regression analysis does not take into account the spatial correlation between variables, so the use of empty panel model is more accurate than the use of traditional panel model.

Table 4-1: Economic development levels of 30 provinces in China 2000-2019 Moran's I

Variables	I	E(I)	sd(I)	z	p-value*
GDP2000	0.197	-0.034	0.116	1.984	0.024
GDP 2001	0.197	-0.034	0.116	1.991	0.023
GDP 2002	0.197	-0.034	0.116	1.990	0.023
GDP 2003	0.194	-0.034	0.116	1.973	0.024
GDP 2004	0.195	-0.034	0.116	1.986	0.024
GDP 2005	0.191	-0.034	0.115	1.957	0.025
GDP 2006	0.190	-0.034	0.115	1.950	0.026
GDP 2007	0.191	-0.034	0.115	1.958	0.025
GDP 2008	0.194	-0.034	0.115	1.979	0.024
GDP 2009	0.192	-0.034	0.115	1.967	0.025
GDP 2010	0.191	-0.034	0.115	1.950	0.026
GDP 2011	0.186	-0.034	0.116	1.911	0.028
GDP 2012	0.186	-0.034	0.116	1.904	0.028
GDP 2013	0.187	-0.034	0.116	1.917	0.028
GDP 2014	0.190	-0.034	0.115	1.944	0.026
GDP 2015	0.193	-0.034	0.115	1.972	0.024
GDP 2016	0.199	-0.034	0.115	2.022	0.022
GDP 2017	0.201	-0.034	0.115	2.040	0.021
GDP 2018	0.202	-0.034	0.115	2.054	0.020

GDP 2019	0.204	-0.034	0.115	2.068	0.019

(2) LM test and R-LM test

The results of LM test and R-LM test are shown in Table 4-2. From the P-value results in Table 4-2, it can be seen that the P-value of the spatial error model is significant at 1% level, which means that the SEM model can be chosen. Since the P-value of the spatial lag model is also significant at 5% and 1% levels, SAR model can also be chosen. In summary, the SDM model combining SEM and SAR is selected in this paper because both SEM and SAR models are suitable.

Table 4-2:LM test and R-LM test results

	Test	Statistic	df	p-value
Spatial error:				
	LM	621.313	1	0.000
	R-LM	605.523	1	0.000
Spatial lag:				
	LM	20.877	1	0.000
	R-LM	5.087	1	0.024

(3) Hausmann test

In order to determine whether the fixed effects model or the random effects model should be chosen, the Hausmann test is performed. The original hypothesis of Hausmann test is that random effects are more effective than fixed effects, if the original hypothesis is accepted, it is more convenient to choose random effects, if the original hypothesis is not true, then fixed effects are better, in which case the fixed effects model should be used. In the results of Hausmann test, chi=757.78 is positive, and p value of 0.000 is less than 0.01, which is significant at 1% test level. Therefore, when selecting SDM model, it is better to choose fixed effect model.

(4) LR test and Wald test

In the LR test, the p value of lrtest sdm sar and lrtest sdm sem is 0.000, which is very significant, and both reject the null hypothesis of degradation. In Wald test, prob>chi2=0.0000 is very significant, rejecting the original hypothesis that SDM model will degenerate into SEM model or SAR model. In combination, SDM model is more suitable as the spatial metrology model in this paper. After the hausman test, the result shows that the test is passed at 1%. According to the results of the three effects of regional fixed effect, time fixed effect and double fixed effect, the time fixed effect is the most significant, so we choose to use the spatial Durbin time fixed model next.

(5) Regression results and interpretation of spatial Durbin time fixed model

The regression results of the spatial Durbin time fixed model are shown below (see Table 4-3). Model (1) is the estimation result of the main regression, model (2) is the estimation result of the

spatial lag term of the variable, that is, the diffusion effect, and model (3) - (5) is the estimation result of the direct, indirect and total effects of the decomposition of spatial effects. In Table 4-3, the R-square result was 0.926, and Log-likelihood was 276.6309 by test, with a larger value, indicating a higher degree of fit and high confidence of the model. According to the constructed spatial Durbin model, ρ is the spatial autoregressive coefficient rho, the statistical results of β coefficient are shown in Main in Table 4-3, and the statistical results of WX coefficient are shown in Wx item in Table 4-3.

The p value of the spatial autoregressive coefficient is 0.00, which is significant at 1% level, and its coefficient of 0.31 is greater than 0, which is positive, indicating that the explained variable, namely GDP, has a positive spatial spillover effect on itself, that is, the economic development of each province has a positive spatial spillover effect on itself. According to the statistical β value in Main, all variables have reached the significance level of 1%, the coefficient of coal and electricity consumption is negative, and the other variables are positive, indicating that coal and electricity consumption have a negative impact on economic development, and the total energy consumption and the added control variables have a positive impact on economic development. However, Wx can explain the spatial conduction effect better than the coefficient of Main. The coefficients of total energy consumption, natural gas and capital are negative, and the p-value is 0.00, indicating that these three variables all have negative spatial spillover effect, and neighboring provinces have negative conduction effect on local economic development, except coal, which is not significant. The situation of other variables is opposite to the effect of these three variables, which is the positive spatial spillover effect and the positive conduction effect.

As can be seen from Table 4-3, total energy consumption, oil consumption, natural gas consumption and capital are significant in terms of direct effect, indirect effect and total effect. According to the display results, it can be seen that in the direct effect, If the total energy consumption, oil consumption, natural gas consumption and capital increase by one unit, the economic growth of the province will change by 0.75, 0.03, 0.017 and 0.652 units, respectively. In the indirect effect, a one-unit increase in total energy consumption, oil consumption, natural gas consumption and capital in neighboring provinces will lead to changes in economic growth of the province by -0.489, 0.126, -0.053 and 0.512 units, respectively. In the total effect, one unit of change in total energy consumption, oil consumption, natural gas consumption and capital in all regions can affect the economic growth of the province by 0.261, 0.156, -0.036 and 1.164 units.

Table 4-3: Regression results of spatial Durbin time fixed model

Variable	Modal(1)	Modal(2)	Modal(3)	Modal(4)	Modal(5)
	Main	Wx	Direct effect	Indirect effect	Total effect
total energy	0.777***	-0.593***	0.750***	-0.489***	0.261*
coal	-0.250***	0.046	-0.253***	-0.038	-0.292***
oil	0.022***	0.084***	0.030***	0.126***	0.156***

gas	0.021***	-0.045***	0.017***	-0.053***	-0.036**
electricity	-0.269***	0.279***	-0.254***	0.272***	0.019
L	0.251***	-0.239***	0.239***	-0.222***	0.017
K	0.624***	0.182**	0.652***	0.512***	1.164***
rho	0.310***				
	(0.00)				
sigma2_e	0.020***				
	(0.00)				
Observations	600	600	600	600	600
R-squared	0.926	0.926	0.926	0.926	0.926
Number of id	30	30	30	30	30

Conclusions and Suggestions

1.basic conclusions

Based on the panel data of energy consumption and GDP of 30 provinces and cities from 2000 to 2019, this paper adopts spatial measurement method to study the internal relationship between energy consumption and economic growth and its temporal and spatial impact. Finally, the following conclusions are drawn:

First, China's total energy consumption and GDP have maintained a basically consistent development trend, and the change trend and change magnitude of the growth rate have a high degree of synchronicity. Secondly, according to the analysis results of the spatial econometric model, it can be seen that: First, there is an obvious spatial correlation between energy consumption and economic growth in each province, and it is necessary to use the spatial econometric model for analysis. Secondly, neighboring provinces have strong spatial dependence and spatial scale effect. Third, the total energy consumption plays an important positive role in promoting the regional economy, and also has an indirect effect on neighboring regions, and this indirect effect is a negative spatial spillover effect. The direct effect of total energy consumption is 0.750, the indirect effect is -0.489, and the total effect is 0.261. This shows that the impact of energy consumption in the province on the economic growth of the province is 0.750, and the impact of energy consumption in neighboring provinces on the economic growth of the province is -0.489. Among the four main energy consumption, coal consumption has a negative promoting effect on the province and neighboring provinces, and the direct effect and total effect are particularly significant. Both direct and indirect effects of oil consumption are positive, and are significant at 1% level under various models, with a total effect of 0.156. Although the effect of natural gas consumption on the economic growth of the province is positive, the spatial spillover effect on neighboring provinces is negative, and the total effect is also negative. The direct effect of electricity consumption is positive, the indirect effect is negative, the influence coefficient of the two is close, but the total effect is positive. For the two control variables, the contribution of labor force to local economic growth is not much different from that of neighboring regions, but the contribution to the province is positive, and the contribution to the neighboring provinces is negative, and the overall contribution is positive. There is little difference in the effect of capital on the economic growth of the region and the neighboring regions, both of which are positive, and the total effect is the largest among all explanatory variables (1.164).

Sustained and steady economic growth has always been a priority for our country. Theoretically speaking, energy consumption plays an important role in China's economic growth. Through the regression analysis of the test results of the above spatial econometric model, we can see that the total energy consumption does affect economic growth, and the four major energy consumption also play different roles, and labor and capital are also important factors.

2.relevant suggestion

(1) Reduce consumption of coal and natural gas. At present, China has become the world's largest energy consumer, but the growth of energy consumption in the form of high energy consumption, especially the proportion of coal use has been high, such a situation is not sustainable. It is not difficult to find from the regression results of the spatial Durbin time fixed model that the consumption of coal has a negative spatial effect on both the province and the neighboring province, which is also corresponding to the primary problems existing in China's energy environment at the present stage. In order to deal with the shortcomings of China's energy and environment problems at the source, the consumption of coal and natural gas must be reduced. Coordinate energy development and environmental protection, for overall consideration, make more use of more economical and clean energy, in order to better promote economic development.
(2) Increase consumption of oil and electricity. It can be seen from the empirical analysis that the promoting effect of oil consumption on economic growth is all positive, and under the decomposition of the spatial Durbin model, the direct effect, indirect effect and total effect are all positive, and the effect of oil consumption is positive both for the province and the neighboring province. While the direct effect of electricity consumption on economic growth is negative, the indirect effect and the total effect are positive. Therefore, when issuing various policies, we should not blindly eliminate the reduction of oil consumption, but increase the consumption of oil, and at the same time, we should actively use electric energy to help daily production and life.
(3) According to the economic development status of each province, different renewable energy consumption targets and personalized energy finance, taxation and subsidy policies should be formulated for different regions. Improve the relevant system construction and legal construction, and strive to ensure that areas with high energy consumption intensity and low level of economic development can get more preferential policies, so that China's energy consumption and economic growth can be more healthy, balanced and sustainable development.

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Investigating the Impact of Training and Developmenton Organizational performance: A Study on Old Age Employees

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Abstract:

Training and development is great contribution in senior employee's performance and organization productivity. There for the objective of this study to see the impact of training and development of senior employees and organization productivity. Seniors employees of the organization are an assets of the organization but the organization could never use them in good way. In past not work on senior's employees. Our study related to senior's employees and organization productivity. The impact of training and development programs for senior employees on organizational productivity will investigated in this study. The study will investigate that increased employee competencies, effectiveness, and productivity are mostly dependent on their knowledge, skills, and attitudes—all of which are primarily developed through training and development. In order to improve and promote organizational effectiveness, productivity, and profitability as well as to gain a competitive advantage over rivals, the paper will tell us that the primary goal of training and development programs for older employees is to cultivate the skills, knowledge, and competencies of the workforce.

The fundamental tenet of training and development is that employees' attitudes, abilities, behaviors, skills, and competencies must all be enhanced if organizational goals and objectives are to be met. This study will fill the gap because most of studies on young employees in past but were not work on old age employees in service sector. The employee of the organization is assets of the organization so, utilize these assets in good way. This study base on service sector employees of Pakistan and use conveyance sampling techniques for collecting data. Research design will base on quantitative research and data will be analyze through PLS-SEM. This study will be contributing and find out the importance of old age employees. The old employee how to perform good work for the organization in good way and contribute in organization performance because the old age employees know the environment of the organization but passage of time

and technology change they not perform well. So, this study will be find out how the performance of the organization will be crease through old age employees training & development.

Key Words: Training & Development, Employee Commitment, Training & Development Evaluation, Perceived Organizational Productivity

Chapter :1

Introduction:

1.1 Problem Statement:

Creating individualized, unique, and non-replaceable human capital is a crucial strategic tool and a prerequisite for enhancing organizational performance in the modern corporate world (Shaw, Park, & Kim, 2013). Because of this, businesses spend a lot of money on programs and activities related to training and development (T&D) (Association for Talent Development, 2017). Nguyen, Truong, & Buyens (2010) and Tharenou, Saks, & Moore (2007) both cast serious doubt on the real contribution of T&D to company success based on meta-analytic assessments of empirical evidence. For instance, a number of empirical studies have shown that training improves employee competence and motivation as well as business performance (Castellanos & Martin, 2011; Kim & Ployhart, 2014). Ployharts, Call, and McFarland (2017) pointed out that T&D investment frequently contributes to an increase in employee performance while also having unfavorable effects including greater job mobility, bargaining power, and turnover.

Old employee has many skills and experiences but time of technology change and advancement in organization sector is important to give training and development opportunity of old age employee because he done work good way on experience base other than young employee.

As the population gets older, elder workers are more prevalent and play a bigger role in businesses and national economies. Organizations have a range of skills and commitment levels among their senior staff. Intriguingly, the baby boomer generation, which was born between 1946 and 1964, is currently in the age range of 53 to 71. Many people in this age group who are still employed are debating whether to remain in their current positions, leave them, or flexible restructure their employment. Bridget Fice is an Australian PO student at the UNE Business School in Armidale. The benefits of keeping certain elderly people on the payroll outweigh the risks of losing their skills, knowledge, and social capital that have been amassed over many years of employment**.** Some older workers say that the main obstacle pushing them into retirement is the physical demands of their jobs. It's ironic that people who work in these fields frequently possess a wealth of knowledge and experience. -Lyons and Kuron (2014) By mentoring and teaching younger workers, these elder professionals are frequently more than glad to pass on their knowledge and abilities. According to research, older employees are more likely to consider their jobs as secure, which leads to a greater willingness to share knowledge and skills with younger and developing employees who may have previously been viewed as "competitors" for status and other perks. Many older individuals with demanding occupations should pay particular attention to the physical components of their work. Additionally, these workers might be

particularly receptive to flexibility. So, the training and development of old age employee is very big issue. The training and development opportunity are not provided to old age employees. If you think your organization productivity good so train and develop old age employee. Seniors employees of the organization are an assets of the organization but the organization could never use them in good way. In past not work on senior's employees. Our study related to senior's employees and organization productivity. The impact of training and development programs for senior employees on organizational productivity will investigated in this study. The study will investigate that increased employee competencies, effectiveness, and productivity are mostly dependent on their knowledge, skills, and attitudes—all of which are primarily developed through training and development. In order to improve and promote organizational effectiveness, productivity, and profitability as well as to gain a competitive advantage over rivals, the paper will tell us that the primary goal of training and development programs for older employees is to cultivate the skills, knowledge, and competencies of the workforce. This study will fill the gap because most of studies on young employees in past but were not work on old age employees in service sector. The employee of the organization is assets of the organization so, utilize these assets in good way. This study base on service sector employees of Pakistan and use conveyance sampling techniques for collecting data. Research design will base on quantitative research and data will be analyze through PLS-SEM.

1.2 Gap:

Employees over 55 make up a substantially smaller percentage of the workforce who receive training

than other employees do. The goal of this paper is to make the argument that their effective training isone of the causes to increase the organization productivity because the old employee has many skills and experience than younger employee that has not been considered thus far. ("Thomas Zwick Faculty of Business Management and Economics, University of Würzburg, Würzburg, Germany.")

1.3 Purpose

So, the purpose of this study identifies the factor.

So, the purpose of the study I.V on D.V through Mediator.

So, the purpose of the study checks the effect of training and development on organization outcomes.

Chapter 2

Literature Review

2.1 Theory

This theory social exchange theory; Eisenberger, Huntington, Hutchison, & Sowa, 1986; Masterson & Stamper, 2003. And (Chan, 1998) support this study.

2.1 T&D, organization productivity:

According to Ahuja (2000) and Sung & Choi (2014a), organization relies on making use of the vast and varied reservoir of knowledge and information that makes it possible to combine and reconfigure existing knowledge in new ways. Because T&D promotes ongoing, exploratory learning that gives workers new information and pushes for experimentation at work, it may improve firm innovation (Shipton, West, Dawson, Birdi, & Patterson, 2006). According to Castellanos and Martín (2011) and Nguyen et al. (2010), task-related KSAs of organizational members are essential for problem identification and the generation of creative and practical ideas. According to Gubbins et al. (2006), Kim & Ployhart (2014), Sitzmann & Weinhardt (2017), T&D is a successful tactic that aids staff members in achieving appropriate KSAs for their adaptive performance. But T&D is highly dependent on resources and demands significant asset investment, so in order to be successful, there must be enough resource allocation (Grossman & Burke-Smalley, 2017; Ployhart et al., 2017; Mediating roles of employee commitment

2.1.1 Employee commitment:

The symbolic value of T&D is one fundamental mechanism that explains why it benefits employees. An organization's investment in T&D for staff members sends a strong message about its concern for their well-being and personal development. Employer investment in T&D strengthens employees' attachment to their company by instilling a strong belief in the company's sincere support (see social exchange theory; Eisenberger, Huntington, Hutchison, & Sowa, 1986;
Masterson & Stamper, 2003). Furthermore, workers who believe that T&D is helpful and relevant to completing their tasks are likely to feel good about and grateful for their company, which helps them form a bond of trust and attachment with their employers (see also perceived organizational support; Rhoades & Eisenberger, 2002). Employee commitment to an organization and their perception of its membership tend to.

2.2 T&D-related moderating contingencies:

2.2.1 T&D evaluation:

According to Spence and Keeping (2011), managers evaluate employees and provide them with feedback as a critical and commonly used part of HR practices. Assessment procedures have many advantages, including gathering behavioral data, keeping an eye on, and managing worker conduct and output. These activities also open up channels of communication between managers and subordinates and enhance worker performance in general (P. Wright, Dunford, & Snell, 2001). However, despite its good intentions, research has also shown that evaluation has little to no effect—in fact, it can be harmful (see Smither, London, & Reilly, 2005 for a review). It seems that workers may hate assessment procedures, which can be seen as the implementation of Theory X, since managers feel that workers should be forced and controlled if they don't enjoy their jobs (Bouskila-Yam & Kluger, 2011). This viewpoint is consistent with the SDT viewpoint, which holds that the imposition of.

2.2 Hypothesis:

Human resource development, also known as HRD, is the cornerstone of T&D and is described as "a series of organized activities conducted within a specified time and designed to produce behavioral change" (Nadler & Nadler, 1970, p. 3). The authors of Sung and Choi (In Press), who linked T&D to SHRM, further defined T&D as "a firm's strategic option to build inimitable and non-substitutable human capital by developing task-related skills and knowledge through firm-specific training and education." Corporate HRD initiatives must include T&D (Dhamodharan, Daniel, and Ambuli, 2010; Gubbins, Garavan, Hogan, and Woodlock, 2006)

2.2 Operational definition:

Training and development refers to educational initiatives carried out by a business to improve old employee expertise and knowledge while educating them on how to better carry out particular tasks.

When we talk about organizational productivity, we're talking about how effectively and efficiently a whole organization uses its tools, methods, and tactics to accomplish its missions. It entails assessing the overall effectiveness of the organization's various departments, teams, and individuals.

Employee outcomes means employee performance who much produce and which level so measure organization performance through employee performance.

Relationship between variable’s

Direct relation between Training & Development and Organization Outcomes (organization productivity).

Direct relation between Training & Development and Employee outcomes (Employee commitment).

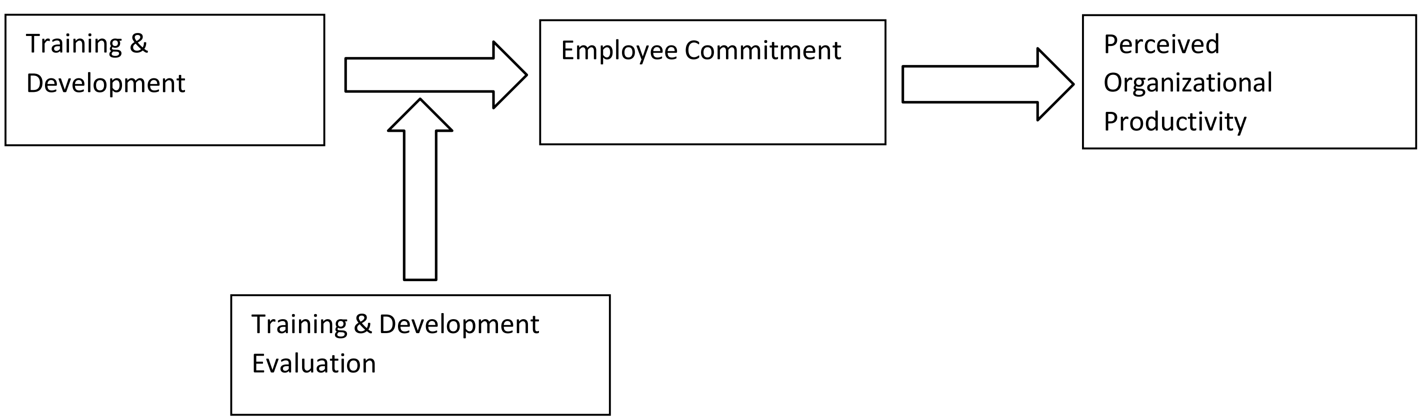
Direct relation between Employee outcomes (Employee commitment) and Organization productivity.

Indirect relationship between Training & Development, Training & Development Evaluation,

Employee Outcomes (commitment) and Organization outcomes (productivity).

2.3 Moderation: The relation Training & Development evaluation between Training & Development and Organization outcomes (Productivity)

2.4 Theoretical / Conceptual framework:



Chapter 3:

Methodology:

3.1 Research setting and data structure:

With consideration for situational contingencies related to T&D, this study attempts to investigate the effects of T&D in terms of analyzing employee outcomes and firm innovative performance. The research goal poses significant challenges for an appropriate research design, as it necessitates a sizeable firm-level sample and multisource time-lag data to enable reliable causal inferences from empirical observations (Takeuchi, Lepak, Wang, & Takeuchi, 2007). In order to overcome these obstacles and provide empirical support for the present theories, we will make use of the Human Capital Corporate Panel data that has been preserved by the Pakistan Research Institute of Vocational Education and Training (NAVTTC). NAVTTC, a research organization that backs the country's training and education policy regarding HR practices in Pakistani businesses, carried out a thorough corporate survey.

This study base on service sector employees of Pakistan and use conveyance sampling techniques for collecting data. Research design will base on quantitative research exploratory study and data will be analyze through PLS-SEM. This study will be contributing and find out the importance of old age employees. The old employee how to perform good work for the organization in good way and contribute in organization performance because the old age employees know the environment of the organization but passage of time and technology change they not perform well.

3.2 Measures:

A 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), will be used to assess each variable using multi-item measures. Using composition models of aggregation such as referent-shift consensus and direct consensus, will use to operationalize collective constructs, the individual responses of department managers and employees will be aggregated to the organizational level for analysis (Chan, 1998). Every scale will show respectable intraclass correlations [ICC(1), ICC(2)] and within-organization agreement [rwg(j)]. The aforementioned patterns will indicate that departmental managers and employees have similar perspectives on employee competence and firm innovative performance, as well as this study will share perceptions regarding training and development and commitment. According to Chen, Mathieu, and Bliese (2004), these indices will confirm the accuracy of our organizational-level compilation of department managers' and employees' ratings.

3.3 Significance:

No work on training & development old employee because in order to increase retention rates, this article examines the requirements and preferences of older workers in training and development initiatives. For a variety of reasons, managers could be hesitant to teach employees who are getting close to retirement. Additionally, managers adopt a number of techniques to avoid training veteran workers. The intended training results must be achieved when training is provided, which calls for reliable performance feedback. Finally, areas that should be included in training and development initiatives for senior employees rather than younger ones are suggested. ("Louise Tourigny, PhD; Marcia Pulich, PhD").The demands and preferences of older workers are examined in this article as they relate to training and development initiatives that can increase retention rates. Managers may be hesitant to teach employees who are getting close to retirement age for a variety of reasons. In order to avoid training elder personnel, managers also utilize certain strategies. To achieve the desired training outcomes, training must be delivered with precise performance feedback. Finally, topics are suggested that are better suited for senior personnel than younger ones to be included in training and development initiatives.

Seniors employees of the organization are an assets of the organization but the organization could never use them in good way. In past not work on senior's employees. Our study related to senior's employees and organization productivity. The impact of training and development programs for senior employees on organizational productivity will investigated in this study. The study will investigate that increased employee competencies, effectiveness, and productivity are mostly dependent on their knowledge, skills, and attitudes—all of which are primarily developed through training and development. In order to improve and promote organizational effectiveness, productivity, and profitability as well as to gain a competitive advantage over rivals, the paper will tell us that the primary goal of training and development programs for older employees is to cultivate the skills, knowledge, and competencies of the workforce.

3.4 Contribution of the study:

This study will fill the gap because most of studies on young employees in past but were not work on old age employees in service sector. The employee of the organization is assets of the organization so, utilize these assets in good way. This study base on service sector employees of Pakistan and use conveyance sampling techniques for collecting data. Research design will base on quantitative research and data will be analyze through PLS-SEM. This study will be contributing and find out the importance of old age employees. The old employee how to perform good work for the organization in good way and contribute in organization performance because the old age employees know the environment of the organization but passage of time and technology change they not perform well. So, this study will be find out how the performance of the organization will be crease through old age employees training & development.

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Family Incivility and Employee Thriving: A Moderated Mediated ModelPsychological Distress and Core Self-evaluation.

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Abstract:

This study extends the stress literature by exploring the relationship between family incivility and employee thriving. We examine whether psychological distress mediates the link between family incivility and employee thriving. We also investigate how core self-evaluation might moderate this mediated relationship. Data from a two-wave study indicate that psychological distress mediates the relationship between family incivility and employee thriving. In addition, core self-evaluation moderates the relationship between family incivility and psychological distress but not the relationship between psychological distress and employee thriving. The results hold while controlling for general job stress, family-to-work conflict, and work-to-family conflict. The findings suggest that family incivility is linked to employee thriving, and psychological distress and core self-evaluation are key mechanisms in the relationship. The data for the current study would be collected from working people. Based on conservation of resources theory (COR), this study assumes that family incivility negatively influences employees' thriving as it may create situation of distress. But, it is expected that individuals with high core self-evaluation would feel less distress and in return their thriving would not be affected.

Key Words: core self-evaluation, incivility, employee thriving, psychological well-being, work-family conflict

Problem statement:

Research on work-family conflict and its consequences on personal and professional outcomes has steadily increased in the last few years. (e.g., Allen, Herst, Bruck, & Sutton, 2000; Ford, Heinen, & Langkamer, 2007; Michel, Mitchelson, Kotrba, LeBreton, & Baltes, 2009). Less focus has been placed on the connections between work and family structures, though. Specifically, even though earlier studies indicate that family-related pressures may negatively impact work- life satisfaction (Ford et al., 2007), Few research have examined how family pressures affect the results of professional performance.(Crouter, 1984). We hope to make three contributions to the literature with this study. First, we build on previous research on stress by investigating a novel concept called "family incivility," which is a mild but persistent type of interpersonal stressor that has its roots in the family setting. Secondly, we look into the relationship between psychological distress and employee well-being. By using core-self evaluation, we contend that workers who witness rudeness in their families are more likely to suffer from psychological discomfort, which impedes their capacity to perform well at work. Third, we contribute to the research on stress and coping mechanisms by investigating variables that may mitigate the adverse effects of familial disrespect..Specifically, we examine core self-evaluation (Judge, Erez, Bono, & Thoresen, 2003) as a potential moderator of the relationships between family incivility, psychological distress, and employee thriving. The purpose of study is to less the family incivility of banking sector women and less the physicological distress and increase the employee thriving through core self evaluation between family and work.

Literature Review:

Family Incivility

In Oxford dictionary, the ill-mannered, insulting or impolite behavior towards others is called incivility. Keeping in view the definitions of workplace incivility a study by Andersson & Pearson (1999) explained family incivility as a weak abnormal behavior with a vague intent that breach the standards of respect and esteem in the family. The key elements of family incivility are discussed below.

A research conducted by Pearson, Anderson, & Wegner (2001) explains that family militant and mistreatment is more intense than the uncivilized behavior. Which typically involves three things

i.e. the misapply of power, the extended period and the physical violence (Finkelhor, Gelles, Hotaling, & Straus, 1983; Lachs & Pillemer, 1995). Family incivility is more fine rather than involving physical injury that typically include impolite and discourteous behavior, such as ignoring or not giving attention.

This all can be initiated by any family member, including suchas siblings or teenagers. Secondly, the purpose of incivility in the family is not clear. The uncivilized family may not have the intentions to harm the person. A study conducted by Corrina, Magley, Williams, & Langhout (2001) adds up that the family may act uncivilized through oversight, insensitivity and ignorance, and this does not harm the targeted person intentionally but accidentally. Thirdly, the standards of mutual respect are affected by family incivility within the family. However, families hold up many standards of behavior. We believe that families have a set of boundaries and limitations for treating each other, for example respecting each other's privacy and not mistreating each other. When we compare family incivility with workplace incivility, family incivility is more confused and it is easily ignored. However, the workplace has many written rules and regulations which the family does not have. Each family member has a different understanding of their family boundaries. For example, many of the family members exceed their limits and boundaries which are not acceptable but they still perceive that their act is within the limitations and they are confident that after their uncivilized act other family members will forgive them.

Family Incivility and Psychological Distress

Holmes & Raheen (1967), Kobasa (1979) found that mental and physical health problems could be generated by major life events such as death of a spouse. However, Delongis, Folkman & Lazarus (1988) detected that minor stressors can cause a greater effect on health. According to Cortina et al (2001), Lim, Cortina and Magley (2008) minor stressors cause frustration, Gotlib (1997) noticed that incivility can cause an undesirable demand that creates and enhances toxicityin the family domain. thus, decreasing the well-being of family members.

The argument has been supported by recent research for instance, as Cortina & Magley (2009); Pearson, Anderson & Porath (2005) found that incivility events occurring at the workplace targets worry and Lim et al,(2008) detected the symptoms of anxiety caused by incivility.

Despite incivility at the workplace, this study believes that family incivility can also havenegative consequences.

Hobfoll (1989) declared that the theory i.e. conservation of resources theory implies that the pitfall of beneficial resources such as good family relations and self-worth causes and enhances psychological stress. In 2011 Lim & Lee explained that the individuals who are facing incivilityare most likely to get information that is negative about their worth in the family, which will have an immense effect on family relationships. Altogether, these studies demonstrate that family incivility is related with the enhancement of psychological distress.

H1: There is a direct and a positive relation between family incivility and psychological distress.

Family Incivility, Psychological Distress and Thriving at work

A study conducted by Spreitzer, Sutcliffe, Dutton, Sonenshein, and Grant (2005) explained that thriving at work is a favorable state and it is called as a joint sense of vitality and learning. Thisresearch also suggested that those employees who thrive feel full of life and perk up i.e. vitality and acquiring knowledge i.e. learning. According to the study of Spreitzer et al. (2005) a desirable psychological state in which employees go through a phase of learning and vitality is called thriving at work. When employees thrive they perceive that their learning experience is

encouraging for their personal development. Spreitzer et al. (2005) explained the first element ofthriving i.e. vitality as an optimistic feeling of being alive and also explained the second elementlearning as a state of attaining skills and knowledge.

Both vitality and learning are necessary for employees to thrive. These elements perform their role by enhancing one another and eventually lead towards some personal development and growth. As Bhagat (1983) explained in his study that private life events can cause distress that can have an unfavorable effect on work. As Cooke & Rousseau (1984); Crouter (1984); Leiter & Durup (1996) noted that workers might neglect their job responsibilities if they face family stress.

A Research by Baum, Singer and Baum (1981) shows that psychological distress has a connection with negative performance. Employees that have gone through family incivility become inattentive at work. Hockey (1997) describes in his study that the motivation and all theefforts that an employee is putting in can also be depleted through psychological distress. Continuing these arguments this study hypothesized:

H2: Psychological distress is negatively related to thriving at work.

H3: Psychological distress mediates the negative relation between family incivilityand thriving at work.

The moderating role of CSE

Kammeyer-Mueller, Judge, & Scott (2009) had recent research on proposing an integrative model that shows how Core Self-evaluation CSE may help people to deal with stress. Durham (1997) found that people have crucial evaluations about themselves which are referred to as CSE. Also Judge et al (1997)(2003) noticed that four traits i.e. self-esteem, generalized self- efficacy, locus of control and emotional stability underlies in a high order construct i.e. CSE. Judge, Van Vianen, & De Pater (2004) defined that when CSE level is high individuals appraise themselves as competent and valuable. This study proposes that negative consequences of family incivility on psychological distress could be reduced by increased levels of CSE.

The cognitive appraisal theory theorized by Lazarus & Folkman (1984) shows, in their primary appraisals, that individuals facing stress situations will evaluate whether the encounter poses a threat. In second appraisal, to deal with stressors they evaluate that an individual must have the resources and ability. With respect to family incivility this study adds evidence that the higher level of CSE by affecting both primary and secondary appraisal may decrease the negative results

Bono & Judge (2003), Judge, Locke, Durham, & Kluger (1998) explained that those individuals having a positive viewpoint are less likely to face stress situations in their lives. These individuals are emotionally stable and do not consider family incivility as threatening. Taylor & Brown (1998) declared that the individuals believe that they can cope with the stressors easily. This will result that the negative psychological strains will not be generated by stressors (Judge et al., 2004). Individuals having higher levels of CSE are less likely to engage in the stress and even if these individuals suffer distress they can handle it and thus their work will not be affected (Greenberg et Al., 1992). Kammeyer-Mueuer et al., (2009), Luria & Torjman (2009) spotted that the higher level of CSE is highly related with the reduction of stress. For example individuals having favorable CSE are those who adapt strategies to deal with stress such as problem solving which have been identifiedto decrease the psychological strain.

Individuals with CSE will make solving problems a central point rather than focusing on theiranxiety. They will look for ways to reduce their distress so that it cannot interfere in their self- development. This study suggests that CSE will have an effect on the relationship between family incivility and psychological distress.

H4: CSE moderates the positive and direct relationship between family incivilityand psychological distress.

Theoretical framework:

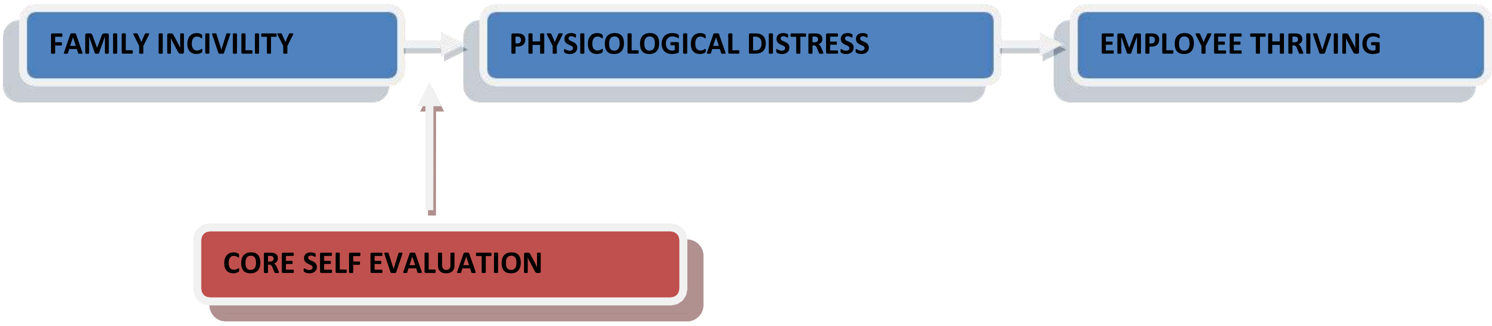

Figure: Proposed moderated mediation model

Methadology:

Research design:

The Study employs a mixed method approach combining both quantitative or qualitative methods to gain a comprehensive understanding of the impact of family incivility on employeethriving with a specific focus on moderating role of core self evaluation.

Sampling:

This research conducts a questionnaire survey on banking sector employees in Lahore, Pakistan. We use probability sampling technique which is simple random and collect data from individual person. The unit of analysis could be individual employees or workers within organizations.

These individuals would be studied to understand how they experience and respond to familyincivility, their levels of employee thriving, psychological distress, and cross self-evaluation within the workplace setting.

Target Sampling Population:

We target banking sector employes and we deeply explore the changes and feelings of employees in a natural environment, increase the inference of the causality of the variables, andreduce common method biases, this study employs the experience sampling method to collect data. With the support and cooperation of senior managers and human resources departments.

Measures:

This study measures Employee's thriving on a five-point Likert scale, with 1 representing "not at all" and 5 representing "very much".Other variables family incivility and physicological distress are measured on a five-point Likert scale, with 1 representing "never" and 5 representing "all of the time". And the variable core self evaluation are also measured five-point Likert scale with 1 representing “strongly disagree” and 5 representing “strongly agree”

Significance of study:

Our study extends prior work on stress and coping by introducing the concept of family incivilityand exploring its link to employee thriving. After controlling for job stress, family-towork conflict, and work-to-family conflict, we find that family incivility is associated with increased psychological distress which is in turn related to decreased employee thriving. We also find that CSE moderates the relationship between family incivility and psychological distress.

Theoretical Implications

While workplace incivility has received a lot of attention recently, the phenomenon of incivility in the family setting has not yet been thoroughly studied. Our findings, which are consistent withpast studies that have demonstrated the detrimental effects of stress on one's health, indicate that people who encounter rudeness from family members are likely to face serious risks to their mental health. Furthermore, our findings indicate that the relationship between incivility in the family and employee thriving is mediated by psychological distress. Our study reveals that exposure to incivility at home can also be negatively associated with performance in the work context, despite previous research finding that rudeness in the immediate setting negatively affects task performance. The association between family incivility and employee thriving appears to be largely explained by the psychological distress that comes with witnessing incivility at home. The outcomes corroborate the moderated mediation model we suggested.

More specifically, there was a correlation between higher psychological distress and high levels of family incivility for people with low CSE. On the other hand, there was no correlation between psychological distress and high levels of family incivility among those with high CSE. This is in line with earlier studies on the sub-traits of CSE and coping, which indicate that peoplewith low CSE may respond to stressors more adversely and use unhealthy coping mechanisms.

Our hypothesis is that employees with low CSE are more likely to doubt their ability to influencethe situation, leading them to adopt avoidant strategies like working longer hours to avoid spending time with family. The number of hours worked has been positively linked to work- family conflict and strain, so such avoidant tactics could backfire.

Managerial and Organizational Implications

According to our research, low-level interpersonal stressors like rudeness in the family may havea negative impact on one's mental health and performance at work. Sadly, supervisors may be more understanding of work-related problems, like taking care of ill children, than interpersonal problems, like rudeness in the family, when it comes to employee absences or tardiness.

Employees may also be ignorant of how stressors at home are influencing their ability to performwell at work. Therefore, in order to help employees identify and manage stressors outside of work and to raise managerial awareness of the potential spillover effects of family stressors, organizations may find it beneficial to set up support systems. Companies can also fund seminars

led by family therapists to raise awareness of the possibility that unfavorable interpersonal behaviors that appear harmless in a family context could cause problems in the workplace. These training sessions can assist staff members in creating preventative plans or putting stress- reduction techniques into practice. It's possible that managers will be essential in fostering environments that improve CSE. For instance, giving employees pep talks, positive feedback, and role models by managers may momentarily raise their self-evaluations. While companies can choose candidates with favorable CSE, they should also work to mold the CSE of current employees through, for example, job changes and overseas assignments. In conclusion, it's critical to grow and improve CSE to enable staff members to manage stressful situations both inside and outside of the company.

Conclusion:

Our study clarifies the connections between psychological well-being, employee thriving, and family incivility, which advances theory and research on stress and coping. In particular, we discover that for workers with low CSE, psychological distress mediates the relationship between family incivility and worker thriving, but not for workers with high CSE. We hope that this study serves as a springboard for further investigation into the potential harm that extended family and interpersonal incivility can do to workers' performance at work.

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Financial Ratio Analysis: A Comparative Study of Islamic andConventional Banks' Performance in Pakistan

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Abstract

Purpose

Over the past few years, the sustainability and growth of Islamic Banks (IBs) have raised a debate among policymakers, regulators, economists, and investors due to these financial institutions' rapid growth and development. The objective of this paper is to analyze the relative financial performance of IBs with Commercial banks (CBs) in Pakistan from 2019 to 2022. To measure the progress of IBs in comparison with CBs.

Approach

To evaluate the financial performance of IBs in comparison with CBs working in Pakistan, this study has considered the financial ratio analysis (FAR). Top-five IBs and top-five CBs, offering Islamic products, are taken as the sample dataset.

Results

The findings show no statistical difference between the profitability level and capital structure of conventional and Islamic Banks. Counter to this Islamic Banks are less risky, have lower liquidity, and are more solvent as compared to CBs.

Research Scops

This study only provides an overview of the financial performance of full-fledged IBs in comparison with CBs (providing both conventional and Islamic services) operating in Pakistan. Moreover, this study only considered sample data instead of considering the whole population of banks operating in Pakistan. Meanwhile, a cross-country analysis can derive more significant information, to compare the financial performance of Islamic and Conventional Banks.

Practical Implications

This study supports that Islamic banking should be augmented in Pakistan. And for this purpose, Islamic literacy should be promoted in Pakistan and IBs should open new branches to expand their business.

Originality/Value

This research would assist debtors, managers, creditors, investors, and other stakeholders in decision-making purposes. Furthermore, this latest information would also be useful to policymakers and regulators (i.e., SBP) for making policies and developing regulations for Pakistan’s financial and banking sector.

Key Words:

Islamic Banking Industry, Comparative Financial Performance, Conventional Banking Industry, Financial Ratio Analysis.

Introduction

The rapid and immense growth/development of IBs has raised a debate among policymakers and other stakeholders, about the performance and sustainability of IBs. This is the reason why in different time zones and for different countries, many studied i.e., Suroso *et al*. (2017), Ledhem & Mekidiche (2020), Rosly & Bakar (2003), Tlemsani & Suwaidi (2016),
Siraj (2012), Berger *et al*. (2019), Alexakis (2019), Baeshen (2021), Rusydiana & Sanrego (2018), Mustafa (2019), Daoud & Kammoun (2017), Sillah *et al*. (2014), Al-Sartawi (2019), Akram & Rahman (2018), and Elsiefy (2013), made an analysis of the financial performance of IBs.

Nowadays, one could not deny the growth of the Islamic banking industry, according to S&P Global Ratings on a global scale, it is growing by at least 8% annually (*Growing Belief in Southeast Asia's US$290 Billion Islamic Banking Market*, n.d.). Debate on the performance and sustainability of IBs has led the research such as Alexakis (2019), Belkhaoui et al. (2020), Ledhem & Mekidiche (2020), and Berger et al. (2019), with the purpose of analyzing and measuring the performance of IBs by samples taken from different Muslim countries and GCC.

As an Islamic country, Pakistan is also practicing Islamic Banking, therefore the evaluationof its financial performance in Pakistan is also needed. Nevertheless, the latest evaluations are lacking in the literature. As Shahid et al. (2013) evaluate the Islamic banking industry's financial performance from 2008 to 2010 with a sample of four banks (two CBs & two IBs). Undoubtedly, the studies like Siddique & Rahim (2013) and Saeed et al. (2013) covered the assessment of a large data set ranging from 2007 to 2012. However, these studies have analyzed the efficiency of IBs instead of financial performance.

Another study by AziZ (2016) used data from the period 2006 to 2014 and made an analysis to evaluate the performance of IBs. Moreover, the latest study by Majeed and Zainab (2021) evaluated the comparative performance of Islamic and Conventional Banks in Pakistan,using data from 2008-2019. So, it is observed that a study on the latest data is required to be conducted for recent times. Furthermore, it seems that the prior studies did not provide transparent reasoning for their research findings, which is to be considered as their limitations.

To override those limitations this study arises the following questions:

1. Have IBs shown better performance for the period 2019-2022 as compared to CBs inPakistan?
2. What factors account for the difference in the relative performance of IBs and CBs?

This Paper uses a sample of ten banks (5 IBs & 5 CBs) working in Pakistan, from

2019 to 2021. This study uses the latest data about the financials of banks working in Pakistan. Furthermore, this study uses a different sample of banks i.e., top 5 CBs and top 5 IBs, working in Pakistan. Adding more the comparison is made among the top five full-fledged IBs and CBs (offering the Islamic window).

Lastly, the study assists us to understand and find out the more logical and objective reasons behind findings, instead of just giving us the comparison of effective/lower performance of IBs and CBs.

With the reason that the bank's financial performance is essential for stakeholders in their decision-making strategy, this study has some requisite consequences. It signifies that evaluating financial performance is crucial. As studies related to this problem, in Pakistan, are behind the time. The study offers particulars of challenges, which could undercut the performance of IBs, which are not foregrounded in existing studies in Pakistan. Hence, the study aids investors in making more careful and effective decisions about their investments, and to the depositors, the study is assisting them with when to invest and when to withdraw the money. Besides this, it assists the managers to enhance the value of decisions regarding both finances and deposit services of the bank. Adding more, the findings are helpful for the policymakers and financial regulators in the country, i.e., SBP, to create the right policies andregulations.

Literature Review

Banks take deposits from customers and lend money to earn profit in the form of interest. Banks provide financing to the customer for personal as well as for different business purposes, i.e., to meet the requirement of working capital, acquiring new assets, etc, such type of financing leads to more employment opportunities, higher purchasing power, and reduce poverty in any country. According to Siraj (2012), the banking industry's performanceis accountable for a country's economic development. The financial performance of CBs is studied by many previous studies i.e., Berger et al. (2019), Samad (1999), Beck et al. (2013), Ledhem & Mekidiche (2020), Masruki et al. (2023), Reger et al. (1992), Alexakis (2019), Sabi (1996), and Siraj, (2012).

Literature shows that many studies have a comparison between the financial performance of IBs and CBs because the Islamic banking industry is evolving globally. Among these studies, many of them have concluded mixed findings. For example, Ariss (2010) applied Lerner Index and H-Statistics to analyze the financial performance of IBs. This study concluded that IBs are less profitable as compared to CBs, and this makes IBs less competitive, but on the other hand, IBs showed a higher value of the loan-to-asset ratio as well as greater capitalization. Another study by Abu Loghod (2010) has made a comparison of the performance of both types of banks IBs and CBs and reached the result that there is no difference in the performance of both types of banks in terms of internal growth and profitability, but CBs are riskier than IBs, as IBs got more independency from external funds.

Besides this many studies got mixed results comparing the performance of IBs and CBs, through financial ratio analysis, Srairi (2009), Elsiefy (2013), Masruki et al. (2023), and Siraj (2012). Likewise, another study by Adekola Olaitan Onakoya (2013) has performed a comparative analysis of IBs and CBs operating in the UK. This study showed that IBs are less risky and cost-efficient but are making less profit which leads them to be less competitive and inefficient in fulfilling their financial obligations as compared to CBs.

Furthermore, different studies in Pakistan have also concluded mixed results. As Jaffar & Manarvi (2011) find that IBs are less profitable as compared to CBs but IBs have more liquidity and capital adequacy. Ansari & Rehman, (2012), concluded that, as compared to their peers, IBs face insignificant risk, have more liquidity, and show greater operational efficiency. Although CBs are more profitable, IBs could play a better game in operational efficiency, liquidity, and asset turnover & debt to asset performance than CBs, Shahid et al. (2013). Another study, by Majeed & Zanib (2016), concluded that IBs are less scale efficient as compared to CBs, even though they are more dexterous in technical efficiency than CBs.

Many studies revealed that IBs have outperformed their peers. For instance, in 9 Middle East countries, the efficiency of IBs is assessed by Iqbal (2001) from 1990 to 1998. Another study by Bader (2008) compared the financial performance of conventional and Islamic financial industries, in the region of Asia and Middle East countries for the period of 1990-2009. Such studies analysed the financial performance through ratios and concluded that IBs couldsignificantly be more dexterous than their peers CBs.

Likewise, a study assessed the performance of IBs and reached the conclusion that IBs got more “technical efficiency”, and also IBs from Asian countries are performing more efficiently than IBs from Middle East and North African countries, (Ab-Rahim, 2013).Another study Rosman et al. (2014), undertook the same analysis but came with a different result that during crises IBs perform more sustainably, although they seemed like scale inefficient.

Nevertheless, some other studies found lower efficiency of IBs. A study conducted in Malaysia by Rosly & Bakar, (2003) and Tlemsani & Suwaidi, (2016), shows that IBs show slow-going performance as compared to CBs. Same as Hassan (2006), who conducted a study in the Middle East from 1995 to 2001, analysed the competency of IBs and conclude that IBs are less efficient as compared to CBs. Moreover, Saeed et al. (2013) conducted a study in Pakistan and used the techniques like financial ratio analysis (FRA) and data envelopment analysis (DEA) to analyse the competence of IBs from 2007-2011 and concludeless efficiency of IBs than CBs.

The analysis of the financial performance of the Islamic financial sector in Pakistan, particularly beyond 2020, is seen to be lacking in the literature, and even when it is there, the findings are sometimes ambiguous.

Table I. Some other studies evaluating comparative performance of IBs.

Studies References	*Results*	*Methodology Used*	*Study Period*
Studies Involved Cross-country Data			
Bader (2008)	IBs showed better performance as compared to CBs	DEA	1990 to 2005
Ledhem & Mekidiche (2020)	The performance of Islamic financial institutions is determined by their profitability.	CAMEL analysis	2014 to 2018
Iqbal (2001)	IBs showed better performance as compared to CBs.	Trend and ratio analysis	1990-1998
Bahrini, R. (2017).	During crises, IBs showed better performance as compared to CBs.	DEA	2007 to 2012
Haron (1996)	In competitive markets, IBs performed better as compared to CBs	OLS	1982 to 1994
Siraj (2012)	IBs and CBs showed mixed performance.	FRA	2005 to 2010
Zainol, Z. (2014)	During crises, IBs showed better performance as compared to CBs.	DEA	2007 to 2010
Chokri & Anis (2018)	IBs and CBs showed mixed performance.	Regression Analysis	2012 to 2014
Ariss (2010)	IBs and CBs showed mixed performance.	Lerner Index and H-statistics	2000 to 2006
Loghod (2010)	IBs and CBs showed mixed performance.	Logit model and FAR	2000 to 2005
Ab-Rahim (2013)	Asian IBs showed better performance than compared to MENA IBs.	DEA	2006 to 2011
Beck et al. (2013b)	IBs showed better performance as compared to CBs	FRA	1995 to 2009
Tlemsani & Suwaidi (2016)	IBs showed better performance as compared to CBs	FRA	2007 to 2008
Srairi (2009)	IBs showed lower performance as compared to CBs.	SFA	1997 to 2007
Studies Involved Country-specific Data			
Mukhibad & Khafid (2018)	IBs and CBs showed mixed performance.	SEM through WarpPLS	2009 to 2016
Elsiefy (2013)	IBs and CBs showed mixed performance.	FRA	2006 to 2010
Shamsu Uddin (2017)	IBs and CBs showed mixed performance.	CAMEL analysis	2010 to 2014

Mokhtar et al. (2008)	IBs showed lower performance than CBs	DEA	1997 to 2003
Rosly and Bakar (2003)	IBs showed lower performance than CBs	FRA	1992 to 1999
Adekola Olaitan Onakoya (2013)	IBs and CBs showed mixed performance.	FRA	2007 to 2011
Widagdo & Ika (2008)	IBs and CBs showed mixed performance.	FRA	2004
Samad and Hassan (2006)	IBs and CBs showed mixed performance.	FRA	1984 to 1997
Ab-Rahim (2013)	Domestic IBs showed lower performance as compared to foreign IBs.	DEA	2006 to 2011
Studies Involved Data from Pakistan			
Majeed & Zanib (2016)	IBs and CBs showed mixed performance.	DEA	2007 to 2014
Jaffar and Manarvi (2011)	IBs and CBs showed mixed performance.	CAMEL analysis	2005 to 2009
AziZ (2016)	IBs perform better than CBs	FRA	2006 to 2014
Ansari & Rehman (2012)	IBs and CBs showed mixed performance.	FRA	2006 to 2009
Saeed et al. (2013)	IBs showed lower performance than CBs	FRA and DEA	2007 to 2011
Usman and Khan (2008)	IBs showed better performance as compared to CBs	FRA	2007 to 2009
Shahid et al. (2013)	IBs and CBs showed mixed performance.	FRA	2008 to 2010

Note(s): Data Envelopment Analysis (DEA), Capital Adequacy + Assets Quality + Management + Earnings + Liquidity & Sensitivity (CAMEL), Frontier Approach (SFA), Financial Ratio Analysis (FRA),

It is also important to note that the ideas of IB's efficiency and financial performance are two different concepts and must be understood separately. The first one, the efficiency of the bank, is a complex concept to be understood by common people. Although the second one, the financial performance of the bank, is easy to understand, as it provides information in figures which is easy to compare by the bank's stakeholders i.e., customers, investors, employees, depositors, creditors, shareholders, etc. Thus, to assist financial regulators as well as the bank's stakeholders, this paper considers the financial ratio analysis from the latest database. Moreover, as Pakistan is a country that is actively involved in Islamic Banking development and its promotion, that is why it is vital to analyse the financial performance of IBs and compare this performance with CB's financial performance.

Methodology:

Population:

Currently, the banking industry of Pakistan is comprised of Development Financial Institutions (DFIs), and Commercial Banks which include Islamic Banks, Conventional Banks, and Microfinance Banks, most of them are incorporated in Pakistan and some of them are Foreign Banks. The banking industry in Pakistan consists of around 31 banks, which include 22 private banks, 5 public sector banks, and 4 foreign banks.

Sample Technique:

This study aims to compare the top 5 IBs and top 5 CBs in Pakistan in terms of their financial performance, as shown in **Table 2**. Cross-sectional data is used for this purpose. Data was extracted from the annual reports of each bank for the period of 2019-2022, taken from the official websites of those banks.

Table II: List of Conventional and Islamic Banks to be compared.

CBs	***IBs***
Habib Bank Limited (HBL)	Faysal Bank Limited
Bank Alfalah Limited	Dubai Islamic Bank Pakistan Limited
Muslim Commercial Bank Limited (MCB)	Bank al Habib Limited
National Bank of Pakistan (NBP)	Meezan Bank
United Bank Limited (UBL)	BankIslami Pakistan LTD.

Theoretical Framework:

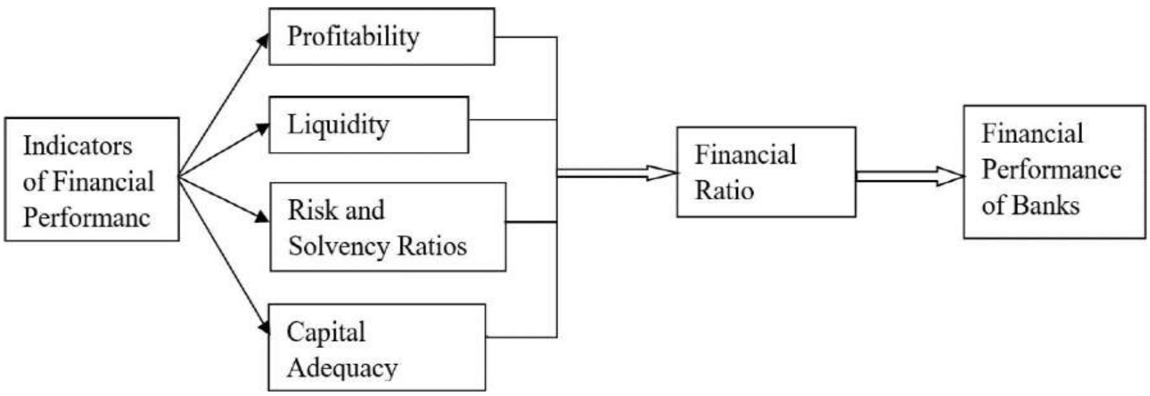


Figure I: Theoretical Framework.

Measurement techniques:

This study uses standard methods of calculating the financial ratios for banks. These financialratios were introduced by Cole (1972) to determine the financial performance of the banks. Many other studies i.e. Elsiefy (2013), Mukhibad & Khafid (2018), Masruki et al. (2023), Beck et al. (2013), Widagdo & Ika (2008), Siraj (2012), and Usman & Khan (2008) have applied this standard method to determine the financial performance of banks. Generally, this method makes a comparison among different financial ratios i.e., Capital Adequacy (measure soundness of capital structure), Liquidity (measures the ability to repay short-term debts), Risk & Solvency (measures the ability to repay long-term debts) and Profitability (depicts the efficient utilization of resources) .

This paper provides results in the form of descriptive statistics i.e., means and their standard deviations, p-values (two-tailed), and t-values (equality of mean), to examine the importance of these ratios separately for both bank types. **Table 3** provides a clear view of the methodology applied. It provides a theoretical framework for methodology.

Table III: Measurement Techniques.

Indicators for Financial Performance	*Measurement techniques*	*Formulae*
Liquidity	**LAR**	[Borrowings/Total Assets]*100
	LDR	[Borrowings/Deposit and other accounts]*100
Profitability	**ROE**	[Net Profit /Bank's Equity]*100
	ROA	[Net Profit /Total Assets]*100
Capital Adequacy	**LCR**	[High-quality Liquid Assets amount (HQLA)/Total net cash flow over next 30 calendar days]*100
	CAR	Total Eligible Capital/Credit RWA+Market RWA+Operational RWA
	LR	Eligible Tire 1 Capital/Total Exposure
Risk and Solvency Ratio	**DER**	[Total Debts/Bank's Equity]*100
	DAR	[Total Debts/Total Assets]*100

Source(s): Elsiefy (2013), SBP (2015) guidelines, Majeed and Zainab (2021), Masruki et al.(2011).

Liquidity:

It is mandatory for banks in Pakistan to keep 20% of their time and demand liabilities in the form of 15% SLR (statutory liquidity reserves) and 5% CRR (Cash Reserve Ratio), instructedby SBP (State Bank of Pakistan). Liquidity is the ability/capacity of a bank's capital and earnings to timely fulfill the bank's obligations when they become due, without suffering undesirable losses. To secure the interest of the general public i.e., the bank's creditors, borrowers, and other stakeholders, SBP ensure that every bank has maintained the required percentage of liquidity.

As time and demand liabilities could be withdrawn by customers at any time, banks could face more withdrawals than new deposits in the short run. Liquidity crises are to be managed by a bank's liquidity. A bank's failure could be the result of its insufficient liquidity. To estimate a bank's liquidity, many studies i.e. Ansari & Rehman (2012), Adekola Olaitan Onakoya (2013) and Hays et al. (2009), have used liquidity ratios i.e. loan-to-assets (LAR) & loan-to-deposit (LDR).

Profitability:

A bank's revenue can bear all costs incurred and yield financial resources. It estimates the bank's marginal efficiency. To observe this marginal efficiency of the bank, we considered two profitability ratios return-on-equity (ROE) as well as return-on-asset (ROA). The major portion of the bank's earnings comes from the interest and fee it charges on its assets (loans given) and services (LCs establishment, Guarantees issued). The profitability of a bankcomputes its performance.

The study by Elsiefy (2013), has computed that to measure the performance of banks we can use profitability ratios. This paper computes ROE and ROA to analyse the profitability. Even though ROA is correlated with ROE, both are different from each other in terms of significance and explanation Karr & Jhon (2005), Simpson & Kohers (2002). Some similar studies, by Ansari & Rehman (2012), and Reger et al. (1992) also used these ratios to analyse profitability. The higher the values of these ratios the higher the profit of the bank.

Capital Adequacy and Leverage:

A sufficient amount of capital, prescribed by regulators, that a bank is required to hold, with respect to its risk-weighted assets. For banks in Pakistan, SBP has prescribed a minimum level of these ratios under Basel Accord III i.e., 11% capital adequacy ratio, and 3% leverage ratio.

An adequate amount of these ratios depicts the soundness of the financial structure of the bank and the ability of the bank to meet its financial commitments when the market is under economic strain. If the bank's capital adequacy is sufficient, it would protect the bank against unforeseen failures and the bank will have less risk. To calculate capital adequacy and leverage ratios, this paper follows the guidelines prescribed by SBP.

Risk and Solvency:

It defines, how well a bank could sustain itself in the long run. It depicts a bank's ability to meet up its long-term debts. If the total assets of the bank are more than its equity, the bank would be considered solvent. Liquidity and solvency both are correlated, as liquidity increases solvency decreases. So, the banks have to maintain a sufficient level of solvency to prevent themselves from defaulting. Some studies i.e., Elsiefy (2013), and Samad & Hassan (2006) have also computed risk and solvency in their analysis through ratios i.e., debt-to- equity (DER) and debt-to-asset (DAR).

Empirical Findings:

This part will be the presentation of a graphical and statistical analysis of each ratio. We willconsider and analyze each ratio separately.

Table IV: Empirical Data on Comparative Performance of CBs and IBs.

	Mean of IBs	Std-deviation of IBs	Mean of CBs	Std-deviation of CBs	T-Value (equality of means) T-test	T-Critical Value	P-Value Sig. (Two-tail)	(α) Significant level	Inferences
ROA	1.32	0.6	0.99	0.04	2.58	3.355	0.03	0.01	Accept H_0
ROE	18.6	1.8	14.9	1.2	2.65	3.355	0.02	0.01	Accept H_0
LDR	59.5	3.1	46.4	3.04	6.13	3.355	0.0002	0.01	Reject H_0
LAR	45.3	2.5	32.8	2.04	5.55	3.355	0.0005	0.01	Reject H_0
LCR	181.2	10.29	216.4	10.03	-3.48	3.355	0.008	0.01	Reject H_0
CAR	16.3	0.43	18.3	1.07	2.52	3.355	0.03	0.01	Accept H_0
LR	4.9	0.3	4.7	0.4	0.534	3.355	0.6	0.01	Accept H_0
DER	14.81	1.17	11.84	1.51	-3.48	3.355	0.007	0.01	Reject H_0
DAR	86.1	0.57	85.55	1.12	-1.772	3.355	0.1	0.01	Accept H_0

Profitability:

First of all, we considered profitability ratios. The table shows the ROA for IBs is slightly higher than the ROA for CBs.

The efficiency and effectiveness of a bank are represented by ROA in terms of utilizing its resources and managing its operations, indicating better financial performance of the bank (Jewell, 2011). A lower value of ROA could be due to the bank's different administrative costs and operating expenses, indicating the inefficiency of the bank in utilizing its resources and managing its operations, showing bad financial performance.

The mean value of ROA for IBs is 1.3% and for CBs is 0.99%. The study tested the equality of the means t-value at a 0.01% level of significance and got a p-value of 0.03 which means there is no significant difference between the mean values of ROA for both types of banksIBs and CBs. So, in conclusion, we can say that IBs and CBs are equally profitable in termsof ROA.

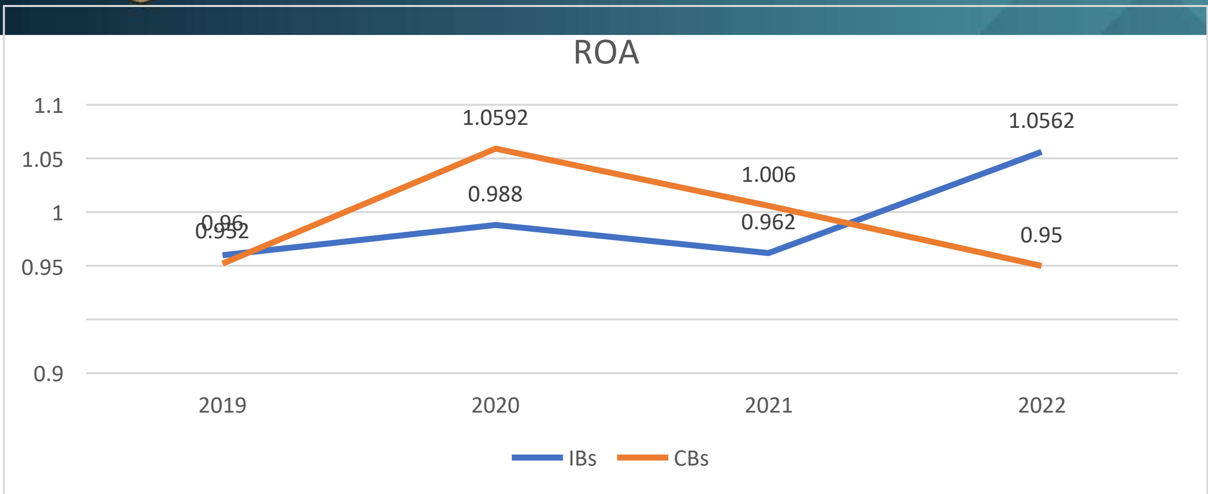


Figure II: Return on Assets.

Likewise, the table shows that the ROE for IBs is higher than the ROE for CBs. ROE shows how much profit is being earned as a percentage of the bank’s shareholder’s equity. The mean value of ROE for IBs is 18% and for CBs is 14.9%. The study tested the equality of the mean t-value at a significant level of 0.01 and got a p-value of 0.005 which indicates that there is no significant difference between the mean values of both types of banks. So, as a result, we can conclude that the profitability of both types of banks is statistically the same.

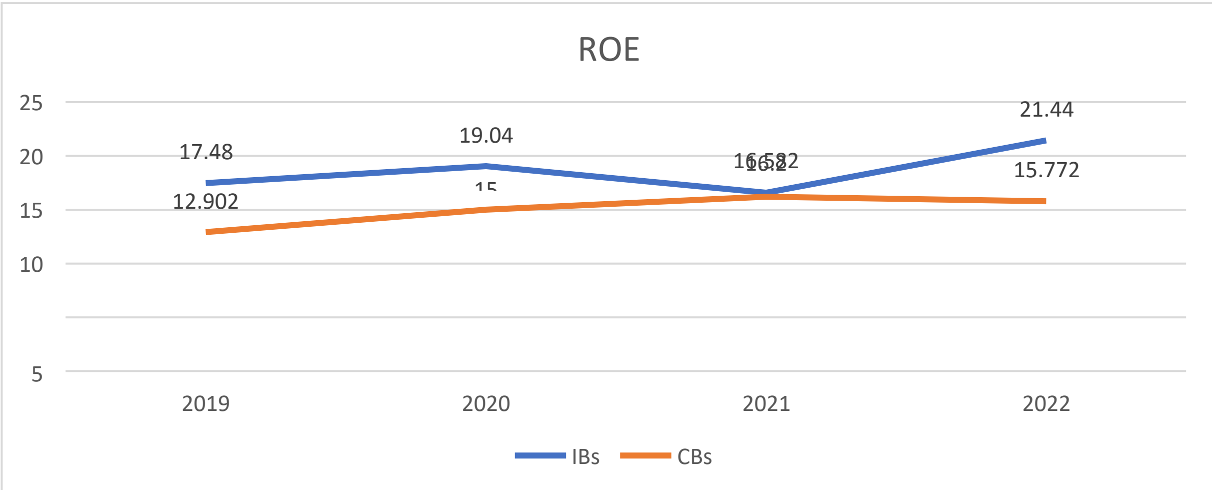


Figure III: Return on Equity.

Previous studies showed that IBs have lower profitability, due to their small size in terms of operations as they were in the early phase in Pakistan, which was a difficulty for them to get benefited from economies of scale of operations. Also (Lindblom & Von Koch, 2002) highlights that we could not calculate Profitability ratios correctly if the comparable banks are different in size. But this study depicts different results by showing higher profitability for IBs, and the reason can be explained as the Islamic banking industry is emerging and is in the immense growth phase, the size of the bank’s scale of operation has increased resulting in higher profitability.

Hancock (1985), has observed that the profitability of the bank is dependent upon the interest rate earned, indicating a positive association between them. And as IBs have interest-free transactions such services cause them lower profitability. But we can conclude that due to their operational efficiency, they are still able to have slightly higher profitability.

Liquidity:

Bank's ability to repay its short-term debts and fulfill its obligations, could be estimated through liquidity ratios. The higher the bank's liquidity, the higher the bank's ability to repay its short-term obligations. In other words, higher liquidity suggests a higher financial performance of the bank.

While calculating liquidity, we first considered the Laon-to-Asset ratio (LAR). This ratio shows us a fraction of the assets of the bank which are tied up in loans. A lower value of the loan-to-asset ratio shows higher liquidity for banks. In this study, we observed that LAR remains higher for IBs as compared to CBs. This means IBs have a higher proportion of their assets tied-up with loans as compared to CBs. The mean value of the LAR for Islamic banks over the period of 2019-2022 is 45.3%. which means, on average 45% of the total assets of IBs are tied up with the loans granted by the bank. Meanwhile, the mean value LAR for CBs over the period is 32%, which shows on average 32% of the total assets of CBs are tied up with loans. The lower value of LAR depicts the better position of liquidity of CBs ascompared to IBs.

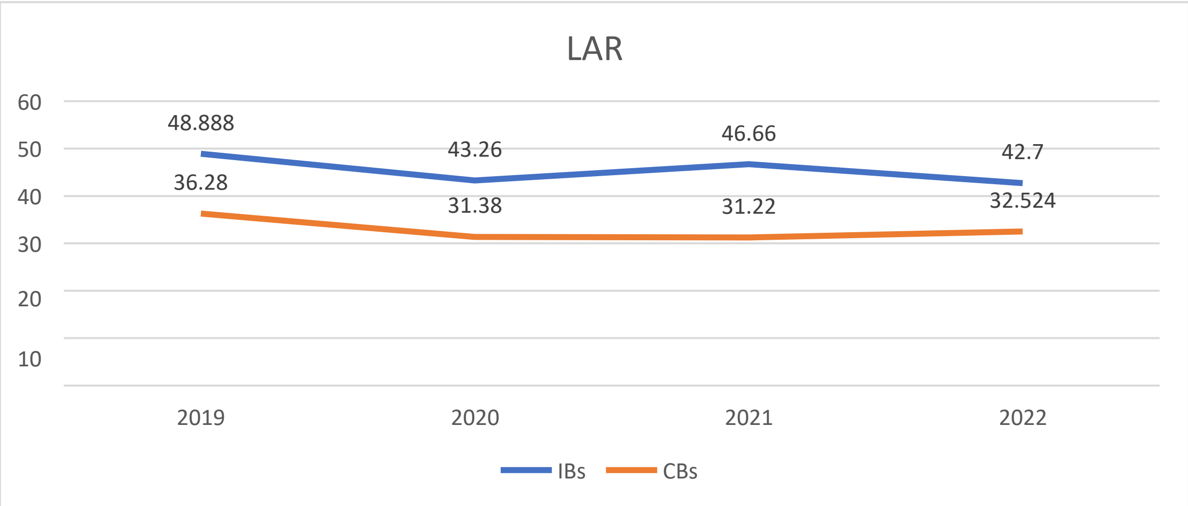
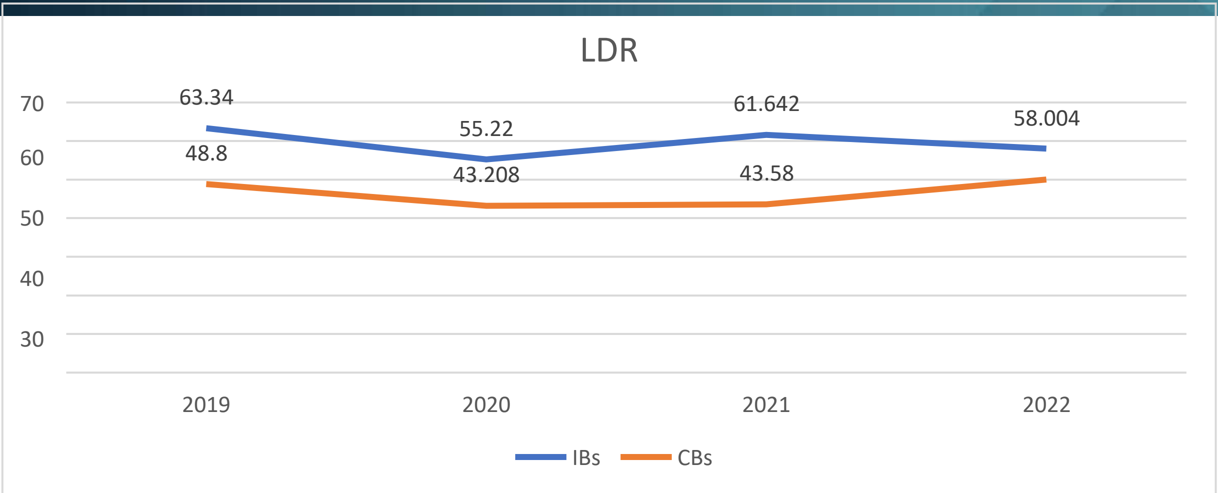


Figure IV: Loan to Asset Ratio.

Likewise, the loan-to-deposit ratio (LDR) shows the fraction of loans that a bank has offered out of its deposits. A lower value of LDR indicates bank has a good liquidity position. Indicating bank has offered fewer loans out of the deposit. Meanwhile, a higher value of LDR indicates a poorer liquidity position for banks. This means the bank has granted more loans out of their deposits.

Empirical data shows that LDR remains at 60% for IBs over the study period. This liquidity management issue faced by IBs is because of the portfolio of several types of assets i.e., Ijarah (Islamic lease) and Murabaha (cost plus) and all other such contracts. Because of their commitment to Shariah-complaint investments and asset-backed financing, IBs have lesser opportunities, while CBs got the option of secondary reserves like short-term government securities and treasury bills. In Pakistan, due to the limited scope and differences of opinion, the option of debt instruments i.e., sukuk



is limited. On the other side, LDR remained at 46% for CBs during a period of study. This means CBs have granted fewer loans out of the deposits than IBs. The table shows the mean values of LAR and LDR for IBs are 45.3% and 60, while for CBs these ratios are 32% and 46% respectively. The p-values show a significant difference between the liquidity position of both types of banks, and these values are 0.0005 for LAR and 0.0002 for LDR.

Figure V: Loan to Deposit Ratio.

The higher values of liquidity ratios for IBs show that IBs have granted significant loans and due to this, they seemed under financial pressure during the period of 2019-2022. In fact, CBs usually offered loans to extremely profitable businesses i.e., the entertainment industry and tobacco, etc. Meanwhile, due to divine restrictions not to invest in immoral activities like gambling, and also businesses such as the tobacco industry. Also, IBs have divine restrictions on investing in interest-based products. Moreover, IBs always grant financing that is backed by real assets. IBs transaction costs are high due to their check and balance. In IBs, surplus funds intensify the liabilities and expenses unless they are not invested. In short, IBs are concerned to follow the limited Shariah-compliant investment option available, while on the other hand, CBs are not restricted to such limited investment options. And also due to the Shariah restriction on IBs, not to sell their debt instruments in the secondary market, IBs got alimited opportunity to sell their debt-based sukuk only in the primary market. So, in conclusion, IBs are less liquid as compared to CBs as they have granted more loans out of their assets and their deposit and also due to their concerned restrictions to Shariah.

The Capital Adequacy and Leverage Ratio:

Capital Adequacy Ratio

The capital adequacy ratio tells us about the bank’s financial strength through its capital and assets. It tells us about the bank’s soundness and risk to the bank. The soundness of the capital structure of a bank is depicted by an adequate level of this ratio and the lower valueof the ratio will picture the possible risk to the bank.

However, the SBP has prescribed a minimum level of Capital Adequacy ratios for banks working in Pakistan, which is 11.50% as of 2022.

Purposes of Managing Capital:

The purposes of a bank behind managing its capital are as followings.

1. To achieve an appropriate capital position, as prescribed by SBP in banking regulations.
2. To obtain a good credit rating, which will enable the bank to obtain liquidity sourcesat a lower cost and optimize the funding mix.
3. To cover and avoid major risks underlying business activities.
4. To hold the flexibility to join investment opportunities in the future, enabling thebank to be stable in times when the market is strained.

Statutory Minimum Capital Requirement and Capital Adequacy Ratio:

SBP through its BSD Circular No.07 of 2009 dated April 15, 2009, requires the minimum paid-up capital of locally incorporated banks to be raised to PKR. 10 billion. The minimum requirement for the capital adequacy ratio prescribed by SBP is 11.05% subject to the Basel III capital adequacy guidelines through BPRD Circular No.06 of 2013 dated August 15, 2013. SBP revive the minimum requirement of this ratio.

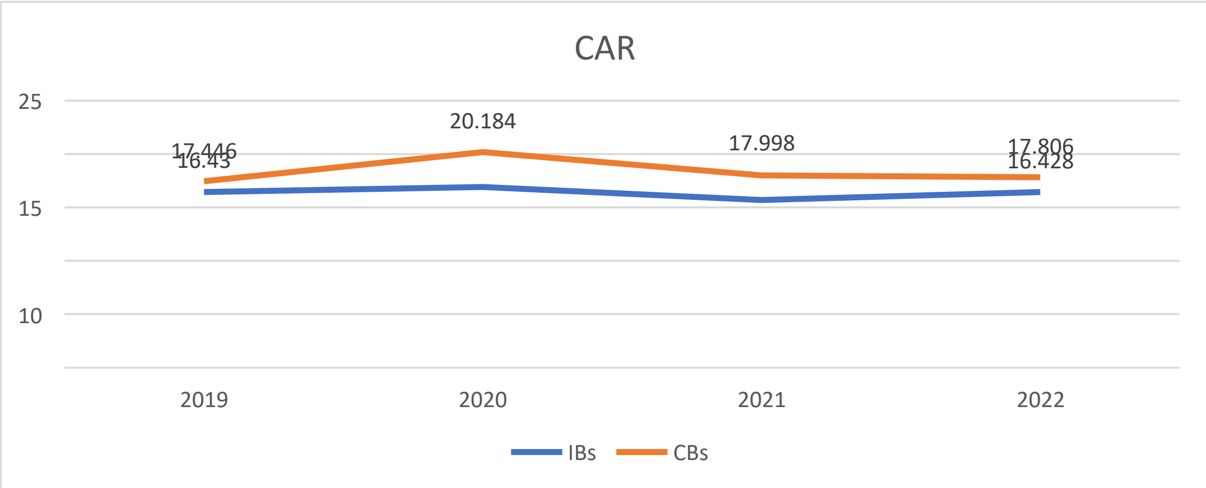


Figure VI: Capital Adequacy Ratio.

Empirical data shows that the mean value of CAR for IBs is 16.3% and for CBs is 18.3% for the study period. Both types of banks have maintained this ratio above the required statutory minimum level. Which shows the capital soundness of them. Although the t-value (equality of means) and p-value at a significance level of 0.01 show that the mean values of both types of banks have no statistical difference.

Liquidity Coverage Ratio:

In order to survive a severe liquidity stress condition a bank has to maintain a prescribed percentage of its burdenless High-Quality Liquid Assets (HQLA). HQLA are burdenless assets of banks as they can easily be converted into cash without a loss of value. That is why this liquidity coverage ratio is known as the ratio between the stock of HQLA and the bank's estimated net cash flow for the upcoming 30 calendar days.

SBP has prescribed banks operating in Pakistan to maintain not less than 100% of this ratio on an ongoing basis. Banks have to compute their LCR ratio monthly following the guidelines issued on 23 June 2016 by SBP.

Empirical data shows the mean value of LCR for IBs is 181.2% and for CBs is

216.4%. The t-value (equality of mean) and p-value at the significance level of 0.01 show that the mean values of both types of banks have a significant statistical difference. As CBs show a higher value of LCR which depicts the higher quality of their liquid assets, indicating better liquidityof CBs as compared to IBs.

But worth noticing point is even the IBs have a lower value of LCR as compared to CBs but they have maintained this ratio almost double, by its minimum required level. Which shows their decent quality of liquid assets and their better liquidity position.

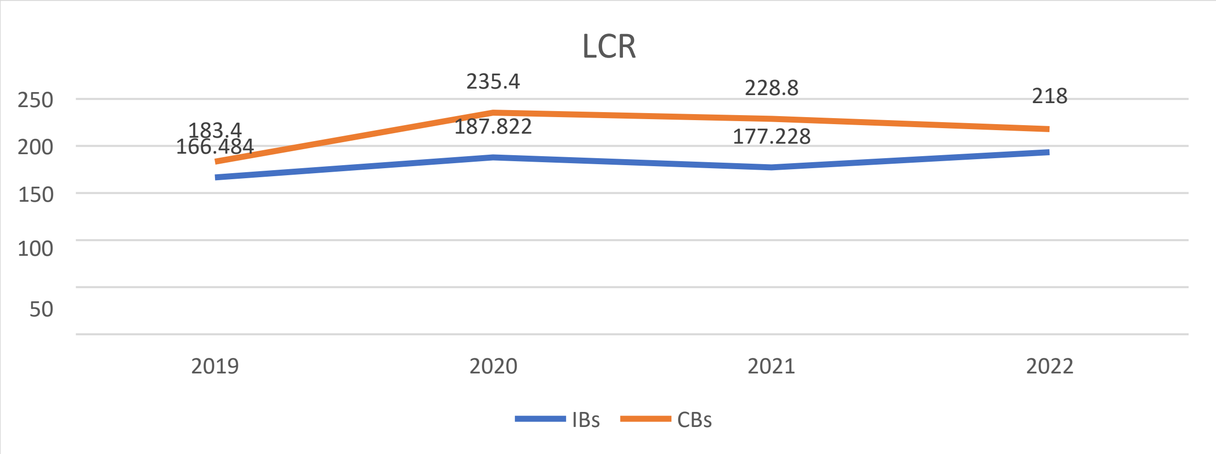


Figure VII: Liquidity Coverage Ratio.

Leverage Ratio:

All banks working in Pakistan have to calculate and report this ratio quarterly as prescribedby SBP. It should be in accordance with the Basel Acord III instructions by SBP, BPRD Circular No.06, dated August 15, 2013. This ratio shows the financial position of the banks concerning their debt, capital, and assets. In other words, this ratio is used to assess the relation between the level of debts of a bank and the bank's capability to repay them.

The reasons behind the calculation of this ratio are to evade disproportionate on-and-off balance sheet leverage in the banking system. So, the following are the objectives.

1. To encourage the banking sector to acquire leverage, which may negatively impactthe economy and broad financial system as well.
2. Underpin the standards based upon risk with an uncomplicated and non-risk-based measure.

SBP has prescribed a minimum level of leverage ratio for banks working in Pakistan which is3%. Empirical results show that the mean value of LR for IBs is 4.9% and for CBs is 4.7%, the t-value (equality of means) and p-value tested at the significance level of 0.01 tell us that the means of both types of banks have no statistical difference. Moreover, both types of banks have maintained LR above the minimum requirement. Which depicts the soundness of their capability to repay their debts.

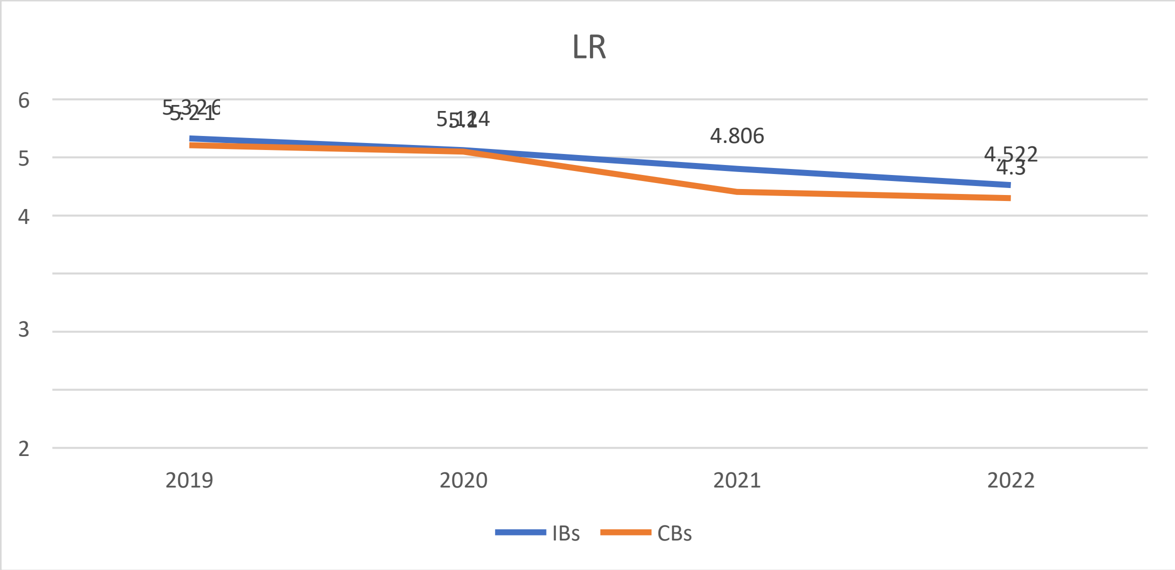


Figure VIII: Leverage Ratio.

Risk and Solvency Ratios:

These ratios evaluate the financial stability of a bank and its risk-bearing and risk-handling capacity. They are frequently used to assess the soundness of a bank. These ratios are useful instruments for assessing long-term financial soundness. The debt-to-asset ratio (DAR) shows the extent to which the assets of a bank are being funded by debts and creditors. A higher DAR depicts a significantly high leverage level and a high risk for the bank. On the other side, the debt-to-equity ratio (DER) indicates how much equity is being utilized by the bank for funding its assets. A greater DER suggests the bank is employing debt to finance its expansion. As a result of the higher interest costs, this has a negative impact on profitability. Masruki et al. (2011), Elsiefy (2013)

Debt to Equity Ratio:

The first ratio DER tells us about the fraction of the total debts of a bank to the total equity of a bank. It depicts how much of a bank's funding is provided by debt in comparison to its equity. A higher ratio indicates more reliance on borrowed money, leading to a higher levelof financial risk. A lower debt-to-equity ratio depicts that the bank relies more on the equityof its shareholders in order to fund its operations, which indicates a lower risk profile and more financial stability.

Empirical data shows that DER remains higher for IBs as compared to CBs. The mean value of DER for IBs is 14.81, indicating more reliance of IBs on debt in comparison to their equity. Meanwhile, the mean value of DER for CBs is 11.84, indicating less leverage and a strong equity position for CBs as compared to IBs. The t-value (equality of mean) and p- value of 0.007 show that the mean values of both types of banks have no statistical difference. The higher ratio for IBs depicts high leverage for them, indicating their reliance on debt to finance their operations, Adekola Olaitan Onakoya (2013), Elsiefy (2013), Ansari & Rehman (2012), and Samad & Hassan (2006), found.

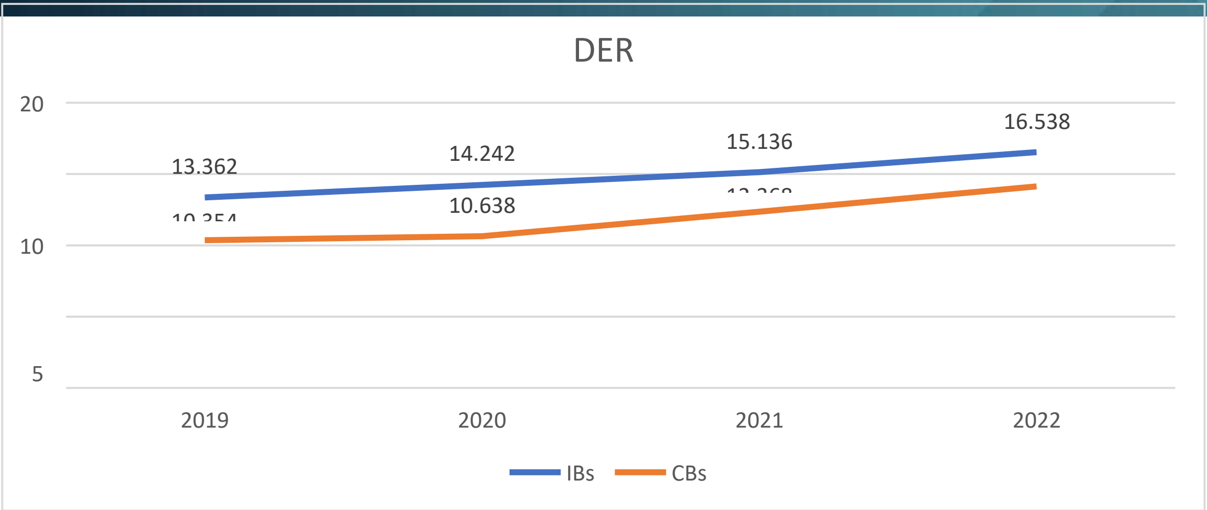


Figure IX: Debt to Equity Ratio.

Debt to Asset Ratio:

This ratio tells us about the fraction of the overall debts of a bank in comparison to the total assets of a bank. It analyses a bank's debt burden and offers statistics on its solvency and risk profile. A lower value of DAR tells us about the high solvency and low-risk exposure of the

bank, indicating that the bank has a smaller fraction of its debts as compared to its assets. The higher DAR depicts a high risk for banks, resulting in possible financial instability.

As empirical data shows the mean value of DAR for IBs is 86.1% and for CBs its mean valueis 85.55%, t-value (equality of means) and p-value of 0.01 indicate that the mean values of both types of banks have no statistical difference. These ratios are very high in both types of banks. This implies that both IBs and CBs are facing high risk which results in their low borrowing capacity. These results are aligned with the following studies, Adekola Olaitan Onakoya (2013), Elsiefy (2013), Ansari & Rehman (2012), and Samad & Hassan (2006).

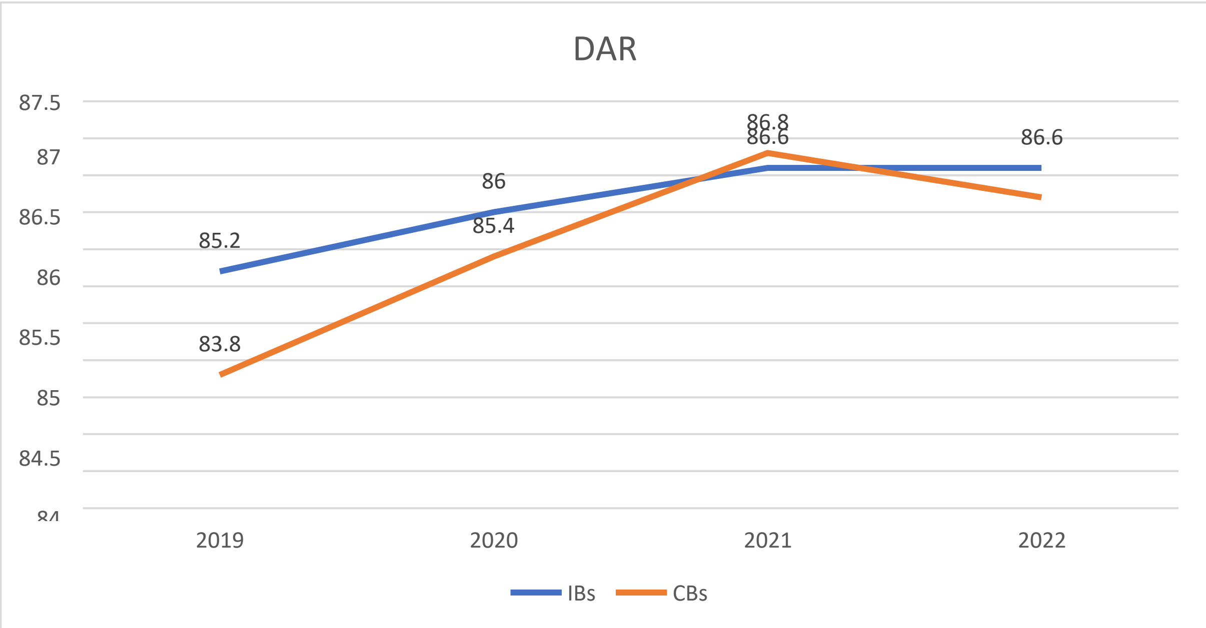


Figure X: Debt to Asset Ratio.

Conclusion:

In the study, IBs show slightly higher profitability as compared to CBs. This is because of theincreasing size of IBs in Pakistan. As the Islamic Banking industry is, in its growth phase in Pakistan, people are getting diverged towards Islamic banking, which is the reason for more deposits and larger operational size of IBs resulting in increased profitability of IBs. Meanwhile, Profitability ratios ROA and ROE for CBs are almost the same as IBs. There are several reasons behind CB's profitability, as they lend and invest in interest-based transactions. CBs usually offered loans to highly profitable businesses. i.e., the entertainment industry and tobacco industry, etc. CBs can offer their debt instruments in the secondary market. While on the contrary, IBs are restricted by Shariah-compliant, lending and investing in such types of businesses is prohibited for them. That's why they are more dependent on their deposits to enhance their business resulting in less liquidity of IBs.

Moreover, SBP has taken several steps to improve the role of the Shariah-compliant board of IBs, which is the reason behind the improved performance of IBs. Additionally, SBP has implemented new regulations and policies for the uniformity & effective administration of IBs.

Table V: Discussions on Findings

Indicators of Financial Performance of Banks	***IBs***	***Reasons***	***CBs***	***Reasons***
Profitability Position	Higher	The increasing size of IBs in Pakistan, better and more efficient utilization of their resources.	Lower	Facing high risk which affects their profitability.
Liquidity Position	Lower	Granting more loans out of their deposits instead of taking external loans.	Higher	Lend money using external debts more than their deposits.
Capital Adequacy and Leverage Positions	Sound Capital Structure	Having sufficient HQLA and achieving the prescribed amount of capital adequacy ratio as instructed by SBP.	Sound Capital Structure	Having high-quality assets (HQLA) and maintaining capital adequacy level as instructed by SBP.
Risk and Solvency Positions	Low Risk and High Solvency	They don't rely on external debts to finance their operations.	High Risk and Low Solvency	They take more and high debts and have more risk of defaults.

Moreover, both types of banks maintain Capital Adequacy and Leverage ratios as per the requirements of SBP, depicting the soundness of their capital structure. IBs show better performance in the context of these ratios and have better risk management.

The conclusion is, in Pakistan IBs are performing well with the assistance of SBP despite having a small part of the financial sector. This implies that by raising the share of IBs in the financial sector, they would have room to perform better. Based on this, the merging of IBs is recommended in order to expand their asset size. This offers a significant area for future research because annual updates to IB and CB evaluation must be made. Additionally, since IBs still account for less than 5% of all banking assets in Pakistan, the research might be expanded to examine why this growth is not occurring as anticipated.

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Unveiling the Nexus of Ethical Leadership: The Mediating Role of MoralAwareness and the Moderating Influence of Moral Decision Making.

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Abstract

The role and influence of moral attentiveness on ethical leadership outcomes continues to draw attention among management scholars. Despite this increased attention, existing literature hasyielded limited insights, particularly into the impact and influence processes of moral attentiveness on ethical leadership at both the individual and organizational levels of analysis.Addressing this gap in research, we will propose and tested a multilevel model that examines the processes linking perceptions of moral attentiveness and ethical leadership at the individual and organizational levels of analysis. Data will be obtained from 10 branches of Islamic banks in Lahore Pakistan. Results from structural equation modeling analysis will reveal three salientfindings. First, moral attentiveness is positively related to moral awareness and ethical leadership. Second, moral awareness partially mediates the relationship between moral attentiveness and ethical leadership. Third, the moderating role of moral decision making significantly influences the relationship between moral attentiveness and ethical leadership. These findings will indicate that moral attentiveness can have a positive impact on ethical leadership, with moral awareness playing a crucial mediating role. Additionally, the moderating effect of moral decision making highlights the importance of individual decision- making processes in the context of ethical leadership. This research contributes to a better understanding of the dynamics between moral attentiveness, moral awareness, and ethical leadership in both individual and organizational settings.

Keywords: Moral attentiveness. Ethical leadership. Moral awareness. Moral decision making.

Introduction

In the contemporary corporate landscape, ethical leadership has gained paramount significance as a driving force behind organizational success and ethical behavior. Understanding the antecedents and mechanisms influencing ethical leadership is vital for both researchers and practitioners. This research paper seeks to investigate the relationship between moral attentiveness and ethical leadership, with a focus on the mediating role of moral behavior and the moderating influence of moral decision making.

Moral attentiveness is the individual's capacity to recognize and respond to moral issues, demonstrating a heightened sensitivity to ethical concerns in the workplace (Reynolds, 2008,

p. 1028). Ethical leadership, on the other hand, refers to leaders' ability to promote ethical behavior within their organizations through role modeling and creating an ethical climate (Kacmar, Bachrach, Harris, & Zivnuska, 2011; Mayer et al., 2009; Neubert, Carlson, Kacmar, Roberts, & Chonko, 2009).

While prior research has explored the connection between moral attentiveness and ethical leadership, there is a gap in understanding the underlying mechanisms and boundary conditions that might affect this relationship.

This study aims to address the following research questions:

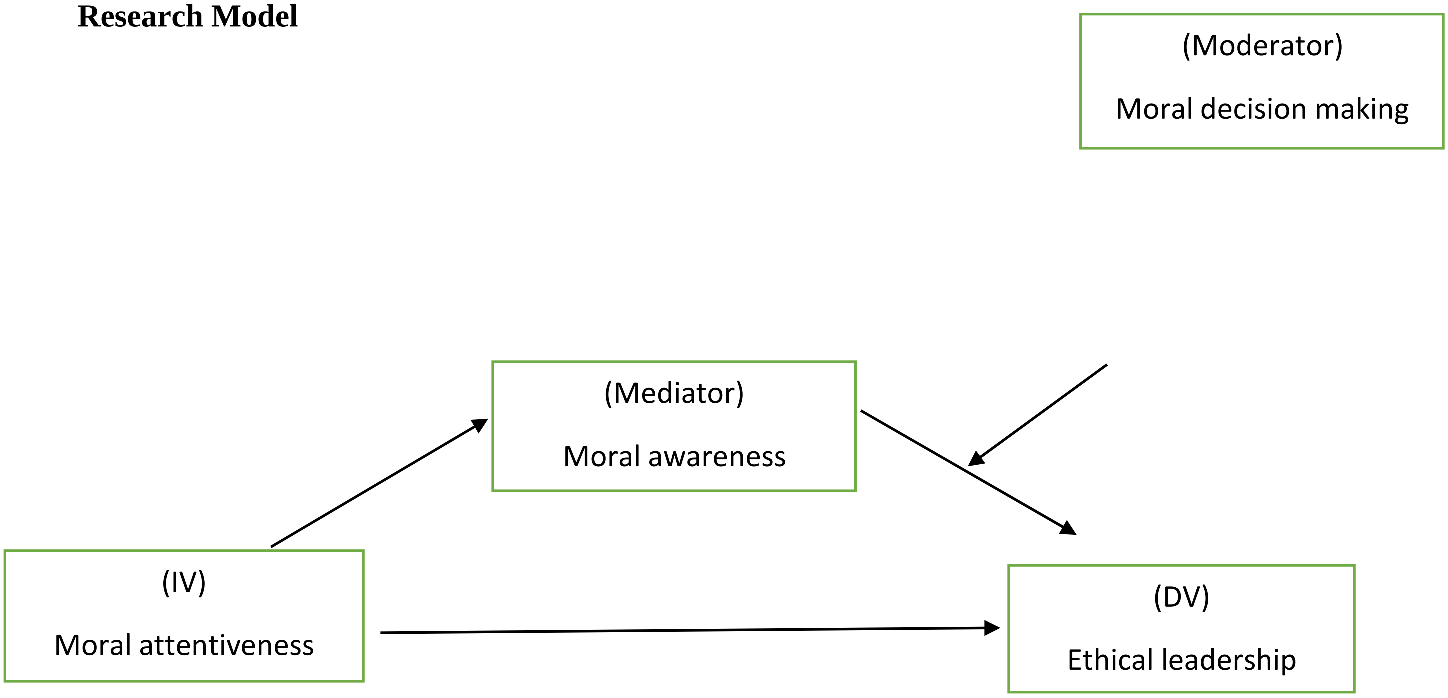
- What is the nature and strength of the relationship between moral attentiveness andethical leadership?
- How does moral awareness mediate the relationship between moral attentiveness andethical leadership?
- To what extent does moral decision making moderate the relationship between moral attentiveness and ethical leadership, and how does it influence this relationship underdifferent circumstances?

The research seeks to employ a mixed-method approach, including surveys and semi-structured interviews, to gather data from a diverse sample of employees and leaders across various industries. By conducting statistical analyses and content analysis, this research intends to provide a comprehensive understanding of how moral attentiveness contributes to ethical leadership through moral awareness and under the influence of moral decision making.

The findings from this research can offer valuable insights for organizations in their efforts to cultivate ethical leadership and ethical climates. By uncovering the mediating and moderating effects in the relationship between moral attentiveness and ethical leadership, this study can contribute to the development of strategies and interventions aimed at enhancing leadership effectiveness and promoting ethical behavior within the workplace.

Literature Review:

Research Model



Methodology:

The theoretical framework of study was tested by collecting data from managers and employees of Islamic banks in Lahore. Consisting of 10 banks nationally and 100 employees and managers. For the purpose of the study information was obtained from employees and managers of different departments of bank. In the first instance interviews were conducted from managers to rate items of moral attentiveness, the overall ethical behavior and moral awareness of front lines employees. Secondly the remaining employees were as to access their perception of moral attentiveness and ethical leadership and to rate their motivations and moral judgements. The questionnaire were sent out through emails to operational Managers and sales managers in individual branches, who printed them off, completed theirs and then distributed the employees survey to their respected staff within the branches. The staff were allowed to complete their survey in their on time and were provided with sealed envelop in which to return the survey.

Hypothesis

H_1 : There is a relationship between moral attentiveness and ethical leadership. H_0 : There is no relationship between moral attentiveness and ethical leadership.

H_2 :There is a relationship between moral awareness and moral attentiveness. H_0 : There is no relationship between moral awareness and moral attentiveness.

H_3 :There is a relationship between moral awareness and ethical leadership. H_0 : There is no relationship between moral awareness and ethical leadership

H_4 : Moral awareness mediates the relationship between moral attentiveness and ethical leadership.

H_0 : Moral awareness does not mediate the relationship between moral attentiveness andethical leadership.

H_5 : Moral decision making influences the strength of relationship between moralattentiveness and ethical leadership.

H_0 : Moral decision making does not influence the strength of relationship between moralattentiveness and ethical leadership.

Questionnaire

	Strongly disagree	Disagree	Neutral	Strongly agree	Agree
1. In a typical day, I face several ethical dilemmas.					
2. I often have to choose between doing what'sright and doing something that's wrong.					
3. I regularly face decisions that have significant ethical implications.					
4. My life was been filled with one moral predicament after another.					

5. Many of the decisions that I make have ethicaldimensions to them.					
6. I regularly think about the ethical implications of my decisions.					
7. I think about the morality of my actions almost every day.					
8. I rarely face ethical dilemmas.					
9. I frequently encounter ethical situations.					
10. I often find myself pondering about ethical issues.					
11. I often reflect on the moral aspects of my decisions.					

12. I like to think about ethics. 13. In a typical day, I faceseveral					
ethical dilemmas.					
14. I often have to choose between doing what's right and doing something that's wrong.					
15. I regularly face decisions that have significant ethical implications					
16. My life has been filled with one moral predicament after another.					

17. Many of the decisions that I make have ethical dimensions to them.					
18. I regularly think about the ethical implications of my decisions.					
19. I think about the morality of my actions					
almost every day.					

Moral attentiveness:

Moral attentiveness is defined as the extent to which an individual chronically perceives and (e.g., Jones, 1991; Moore & Gino, 2015; Tenbrunsel & Smith-Crowe, 2008; Treviño, 1986
)considers morality and moral elements in his or her experiences (Reynolds, 2008, p. 1028).

Ethical leadership: “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (p. 120). Ethical leaders thus inform and shape the ethical behavior of their followers. Ethical leadership has been associated with a number of positive outcomes, including followers' organizational citizenship behavior (Kacmar, Bachrach, Harris, & Zivnuska, 2011; Mayer et al., 2009; Neubert, Carlson, Kacmar, Roberts, & Chonko, 2009).

Moral awareness:

Accessibility to morally salient and vivid stimuli. (Fiske & Taylor, 1991)

Moral decision making:

Moral perception or interpretation of the situation. (e.g., Jones, 1991; Moore & Gino, 2015; Tenbrunsel & Smith-Crowe, 2008; Treviño, 1986)

Conclusion

While various ethical frameworks take stances on right and wrong (like formalism or Machiavellianism), moral attentiveness works on a different plane. It suggests that simply acknowledging individuals' contemplation of moral concepts adds valuable insight. This concept of moral attentiveness can be applied broadly, both in theory and in measuring various behaviors. Consequently, it stands as a distinct and encouraging foundation for further research.

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"Work-Life Balance and its Influence on Career Development among Women Bankers: The Mediating Role of Creativity and Moderating Effect of Family Support" A Conceptual Study.

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Abstract

Pakistan's banking sector has experienced substantial growth, witnessing a notable rise in the participation of women professionals. However, despite this increased presence, women remain underrepresented in managerial positions. This research employs an integrative framework that merges relational and institutional perspectives to comprehensively understand this persistent underrepresentation. The study aims to unravel the intricate relationship between work-life balance (WLB) and the career progression of women in the Pakistani banking sector. Specifically, it delves into the influence of creativity as a mediator and family support as a moderator within this context. The study utilizes an exploratory research design, commencing with a deductive approach and progressing from general to specific aspects, indicative of a deductive and exploratory study. The convenience sampling method will be utilize to gather data from individual female bankers across various hierarchical levels. The findings of this study will shed light on a positive association between WLB and the career development of women in banking. Notably, the research elucidates the mediating role of creativity in this relationship, highlighting its impact on shaping career development trajectories. Moreover, the study emphasizes the pivotal significance of family support, elucidating its role as a key influencer that shapes the connection between WLB and the progression of women's careers within the banking sector. They underscore the critical need for nurturing initiatives that promote work-life balance within the industry. Additionally, the findings will emphasize the importance of reinforcing family support structures to empower and enhance the career paths of women in banking. These insights will be invaluable in driving future policy initiatives and organizational strategies geared towards fostering an inclusive and supportive environment, thereby enabling the advancement of women professionals within the banking industry.

Key Words: Work-life balance, Career development, Creativity, Family support

Introduction

Banks play a vital role in economy and prosperity of a country. This sector is the back bone of an economy of any country. A bank's achievement of its objectives hinges on the caliber of its activities and the collaborative endeavors of the individuals involved to meet these set goals. The spectrum of tasks within the bank mirrors the varied activities present in its work environment and the opportunities provided for employees to advance their careers. Empowering individuals with the necessary skills and knowledge for seamless career transitions, while providing ongoing support throughout their life journeys, holds paramount importance, not just for a smoothly operating economy but also for the well-being of each individual (Bimrose, 2009). Pakistan's banking sector is recognized as a thriving industry, with a growing involvement of women in recent years. Currently, women make up 13% of the entire banking workforce, encompassing head offices, branches, and branchless banking agents. Notably, the representation of women agents in branchless banking is notably low at 1%. To enhance female participation in the sector, the policy suggests setting a target of 20% for all banking institutions. Women are assuming a progressively vital role in the Pakistan banking sector and the nation's economy. They are engaging in diverse positions, ranging from bank employees to occupying high-level managerial roles. The expanding opportunities for women in the banking industry are a positive development. Women are assuming a progressively vital role in the Pakistan banking sector and the nation's economy. They are engaging in diverse positions, ranging from bank employees to occupying high-level managerial roles. The expanding opportunities for women in the banking industry are a positive development.

According to a study conducted by I.M.S. Weerasinghe (2017), the banking sector in Sri Lanka is predominantly female, but there is a noticeable lack of women in senior managerial positions. Similarly, Kennedy D Gunawardena (2017) also highlighted the issue of fewer women holding higher managerial roles in the Sri Lankan banking industry. While there are differences in the gender distribution of top-level management between state and non-state banks, the Sri Lankan banking industry is known for providing clear career development opportunities and having a significant female workforce.

The disparity in the representation of women in higher managerial roles between non-state commercial banks and government sector banks suggests the presence ofinfluential factors. Previous studies by Irungu (2017) and Sigroha (2014) have also linked work- life balance to challenges in career development across various sectors.

Other countries have conducted studies on the impact of work-life balance (WLB) on career development. However, this particular study aims to delve deeper by examining the mediating role of creativity and the moderating influence of family support within this relationship.

This study aims to explore the work-life balance status among female professionals in Pakistan's banking sector and how it influences their perceived performance. Explore the influence of creativity as a mediator in the correlation between work-life balance and career advancement among female bankers. Investigate how creative skills impact the career paths of female bankers while examining the relationship between work-life balance and their professional growth. Analyze the factors, both supportive and obstructive, that affect the career progression of female bankers in connection to their work-life balance. Additionally, assess the existing work-life balance practices within the banking sector and their effects on the career development of female bankers.

1. How does work-life balance impact the career development of female bankers?
2. To what extent does creativity mediate the relationship between work-life balance and career development for female bankers?
3. How do family support and creativity jointly influence the career development of female bankers in the context of managing work-life balance?
4. What role does work-life balance play in fostering or hindering the creative abilities of female bankers?

Literature Review

Work life balance

Amidst a society rife with conflicting obligations, the issue of work-life balance has taken center stage in workplaces. Three significant factors contributing to the heightened interest in and significance of earnestly addressing work-life balance are: 1) escalating global competitiveness; 2) growing focus on personal lives and family values; and 3) an aging workforce. Given these challenges, work-life balance remains a persistent concern in our society. Academic and business circles continue to accord considerable attention to this concept, consistently engaging in fresh research endeavors (Lockwood, 2003). The term "work/life balance" emerged in 1986, though its widespread usage in everyday language was somewhat sporadic initially. Surprisingly, work/life programs were already in existence as early as the 1930s. Before World War II, the W.K. Kellogg Company implemented four six-hour shifts instead of the typical three daily eight-hour shifts, resulting in enhanced staff morale and productivity. Rosabeth Moss Kanter's influential book, "Work and Family in the United States: A Critical Review and Agenda for Research and Policy" (Kanter, 1989), played a pivotal role in bringing the issue of work/life balance to the forefront of research and organizational focus. Consequently, companies started implementing work/life balance programs during the 1980s and 1990s. Initially, these programs predominantly targeted women with children, but today's initiatives are less gender-specific, encompassing a broader range of responsibilities beyond just family-related ones. Additionally, work/life balance programs are not restricted to the United States; they are also essential for employees in global communities who seek flexibility and autonomy in managing their work and personal lives (Lockwood, 2003).

In today's evolving workplace, achieving work-life balance stands out as a crucial aspect for the future. Historical, social, economic, global, political, and environmental factors have driven individuals, especially women, to explore opportunities beyond traditional boundaries, resulting in increased workforce diversity. This issue isn't confined solely to women but extends to men overloaded with work and deprived of leisure activities. It's not just an individual concern; rather, it's a broader societal issue crucial for sustainable long-term development. Over the past two decades, work-life balance has emerged as a significant challenge, intensified by economic uncertainties, organizational changes, and heightened business competition (Green, 2001 as cited in Akter, 2013). Achieving work-life balance entails establishing a feasible and lasting harmony between professional responsibilities and other aspects of life. The benefits derived from maintaining this balance impact both individual employees and the organizations they work for. For employees, work-life balance contributes to stress reduction and offers greater autonomy in managing their schedules and commitments. On the other hand, employers reap the rewards of a more satisfied and less stressed workforce, which has the potential to foster enhanced stability and productivity within the company (Marques & Berry, 2021).

Career Development

Both individuals and employers exhibit a keen interest in modern career pursuits. Although the concept of career development traces back to the early 20th century, notably highlighted in Parsons' (1909) approach to career selection, it's only in the past two decades that it has gained significant attention within business realms (Burke, 1995 as cited in Kuijpers & Scheerens, 2006). Presently, career options are increasingly seen through the lens of employability, where career development transcends organizational boundaries, leading to what's termed as "boundary-less careers" (Arthur, 1994 as cited in Kuijpers & Scheerens, 2006).

"Career development represents the negotiable values, expectations, and goals held by employees regarding their career progression, harmonized with the organizational needs and objectives to establish an effective working synergy between them" (Orpen, 1994 as cited in Napitupulu et al., 2017). Additionally, "Career Development comprises a series of interrelated work activities that offer continuity, fulfillment, and purpose in one's life. It involves a progression of roles that are strategically sequenced to lead to advancements in responsibility, status, authority, rewards, and career growth, encompassing all tasks undertaken within the current work tenure" (Sedarmayanti, 2011 as cited in Arifin et al., 2020).

Family Support

"Family Support" encompasses various resources and services available to families, encompassing both formal aids like paid respite care and informal assistance such as connections between parents. These services collectively form a community-based system aimed at fostering the welfare of families and their children with special needs. Family support is recognized as a pivotal element contributing to an individual's successful career development (Ferguson et al., 2012; Lapierre and Allen, 2006; Pluut et al., 2018). For employed women, this support within the home context encompasses spousal assistance, hired domestic aid, and voluntary help from family members (Lu et al., 2009). Ely et al. (2014) emphasized the significance of spousal support, particularly for women with defined career aspirations. The role of family exhibits both positive and negative influences on women's career advancement.

The traditional perspective that assigned males as the primary breadwinners and females as homemakers has evolved over time (Perrone et al., 2009). In contemporary society, women experience greater career success due to increased support from their families, including support from extended family members (Constantinidis et al., 2018). However, conflictingly, families may impose restrictions on women's employment, rooted in traditional gender roles that prioritize a woman's role as a mother and wife, relegating the public sphere for men (Benradi, 2006). Extensive research in this domain has highlighted gender-related barriers, notably the lack of support from husbands and family members towards working women

(Fielden and Dawe, 2004; Kirkwood, 2009). Challenges arising from family life and the struggle to balance personal and professional obligations remain significant obstacles for women pursuing their careers (Paterno et al., 2008).

The absence of family support tends to have a more pronounced impact on women compared to men (Shinnar et al., 2012), and familial conflicts often emerge as significant hurdles in the career progress of women (Jennings and McDougald, 2007). Businesses owned by women are significantly influenced by decisions and prospects involving their family members (Boz and Ergeneli, 2014). Gender dynamics within familial, professional, and societal contexts may elucidate these observations (Roomi et al., 2008). While both men and women in their professions experience pressure in managing work and family responsibilities, women professionals often encounter higher levels of exhaustion than men when striving to balance these aspects (Duxbury et al., 2000). Without consistent family support, it becomes exceedingly challenging for women to strike a balance between their careers and caring for their children. Some women even opt to preemptively abandon their careers to prioritize having children, jeopardizing their professional trajectories (Lebrón, 2016). The situation is exacerbated in patriarchal societies like Bangladesh, India, and Pakistan, where women not only shoulder a larger portion of family responsibilities but also grapple with societal expectations to embody the image of an "ideal woman" (Ali, 2012; Azim, 2006).

Creativity

Various researchers from diverse fields have explored the link between creativity and job performance using different approaches. Creative employees demonstrate an ability to generate innovative solutions to work-related challenges, enabling them to perform tasks effectively and enhance their overall job performance. However, it's crucial to note that this relationship isn't automatic and depends on personal and organizational factors that can either support or impede creativity in the workplace (Amabile et al., 1996).Numerous empirical studies have highlighted a positive association between creativity and job performance. For example, Suh and Shin (2005) found a significant and positive relationship between creativity, job performance, and their correlates within a non-profit organization setting. Similarly, Janssen and Giebels (2010) discovered a statistically significant connection between an employee's creativity and individual job performance across manufacturing work groups. Taboli and Zaerizadeh (2016) investigated the impact of individual creativity on job performance, revealing a significant influence, particularly when ethical leadership was involved. Additionally, Eschleman et al. (2014) explored the effects of non-work creative activities on recovery experiences and work-related behaviors, demonstrating the direct and indirect impact of creative activities on performance outcomes.

Employee engagement in work has been linked to an increased level of creativity, subsequently contributing to improved job performance. Isaksen and Ekvall (2010) highlight that deeper engagement among employees, coupled with a conducive environment for creativity, leads to various business benefits, including enhanced job performance. The componential theory of creativity by Amabile (1996) supports this model. In Amabile's theory, task motivation or engagement in one's work stands out as a significant driver for workplace creativity (Amabile and Mueller, 2008). Employees tend to exhibit greater creativity when intrinsically motivated and engaged in tasks that they find stimulating or challenging. This enhanced creativity translates into smarter work practices as individuals devise innovative solutions for daily work challenges, positively influencing overall work performance (Amabile and Kramer, 2007).

Conversely, whenemployees perceive their jobs as uninteresting, their motivation and engagement might decline, impacting their ability to think creatively in problem-solving and consequently leading to performance issues.

WLB and Career development

The "Boundary Theory" is a relevant framework that supports the influence of work-life balance on the career development of female bankers. This theory suggests that establishing clear boundaries between work and personal life is crucial for overall well-being and professional success. For female bankers, achieving a balance between work and personal life can positively impact their career trajectory by reducing stress, enhancing job satisfaction, and fostering a supportive environment that promotes long-term career growth.

The "Glass Ceiling Theory" is often relevant in discussions about the career development of female bankers. This theory highlights invisible barriers that limit the advancement of women in the workplace, including the banking industry. Addressing these barriers is crucial for promoting gender .

H1: A balanced work life boundary among female bankers positively influences career development

Family Support, Career development, WLB

The "Buffering Hypothesis" or "Buffering Effect" in the context of family support can be applied to understand the moderating effect between work-life balance and career development. According to this hypothesis, family support acts as a buffer or moderator that mitigates the negative impact of poor work-life balance on career development. In other words, a strong support system from family can help individuals navigate challenges, maintain balance, and positively influence their career trajectories despite potential work-life conflicts.

equality and supporting the career growth of women in banking.

H2: Family support moderates the impact of WLB on career development

Creativity, Career development, WLB

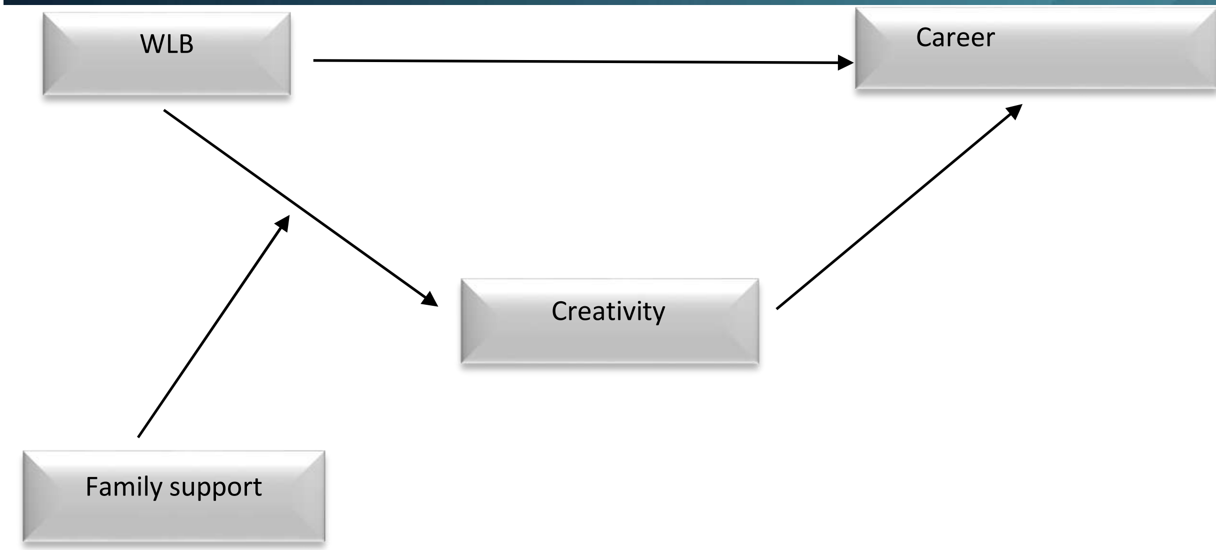
The "Job Demands-Resources (JD-R) Model" is a relevant theory that can support the idea of creativity mediating the relationship between work-life balance and career development. In this model, job resources, such as autonomy and social support, can lead to positive outcomes like creativity. When individuals have a better work-life balance, they may experience lower job demands and increased resources, fostering a conducive environment for creativity. This creativity, in turn, can contribute to career development by bringing innovative solutions to work challenges and enhancing one's professional skills and reputation.

H3: WLB influence career development through creativity as a mediating factors.

Family support and Career development

The "Role Enhancement Theory" is often associated with family support for females in their careers. This theory suggests that when women receive support from their families, especially in terms of understanding and valuing their career roles, it enhances their overall well-being and career success. Supportive family environments can contribute positively to a woman's career development by fostering a sense of balance and encouragement in pursuing professional goals.

H4: Family support positively influence women’s career development.



Methodology

The study employ an exploratory research design, starting with a deductive approach and moving from general to specific aspects. Structure of the study is to investigate the interplay between work-life balance, career development, creativity, and family support. Population is the female bankers across all banks in Pakistan. Study will gather data by using convenience sampling to select participants, emphasizing diversity in roles and levels. Collect data specifically from female bankers of BOP, UBL and Allied Bank located in Lahore to provide a detailed understanding within these contexts. Questionnaire is developed with predominantly close-ended questions to gather quantitative data efficiently. Aligned questions with existing theories on work-life balance, career development, creativity, and family support. Unit of analysis of this study is individual female bankers.

Measurement

Five point likert scale adapted for WLB from Shukla, A., & Srivastava, R. (2016), career development from Hirschi, A., & Nagy, N. (2017), creativity Scale (K-DOCS), Family support scale from D. W., & Adams, G. A. (1995)

Significance of the study

In Pakistan's context, shaped by cultural norms, this study provides insights into the experiences of female professionals, informing policies and support systems for better career development and well-being. This research enhances theoretical understanding by exploring intricate connections between work-life balance, creativity, family support, and career development. The study builds a comprehensive framework integrating work-life balance theories with creativity and family support, paving the way for future research in similar contexts. Practical insights gained can aid organizations in creating environments fostering work-life balance, creativity, and family support, thereby improving employee well-being and career development. Understanding creativity's mediating role guides practical strategies for promoting workplace innovation, potentially enhancing problem-solving and competitiveness. By addressing the underexplored intersection of work-life balance, creativity, and family support in female bankers in Pakistan, the study fills a noteworthy gap in academic literature. The study's methodology, examining mediating and moderating roles, provides a template for future researchers, offering insights into conducting robust research on complex organizational relationships.

Conclusion

The study investigating the impact of work-life balance on the career development of female bankers in Pakistan has provided valuable insights, focusing on the mediating role of creativity and moderating role of family support. This study specifically targeted individual female bankers within the branches of BOP, UBL, and Allied Bank located in Lahore, using a quantitative approach with data collected through structured questionnaires featuring closed-ended questions. It emphasizes the critical importance of achieving a balanced work-life equation for the career progression of individual female bankers. The identified mediating role of creativity underscores the influence of a creatively nurturing work environment on enhancing career development outcomes. Furthermore, the moderating impact of family support highlights the interplay between personal and professional spheres, emphasizing the need for supportive family structures to optimize the effects of work-life balance on individual career trajectories.

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A study which is conducted on Daraz, Pakistan. That determine the Importance ofelectronic word of mouth in building both brand trust and brand attitude.

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Abstract

The emergence of e-commerce platform for shopping is increasing due to increase in technology. The power is now shifting from the sellers to buyers through E-wom. This study aims to investigate the influence of positive electronic word of mouth on brand attitude and brand trust and then to purchase intention on daraz. The purchasing decision on e-commerce websites or applications can be highly dependent on the reviews given by the customers who use the product. These reviews could not only shape the trust and attitude of consumer, but also the purchase decision. An online survey was conducted using Google form to see the impact of positive electronic word of mouth on brand trust and brand attitude and ultimately on online purchase of the product. The total 253 responses collected from the people who use daraz for shopping. The study limitations include time was short, responses are collected from only two cities, and resource were also limited to conduct study. The majority of respondents were students.

Keywords: E-wom, Brand Trust, Brand Attitude, online purchase intention

Introduction:

E-wom is an innovation of wom due to Online shopping platforms and social media platforms where interaction between product and buyer is not face to face (Godes & Mayzlin, 2009). Electronic word of mouth is a way of interaction between consumers and buyers in online purchasing (Bulut & Karabulut, 2018). According to Srivastava and Sivaramakrishnan (2020), normally information about product or brand given by online entities is not trustworthy for buyers now. This is the reason why marketing researchers are now potentially focusing on study the consequences of e-wom on consumers purchase behavior (Brown et al., 2007).

E-WOM is defined as:

"Any positive or negative statement made by a potential, actual, or former customer about a Product or a company, available to a multitude of people and institutions via the internet."(Kudeshia & Kumar, 2016, p. 310)

E-wom includes all the information provided by the customers in the form of posts, reviews or comment (Hu et al., 2014). People use the reviews of customers about product to get confidence in their buying decision (Erkan & Evans, 2016). The reason behind the use of E-wom is that it is not something which is provided by the company or product manufacturers rather it is information about product provided by the customers (Xu, 2014). Normally, consumer purchases the product in case of positive electronic word of mouth (Park & Lee, 2008).

E-commerce businesses are not as same as traditional business and consumer have to make purchase decisions without touching the products (Kim et al., 2011). Understanding the factors that contribute to the online purchase intention is important because number of online stores is increasing rapidly and the numbers of customers who buy products through online platforms or websites are also increasing (Kearney, 2012). In the modern era of technology, the interactions between consumers are important source for getting confidence in purchase decision of unfamiliar products as well as brands (Baird & Parasnis, 2011). According to study by McKinsey & Co. consumers make purchase decisions on online platform at about 20% to 50% according to reviews given by consumers (Bughin et al., 2010). The content available on the internet about the product shape the trust of customers and ultimately their purchase intention even without any interaction with entity(online) (Huh & Shin, 2014; Mayer et al., 2005). Thus, E-wom is a facility for customers for making their brand attitude and purchase decision (Erkan & Evans, 2016).

Recent literature is available that analyze the impact of E-wom on online purchase intention (Kudeshia & Kumar, 2016). According to my knowledge, very limited researches are available that extend the relationship between e-wom and online purchase intention by defining mediation mechanism of brand trust and brand attitude. To this back drop, this research will focus on checking the mediating mechanism of brand trust and brand attitude between e-wom and purchase intention.

Trust on brand is a perception or belief of an individual that the company will meet his needs (Herbst et al., 2012). Purchase decision of customers highly depends on the trust shaped by E-wom (Wang, 2001). Consumers normally will not buy the product until having trust on the company which establishes relationships among consumers and business (Herbst et al., 2012; Gkouna et al., 2020). The trust of consumer on brand depends upon the things like online platform, the credibility of online reviews or E-wom and on servicing the orders (Saw et al., 2015). According to Wu and Wang (2010), the attitude towards brand is considered as evaluation of a person towards brand and positive or negative aspects for a brand. Brand attitude is an important independent variable of purchase intention in online purchasing (Kudeshia & Kumar, 2016). The intention to purchase will be high if a person has positive evaluation of a brand (MacKenzie & Spreng, 1992). The evaluation of brand i.e. brand attitude will be favorable in case of positive E-wom (Kudeshia & Kumar, 2016)

This study will give the result by using respondents in Pakistan. Daraz is an online purchasing platform and this study is conducted on daraz. The reason is that daraz is a top visited online shopping website in Pakistan and people use daraz in majority for online shopping in Pakistan (Similar Web, 2023).This study is also supported by Theory of Reasoned Action (TRA) Fishbein and Ajzen (1975). TRA infer that brand attitude will lead to favorable intention of consumers toward purchasing (Chu & Chen, 2019).

This research is also supported by signalling theory (Pfeuffer & Huh, 2021). Signalling theory tells that consumer utilize online reviews as a signal to built-up trust which leads to purchase intention (Pfeuffer & Huh, 2021). This theory also demonstrates the fact that consumers build trust by using the information which is provided

by other consumers as a way of trust to make buying intentions (Cheung et al., 2014). This study attempt to investigate the outcomes of E-wom on daraz in purchase decisions. Moreover, by using mediation role of brand trust and brand attitude. Therefore, it attempts to reply the answers of questions such as Do brand trust and brand attitude mediating the role between e-wom and purchase intention on daraz? Or Does e-WOM have impact on building brand trust and brand attitude and ultimately on purchase intention? Or Does brand trust and brand Attitude leads to purchase Intention in online shopping using positive e-wom?

Literature Review:

Electronic word of mouth

E-wom is information about the product shared by the customers (Gilly et al., 1998). Electronic word of mouth can be in the form of blogs, e-mails, online reviews which is widely spread by internet (Hennig-Thurau et al., 2004). Technology improves the thinking style of consumers due to their vast access to the recommendations given by product users and changes the traditional WOM with E-wom (Yaylı & Bayram, 2012; Dwyer *et al*., 2007). These recommendations shape the intentions of people whether to buy or ignore the product and also improve product sale (Ye et al., 2011). Consumers often use E-wom to reduce any kind of error in purchase (Standifird, 2001).From a study, E-wom impact the purchase decision (Saleem & Ellahi, 2017). Electronic word of mouth can be from reliable and non-reliable sources (Flanagin and Metzger, 2007). If the E-wom from trustworthy source is positive than likelihood of purchasing product is high and if the E-wom is negative than the likelihood of purchasing product is very much low (Lee & Youn, 2009; Xu, 2014). According to a study, attitude and trust are also outcomes of positive electronic word of mouth along with purchasing decision (Cheung et al., 2009).

Brand Trust

Trust is believe and physiological term which means that a brand is a fair and will work honestly (Corritore et al., 2003). Trust in brand means it has capability to fulfill the needs (Marzocchi et al., 2013). The relationship between brand trusts is positive with purchase intention (Herbst et al., 2013). Previous literature suggests the relationship between brand trust, E-wom and brand trust. More positive electronic word of mouth leads to more trust and trust ultimately leads to purchase intention (Huyen & Costello, 2017). Companies are very much concerned towards building trust in customers because it an important competitive advantage (Allen et al., 2018; Taboret al., 2018). Consumers trusts more when they are aware about the source of information (E-wom) is reliable or not (Sauer at al., 2016). Consumers will ultimately switch the brand and have low purchase intentions if his/her trust is low (Shin et al., 2019). On the other hand, if the trust of consumer in any brand or company is high then they will not likely to switch and alter buying intentions (Haung at el., 2020).

Brand Attitude

Brand attitude can be defined as how consumers evaluate a particular brand in his mind that it is good or bad (Engel et al., 2006). This evaluation is based on emotional evaluation, behavioral tendency and can be unfavorable or favorable (Kotler & Keller, 2008). Brand attitude is also considered as a preference for a brand (Fishbein & Ajzen, 1980). Attitude about product can be built either favorable or unfavorable through electronic word of mouth (Chevalier & Mayzlin, 2006). A brand attitude will be positive if consumers considered brand beneficial for them (Wilkie, 1986). If consumers have positive brand attitude then it is very much possible that consumer will make purchase from brand (Kotler & Keller, 2008). The likelihood of brand attitude to be positive can be high if the number of positive electronic word of mouth is high Wu and Wang (2011) and if the brand attitude is positive due to positive electronic word of mouth then purchase intention will also on favorable side (Aaker & Keller, 1990). According to a past study by Schivinski and Dabrowskia (2014), Brand attitude will be more positive and leads to purchase intention if electronic word of mouth is generated by consumers rather than any company.

PURCHASE INTENTION

Purchase intention is like an intent or assumption of consumer to buy product (Ariffin et al., 2018). If the consumers are more willing to buy the product of a company, the profit will also goes on favorable side (Dabbous et al., 2020). According to previous literature, the decision of consumer to purchase product depends on many factors such as the quality of product, evaluation or attitude of consumer towards product, the company who made it and selling it, and trust upon the company or brand (Ariffin et al., 2018; Jung at El., 2020; Shin et al., 2019). If a consumer have high degree of trust in company or product then the risk of purchasing decrease and satisfaction of purchasing right product increase, this will lead to purchase product (Shim et al., 2021; Laparojkit & Suttipun, 2021). Consumers are now using internet for reducing risk and getting confidence in right purchasing decisions (Standifird, 2001). Electronic word of mouth is considered as an important source for getting help in purchasing products (Hu et al., 2011).

Theoretical background and Hypothesis

Positive E-wom and Brand attitude

Brand attitude is a positive or negative perception of an individual about brand. Brand attitude determines the intention to purchase so it's an important concept for marketers to study (Chevalier & Mayzlin, 2006). While making decision for purchasing about product or brand, consumer's attitude is very significant. According to Wu and Wang (2011), when the E-wom is positive along with reliable source then the attitude toward brand will be much likely to be on positive side. if the E-wom is negative from unreliable source then the chances of brand attitude will be negative and buying behavior will be also very low (Kudeshia & Kumar, 2016). So this discussion leads to make a hypothesis

H1: Positive E-wom has a relationship with brand attitude.

E-wom and Purchase Intention

Behavior or attitude of an individual to make purchase of products Tariq et al. (2013) is purchase intention Online review are useful for consumers to determine whether or not to purchase a product (Shukla, 2011). Lin et al. (2013) infers that positive E-wom from large number of consumers and from credible sources leads to purchase intention. The reason behind the use of E-wom for making purchases is that it's information about products given by product users instead by company (Xu, 2014) . Literature also includes the information that positive E-wom or online review from consumer is important source for getting confidence in purchase decision (Yaylı & Bayram, 2012). A hypothesis from the discussion can be

H2: E-wom has a relationship with purchase intention.

Brand Attitude and Purchase intention

According to Keller and Lehmann (2006), when evaluation of a brand by consumer is positive then consumer will spend money to make purchase (Kudeshia & Kumar, 2016). If consumers have positive brand attitude then it is very much possible that consumer will make purchase from brand (Kotler & Keller, 2008). Theory of Reasoned Action tells that the behavior of consumers to make purchase is much dependent on their attitude toward brand (Summers et al., 2006). Both Attitude toward the brand and purchase intention are physiological variables and have relationships (Miniard et al., 1983). So from above information a hypothesis can be purposed

H3: Brand Attitude and Purchase intention have relationship between them.

Mediating role of brand Attitude

Electronic word of mouth will lead to positive or negative brand attitude (Chu & Chen, 2019). Higher the quantity of positive electronic word of mouth, the likelihood of brand attitude to be positive will be high (Lin et al., 2013). Brand attitude is important determinant of the decision about making purchase decisions (Yen at al., 2010). Positive brand attitude shapes the intentions to purchase and negative brand attitude will shape the intentions to not spend for a product (TRA; Fishbein & Ajzen, 1975). From study by Kudeshia and Kumar (2016), If a consumer reads positive online reviews in large quantity then his attitude will be positive about brand which leads to making purchase. This suggestion purposing hypothesis

H4: Brand Attitude has mediating effect between E-wom and purchase intention.

E-wom and Brand Trust

Positive electronic word of mouth leads to trust on brand (Kim & Kim, 2019). Consumers get confidence about the product, shaped by electronic word of mouth (Chu & Chen, 2019). Consumers give reviews on e-commerce platforms after using the product and buyers use these reviews to develop trust in brand or product (Huertas-Valdivia et al., 2020). This formulate the hypothesis that

H5: E-wom has relationship with brand trust

Brand Trust and Purchase Intention

Confidence in something can be referred as a trust (Herbst et al., 2012) . Consumers wantto get confidence in product that if will meet the need, then to purchase it (Ariffin et al., 2018). If consumers trust on particular brand or product then he will purchase products from that brand. Purchase intention Literature suggests that brand trust and purchase intention are linked (Sanny et al., 2020). A study also infers the relationship between brand trust and purchase intention in context of online shopping (Zhang & Liu, 2015). Thus literature suggest the hypothesis that

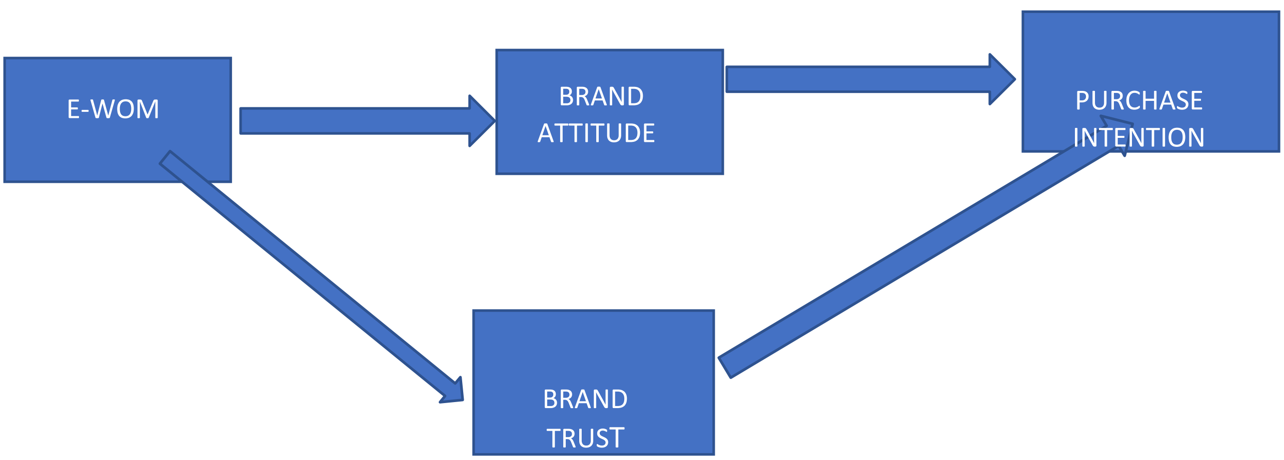
H6: Brand trust has impact on purchase intention of participle brand is very much derived by trust in that brand (Susanti, 2020).

Mediating role of brand trust

The information on internet in the form of reviews that are available for purchasers shapes the trust of purchaser (Septiari, 2018). Positive E-wom leads to gain confidence in product or in brand (Ariffin et al., 2018). When the E-wom is positive then consumer will trust on brand (Hong & Lee, 2019). Brand trust leads to making intentions of consumer to buy product. Literature also suggests that E-wom shapes the trust of individual and this trust will lead to purchase intention (See-To & Ho, 2014). This past discussion suggest hypothesis

H7: Brand Trust has mediating effect between E-wom and Purchase intention.

Research Model:



Methodology:

This study is conducted by reviewing many articles from different databases such as Emerald Insight, Willey Online Library, Springer, Sage, Taylor and Frances etc. Firstly, by determining interesting variable E-wom, many articles are searched on these databases using E-wom as key word. The articles of interest are used to make research model. There were total about 15 to 20 articles were analyzed for study. Then scales for data collection are adapted from different articles. The data was collected and analyzed through Spss. The time of conducting study was almost around 130 days.

Research Design

Study Approach: This is a quantitative research study.

Study Settings: The study settings for this research are totally Non-contrived because it is totally conducted in natural settings.

Unit of Analysis**:** The unit of analysis is individual.

Time Horizon: Time horizon of study is cross-sectional as data is collected only one time.

Population**:** This study is conducted on daraz in Pakistan. Therefore, population is all the shoppers of daraz.

Sampling Technique**:** Convenience sampling technique which is a non-probability sampling technique is used for this study.

Sample Size**:** Item to response ration is used to determine the sample size because population data was not available and so population is unknown (Costello & Osborne 2005). According to this, sample size is 320 (16*20).

MEASURES

There are different studies from which the survey of study is conducted. The Five-point likert scales used to measure the variable ranges from (strongly agree) 1 to (strongly disagree) 5. Four item scale of positive electronic word of mouth is taken and adapted according to the context of study from (Jalilvand & Samiei, 2012). Four item scale of brand attitude is taken and adapted according to the context of study from (Schivinski & Dabrowski, 2014). Four item scale of online purchase intention is taken and adapted according to the context of study from (Thomas et al., 2019). Four item scale of brand trust is taken and adapted according to the context of study from (Chaudhuri & Holbrook, 2001). Along with these scales, the demographic close ended questions on age, gender, Qualification and income amount were also asked.

Data collection:

Data were collected from the customers of Daraz. The majority of respondents are from Lahore and Okara because these both were convenient places to collect data. Data is collected using Google form for making questionnaire due to limited resources for conducting study. The respondents summary of demographic characteristics is include 72.7% are unemployed. The age of 75.6% respondents is 21-25. The level of education of majority of respondents is undergraduate (74.3%). 75.9% respondents are students.

Data Analysis

Preliminary Analysis

Data was analyzed using statistical package for Social Sciences.

Missing value test

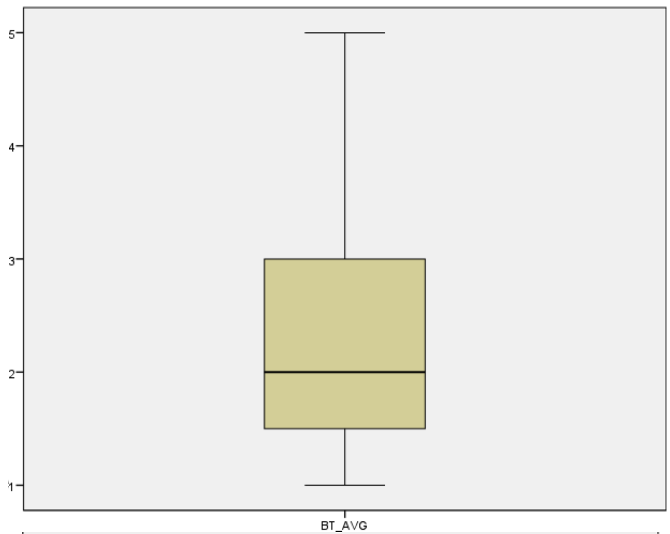
The data was collected through Google form. The required option for every item is enabled means that respondent could not submit Google form until giving all the responses. Therefore, there is no any missing value.

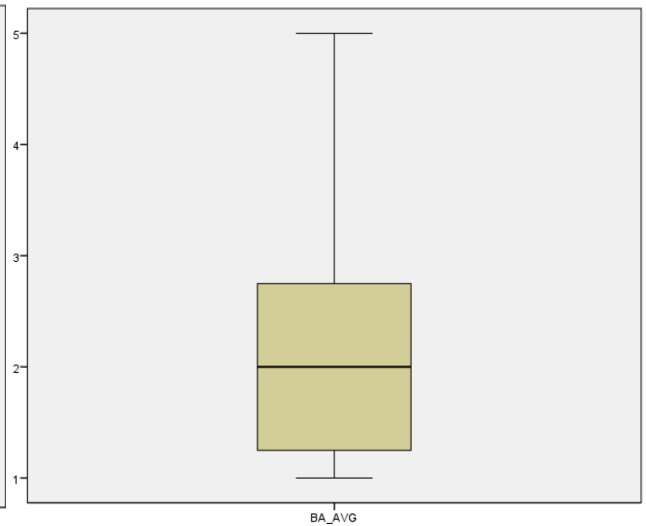
Statistics

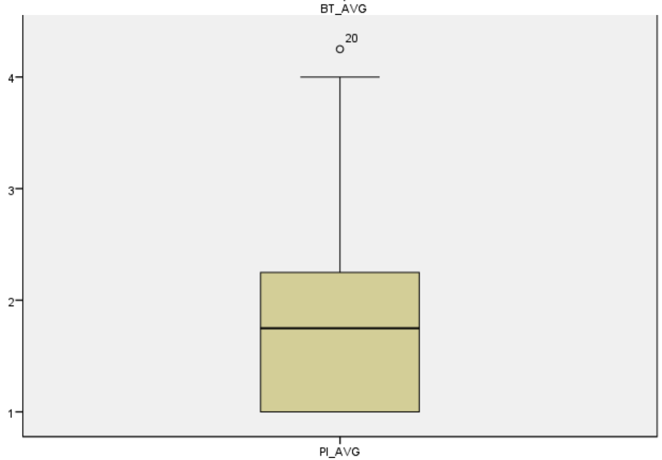
		EWOM1	EWOM2	EWOM3	EWOM4	BT1	BT2	BT3	BT4	BA1	BA2	BA3	BA4	PI1	PI2	PI3	PI4
N	Valid	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Exploring Outliers

Outliers should be check on dependent variable of the study. Five outliers are finding through stem and leaf method. These Outliers removed in descending order.







Data Normality Test

Data Normality of the study is tested through two methods.

1. Skewness and Kurtosis (with criteria of ±3 and ±10)
2. Histogram and Normal Probability plot

<u>Skewness and Kurtosis</u>

The results of Skewness and Kurtosis are following

Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
BA1	248	.899	.155	.108	.308
BA2	248	.733	.155	-.081	.308
BA3	248	.597	.155	-.387	.308
BA4	248	.689	.155	-.207	.308
Valid N (listwise)	248				

Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
EWOM1	248	1.579	.155	2.050	.308
EWOM2	248	1.016	.155	.581	.308
EWOM3	248	.971	.155	.282	.308
EWOM4	248	1.264	.155	1.211	.308
Valid N (listwise)	248				

Descriptive Statistics

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
BT1	248	.605	.155	-.251	.308
BT2	248	.366	.155	-.744	.308
BT3	248	.436	.155	-.605	.308
BT4	248	.517	.155	-.386	.308
Valid N (listwise)	248				

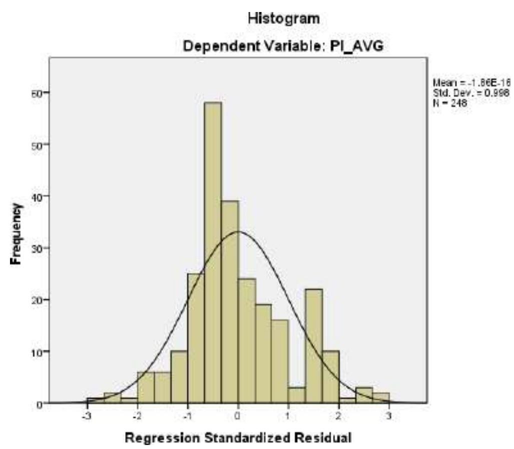
Descriptive Statistics

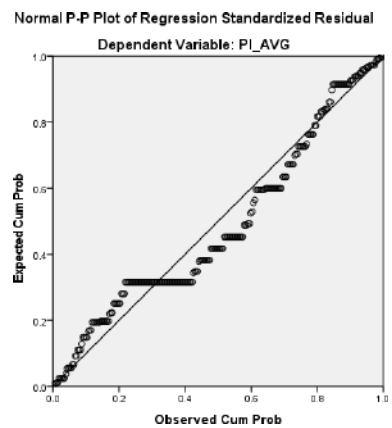
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
PI1	248	1.238	.155	1.114	.308
PI2	248	1.044	.155	.807	.308
PI3	248	.985	.155	.443	.308
PI4	248	.979	.155	.628	.308
Valid N (listwise)	248				

As the values of Skewness and Kurtosis are falling with in the range of ±3 and ±10. So distribution of data is normal according to Skewness and Kurtosis.

<u>Histogram and Normal Probability plot Test</u>

Histogram and Normal Probability plots test are applied to check normal distribution of data. The results of Histogram and Normal Probability plots using EWOM as Independent and PI as dependent are following:





As the mostly frequencies of Histogram are within bell shaped curve So data is normally distributed. On the other hand frequencies are lying near and far from regression line. Therefore, data can be subjected to normally distribute according to normal probability plot.

Scale Reliability Analysis

Scale Reliability of Electronic word of mouth

Reliability Statistics

Cronbach's Alpha	N of Items
.861	4

As the value of Cronbach's alpha is greater than 0.0.70. So scale is reliable.

Scale Reliability of Brand Trust

Reliability Statistics

Cronbach's Alpha	N of Items
.908	4

As the value of Cronbach's alpha is greater than 0.70 so scale is reliable

Scale Reliability of Brand Attitude

Reliability Statistics

Cronbach's Alpha	N of Items
.891	4

As the value of Cronbach's alpha is greater than 0.70 so scale is reliable

Scale Reliability of Purchase Intention

Reliability Statistics

Cronbach's Alpha	N of Items
.892	4

As the value of Cronbach's alpha is greater than 0.70 so scale is reliable

Correlation Analysis

Table

Variables	1	2	3	4
1-EWOM	1			
2- BT	0.58**	1		
3- BA	0.65**	0.83**	1	
4- PI	0.74**	0.64**	0.76**	1

Note: EWOM=Electronic Word Of Mouth, BT=Brant Trust, BA=Brant Attitude, PI=Purchase Intention, **P<0.01

According to correlation table:

Correlation between Ewom and BT is positive (r=0.58, P<0.01), Positive correlation exist between Ewom and BA (r=0.65, p<0.01), The correlation between Ewom and PI is positive (r=0.73, p<0.01), Positive correlation is analyzed between BT and BA (r=0.83, p<0.01), The relationship of BT with PI is positive (r=0.64, p<0.01) and BA is positively related with PI (r=0.76, p<0.01).

Discussion and Conclusion

Theoretical Implications

The study investigates about building favorable and positive brand attitude and brand trust through the positive E-wom to result in purchase intention. Position electronic word of mouth, with positive brand attitude and trust leads to purchase intention. This study considers consumers electronic word of mouth. Because positive E-wom from trustable sources and in high quantity from consumers leads to be in consenting customers than from electronic word of mouth from any company (Jeong & Koo, 2015). The positive relationships are suggested between E-wom, Brand Attitude, Brand Trust, and purchase intention.

Research model used in the study is showing that purchase intention is encouraged by both brand trust and brand attitude through positive electronic word of mouth. This study in contribution to study conducted by Wu and Wang (2011) is similar to this study which shows that brand attitude will be more positive if the messages from electronic word of mouth are large in number from credible sources than lower credible resource. This study also contributed that trust in brand results in intention to purchase not only once but again and again like study by (Urueña & Hidalgo, 2016). Moreover this study also indicates that trust result in intention to purchase like studies by (Chatzigeorgiou et al., 2019 ; Laparojkit & Suttipun, 2021). This study also provides information that positive E-wom leads to purchase intention like study which gives information about the fact that both quality and the number of reviews have impact of purchase intention (Park, et al., 2007). So this study contributes to theory by examining the mediating impact of brand trust and brand attitude between electronic word of mouth and purchase intention.

Practical Implications

This study imposes lot of implications for business managers of E-commerce mainly to daraz. In traditional business its difficult to access the product regarding customers perspective but online businesses such as daraz made it easy for managers to see that whether a customer become satisfied or not. Managers can found through reviews that what kind of changes, a customer want to make in product. Moreover companies should use public influencers to give positive electronic word of mouth. Organizations should consider the importance and effectiveness of electronic word of mouth while making organizational strategies. This study suggests managers to manage electronic word of mouth about their products. This study finds out the impact of positive electronic word of mouth on building brand trust which results in purchase intention of consumers. People will be more encouraged to do positive electronic word of mouth if a company resolves the queries of customers in less time (Kudeshia & Kumar, 2016). This study has larger number of respondents which are young so managers should be focus to positively engage young consumers (Dazeinfo, 2015). People who want to make purchases from daraz can also use electronic word of mouth for right purchasing. People should purchase products which have large number of positive reviews from customers who give reviews after using product or physically seeing it.

Limitations and recommendations for Future Studies

The data for study is just collected from two cities of Pakistan. Therefore, generalization of finding can be questionable to whole population in Pakistan. Future studies could be focus on collection of data from all cities of Pakistan. This study can also have common method variance. Therefore, future studies could be work on collection of data in ways (such as longitudinal study, dyads analysis, shuffle the sequence of questions etc.) to avoid common method biases. In this study, Brand trust and brand attitude are used as mediators. Future studies could be focus on using other variable to identify mediation mechanism between E-wom and purchase intention. This study aims to investigate the behavior and assumptions of customers. But it is normally impossible to predict about people's behavior. This study collected data from daraz purchasers but future studies can use other E-commerce customers for data collection to determine the outcome of electronic word of mouth on the decision or intention of customers to make purchase.

Conclusion

E-commerce businesses like daraz should focus on positive word of mouth about their products to improve sales. This study determines the importance of positive electronic word of mouth in building positive both brand trust and attitude. So, this study identifies the purchase decision of individuals on daraz. People are more likely to make purchases when customers give positive electronic word of mouth about product.

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“Impact of Leadership Styles On Employee Performance: A Moderating Role of Employee Resilience”

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Abstract:

Leadership styles have been studied by several researchers and have been a topic of interest for many. This study investigates the influence of different leadership styles on employee performance, examining the moderating role of employee resilience and the mediating role of job satisfaction. The research aims to contribute valuable insights to the fields of organizational psychology and leadership development. By investigating how leadership styles interact with employee resilience and job satisfaction, this study seeks to provide detailed understanding of the aspects shaping employee performance in contemporary workplaces. The findings aim to provide a comprehensive understanding of the intricate dynamics among leadership, job satisfaction, employee resilience, and ultimately, employee performance in organizational settings.

Key Words: *leadership styles, autocratic leadership, laissez-faire, job satisfaction, employee resilience*

INTRODUCTION

Problem Statement

In the contemporary workplace, effective leadership is pivotal for achieving organizational success and maintaining a motivated and productive workforce. Leadership is responsible for harmonization and incorporation of both human and material resources to reach desired goals & meet the objectives of the organization.

With the level of interest shown by many scholars in the topic of leadership and its styles, various leadership theories have emerged (Khan et al., 2012). These theories are primarily focused on portraying the fundamentals of the different types of actions and the conducts of leaders (Humphreys and Einstein, 2004).

It's been so long since organizations aimed to search for exceptional leadership that is fit for carrying them to success. As a result of the endless endeavors of the scholars in differing the approach in which leaders behave and various numbers of leadership theories and concepts have been established over time. For instance, Lewin's Leadership Style (1939) has named three leadership styles, democratic, autocratic and Laissez-faire (Billing, 2015), whereas "Grid" was then described by Robert Blake and Jane Mouton (Moloy, 1998) in 1964. Simultaneously, Hersey and Blanchard (1969) have consequently established the Leadership theory presently known as the situational leadership theory (McCleskey, 2014). That being the case, leadership styles and their importance are not uncertain and abstruse; this can be demonstrated by the large number of works undertaken on the topic across developing and developed countries alike (Babatunde, 2015; Iqbal et al., 2015; Mohammed et al., 2014; Zumitzavan and Udchachone, 2014).

Leadership styles characterized by varying degrees of autonomy, support and motivation, can significantly influence the performance of employees. To comprehensively understand the complex relationship, this study aims to investigate the impact of different leadership styles, (namely, authoritarian and laissez-faire) on employee performance, with a specific focus on job satisfaction as a mediator and employee resilience as a moderator.

While previous research has explored the relationship between different leadership styles and employee performance or job satisfaction separately, there is a linked understanding of how these factors interact with each other and to what extent influence one another. Additionally, the role of employee resilience, a critical yet often under-explored factor, in moderating the relationship between leadership styles and employee performance remains a significant gap in existing literature. Therefore, this research Seeks to address the following research questions.

Research Questions:

1. What is the impact of autocratic leadership style on employee performance?
2. What is the impact of laissez-faire leadership style on employee performance?
3. To what extent job satisfaction mediates the relationship between leadership styles and employee performance?
4. To what extent does employee resilience moderate the relationship between leadershipstyles and employee performance?

Research Objectives:

The main aim of doing this study was to investigate the impact of different leadership styles on the performances of the employees with a moderating effect of employee resilience.

2. Literature Reviw of the Theories

2.1. Leadership

Leadership is one of the world's most seasoned and a universal phenomenon in humans, (Bass, 1990). From ancient to modern history, leadership has played a vital and integral role indeveloping groups, societies, and nations. Over time, leadership has been defined in terms of a leaders' behaviors. Bass attempted to define leadership from the classics of Western, Egyptian, Greek, and Chinese literature as early as the 6th century BC.

Even though, the *Oxford English Dictionary* noted the appearance of the word leader in the English language as early as the year 1300, the word leadership did not appear until about 1800 (Bass, 1990; Stogdill, 1974). The concepts of leadership can be tracked back to ancient times,but the definitions and classifications of leadership start from the early 20th century, (Rost, 1991).

Even though leadership has been well researched over the years, there is still the need for a universally accepted definition. According to Kumar (2014), Leadership is defined as a process by which a person influences others to achieve an objective and directs the organization in a way that makes it more cohesive and well-reasoned or rational. These can be accomplished by applying different attributes of leadership such as beliefs, values, ethics, character, knowledge, and abilities. Leadership is the blended participation of vision, resources, and values that can lead to positive changes. It is the capacity to construct people's trust and enthusiasm and make a desire to be driven within them.

2.2. Leadership Styles

Memon (2014) defines it as the style of leadership that provides direction, encourages people, and plans to implement. Leadership styles are seen as the approaches that are used by leaders when leading organizations, departments, or groups, (Mehmood & Arif, 2011). Leaders who look for the most effective leadership style may find that a fusion of techniques is useful because there's no best leadership style, (Darling & Leffel, 2010). Leadership styles are viewed as a merger of various characteristics and behaviors used by the leaders to interact with their subordinates, (Coetzee & Coetzee, 2011).

2.3. Autocratic Leadership

Autocratic leaders are said to be classic and dominating. Autocratic leaders expect their subordinates to work accordingly to what they want. Usually, autocratic leaders retain the decision-making rights with them, (Obiwuru, et al., 2011). Autocratic leaders want their followers to perform and implement the services and strategies according to the narrow way. Iqbal, Anwar, and Haider (2015) conducted a study to determine the impact of leadership styles on organizational performance. The study stated that autocratic leaders are much less creative and only promote one-sided conversation. Which critically affects the motivation level as well as the satisfaction level of the employees. The autocratic leadership style is known to be effective for a short-term only. Moreover, it is a type of leadership characterized by a person's individual control over the actions of all group members. Usually, Autocratic leaders make choices based on their beliefs and judgements and rarely consider the follower's advice, (Cherry, 2019).

2.4. Laissez-faire Leadership

Laissez-faire leadership is also known as delegate leadership. In this type of leadership style, the leaders are hands-off and allow group members to make the decisions. The leadership ofLaissez-Faire is the characteristic of leaders who avoid having any responsibility or making any decisions, (Robbins, 2007). Leaders contemplate subordinates as entirely responsible for any decision and give their assistants the complete freedom and power to make work decisions, (Chaudhry & Javed, 2012).

It is the style of leadership in which the leader does not believe in his own supervisory capacity and rather lets his subordinates have the authority of decision-making. These leaders have no clear goals as to how they can work and do not help the group to make decisions and therefore; it leaves too much burden for the subordinates, (Bass & Bernard, 1985).

2.5. Job Satisfaction

Different authors have various approaches towards defining job satisfaction. One of the most often used definitions of job satisfaction is the one given by Spector. According to him, job satisfaction means employee satisfaction that is defined as a "psychological process that energizes and maintains human activity in relation to work, tasks, or projects" (Spector, 1997). Hoppock has defined job satisfaction as any fusion of psychological, physiological and environmental set of conditions that cause a person truthfully to say I am satisfied with my job (Hoppock, 1935). According to Kaliski (2007), job satisfaction can be defined as something that is perceived as feelings of accomplishment and how successful an employee is in their job.

2.6. Employee Resilience

To concentrate on individual resilience in the organizational settings, the concept of ‘employee resilience’ has been proposed, (Näswall et al., 2015). Definition of Employee Resilience can be stated as, “employee’s potential, facilitated and supported by the organization, to utilize resources to continually adapt and flourish at work, even if/when faced with demanding circumstances” (Näswall et al., 2015, p. 1). Luthans (2002, p.702) defined it as a “developable capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibilities”. Employee resilience has profound implications for promoting individual competence (Masten, 2001), enhancing individual responses to stressful circumstances (Yousef & Luthans, 2005), and improving job performance (Cooper et al., 2019).

It is argued that employee resilience contributes to performance drivers, including positive employee attitudes which leads to increased employee performance. (Näswall et al., 2015). Furthermore, employee resilience may also be viewed as a protective factor on employees’ actions to change in the workplace (Shin et al., 2012). Employee resilience is the ability of the employees that are supported and facilitated by organizations to emphatically cope, adapt, and even shine in response to dynamic and challenging environments, (Nguyen et al.,2016; Kuntz et al., 2017; Prayag, 2018).

2.7. Employee Performance

Performance can often be defined simply in an output terminal that is needed for the achievement of pre-decided goals. Performance concerns the job that has been done, how it has been done and what has been achieved. The Oxford English Dictionary confirms this definition by including the phrase "carrying out" into the definition of performance. ‘The accomplishment, execution, carrying out, working out of anything ordered or undertaken’ (ACHUNGUH, 2020).

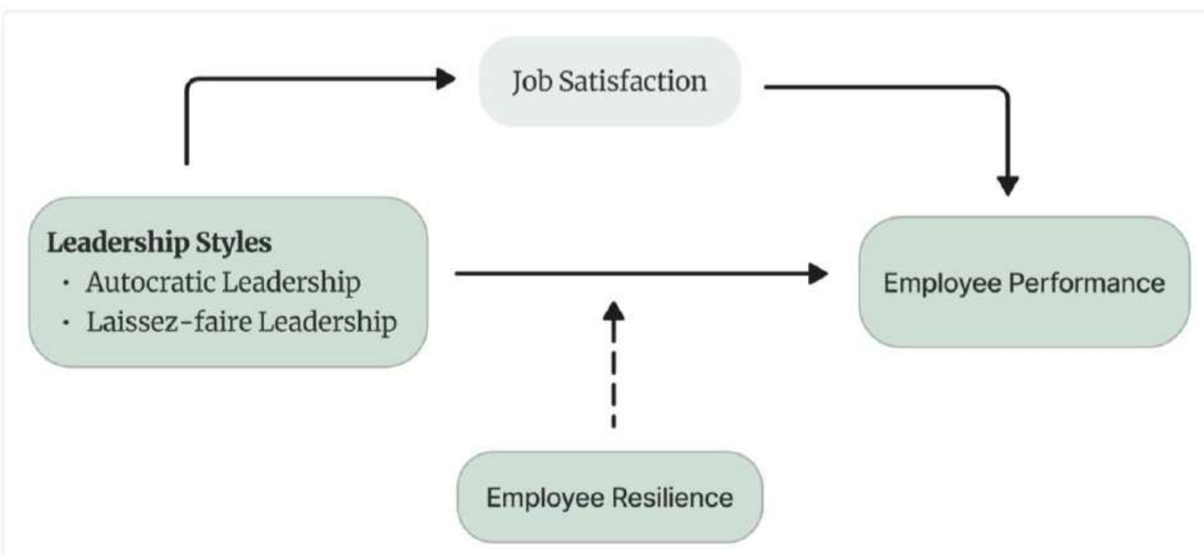
Employee performance is defined differently by various scholars. It is a term typical to the human resource field where employee performance refers to the ability of the employees to achieve organizational goals more effectively and efficiently. Organizations require employees who perform well to contribute to achieving the organizational goals, to deliver their specialized products and services, and to gain competitive advantage. Relationship between leadership styles and employee performance.

The relationship between leadership styles and employee performance has been the subject of extensive research in organizational behavior and management. Different leadership styles have varying impacts on job satisfaction and overall performance of the employee. Literature has underlined leadership as a crucial element in the organizational behavior landscape, whereby it is one of the flexible impacts of individual and organizational interactions (Obiwuru et al., 2011).

The relationship between autocratic leadership style and employee performance is a partial one. This is because Autocratic leaders make decisions unilaterally without much input from their subordinates. This style can lead to quick decision-making but may result in lower employee morale and motivation, (Tannenbaum, R., & Schmidt, W. H., 1958). Autocratic leadership has been associated with higher levels of task completion and efficiency in certain situations where quick decision-making is crucial (Likert, 1961). However, various studies suggest that autocratic leadership may lead to lower job satisfaction and creativity among employees (Bass, 1981).

Whereas the relationship between Laissez-fair leadership style and employee performance can be positive as Laissez-faire leaders provide minimal guidance, allowing employees to make decisions on their own. Previous research indicates that this leadership style may be effective in situations where employees are highly skilled and motivated, requiring minimal supervision (Bass, 1981). While this style can promote creativity, it may also lead to a lack of structure and accountability. Laissez-faire leadership has also been linked to reduced productivity and lower job satisfaction due to a lack of clear guidance and support (Bass & Avolio, 1990).

Conceptual framework



Hypothesis Development

From the information we have gathered as of now and the conceptual framework, we were ableto draw the following hypothesis:

H1: Autocratic Leadership style has a positive impact on employee performance.

H2: Laissez-Faire Leadership style has a positive impact on employee performance.

H3: Job Satisfaction mediates the impact of Autocratic leadership style on employeeperformance.

H4: Job Satisfaction mediates the impact of Laissez-Faire leadership style on employeeperformance.

H5: Employee Resilience moderates the impact of Autocratic leadership style on employee performance.

H6: Employee Resilience moderates the impact of Laissez-Faire leadership style on employee performance.

3. RESEARCH METHODOLOGY

This section of the undertaken study discusses the research method and how different strategies of methods are used to realize the objectives of the research. Research methods are the basic prototypes where the theoretical values are assessed and hence, research methods talk about the ways through which specific paradigms are followed and give

the generalization about results.

3.1. Research Design

The study employs a mixed-methods approach, combining both qualitative and quantitative methods for the purpose of understanding the impact of leadership styles on employee performance, with a moderating role of employee resilience, and mediating role of job satisfaction.

3.2. Sampling

Quantitative Phase

A simple random sampling will be used to collect data from the employees of various industries. The sample size will be determined according to the total population of different industries for the purpose of calculating the impact of leadership style on employee performance with a moderating role of employee resilience.

Qualitative phase

Purposive sampling will be used to select a subset of participants from the quantitative sample for interviewing purposes. This will allow us to understand the impact of leadership styles on employee performance.

4. Data Collection

Quantitative data

A structured questionnaire will be distributed among team members. A five-point Likert scale questionnaire will be used. The development of the Likert scale will be dependent on the following variables; leadership styles (autocratic and laissez-faire), job satisfaction, employee resilience, and employee performance.

Qualitative Data

Interviews will be conducted with team members to understand their experiences and perceptions. Open-ended questions will be used to explore their interactions with different leadership styles and how it affects their work.

5. MEASUREMENT

Undoubtedly, creating a well-rounded measurement for the research topic involves various aspects like having a clear understanding of the variables and what appropriate scales to use. The measurement structure with appropriate scales and the questionnaire items for the research on the impact of leadership styles on the employee performance are suggested below.

SCALE

We will be using interval scale for all our variables.
Interval scale: 5-point Likert Scale (1= Strongly Disagree, 5= Strongly Agree)

4.1. **Independent Variable: Leadership styles**

Autocratic Leadership Style's Questionnaire items (Anyango,2015; Chaudhary, 2014; Iqbal, et al., 2015: Lumbasi, 2015)

1. Leader has absolute power over his/her subordinate.
2. Subordinates have little power for making suggestions.
3. Leader distrust his/her subordinates.
4. Group members are rarely trusted with decisions or important tasks.

Laissez- Faire Leadership Style's Questionnaire Items (Anyango, 2015; Iqbal, et al., 2015; Chaudhary, 2014)

1. In complex situations my supervisor allows me to work my problems out in my ownway.
2. My supervisor stays out of the way as I do my work.
3. As a rule, my supervisor allows me to appraise my own work.
4. My supervisor gives me complete freedom to solve problems on my own.
5. In most situations I prefer little input from my supervisor.
6. In general, my supervisor feels it's best to leave subordinates alone.

4 Dependent Variable: Employee PerformanceQuestionnaire Items

1. I feel my working performance is good.
2. I view my productivity on the job as good.
3. I think my performance score in my current position is good.
4. The supervisor peer review evaluation of my performance is good.

5 Mediating Variable: Job Satisfaction Questionnaire Items

1. I feel I am being paid a fair amount for the work I do.
2. I am not satisfied with the benefits I receive.
3. When I do a good job, I receive the recognition for it that I should receive.
4. I sometimes feel my job is meaningless.
5. I like the people I work with.
6. I do not feel that the work I do is appreciated.
7. The benefits we receive are as good as most other organizations offer.
8. I don't feel my efforts are rewarded the way they should be.

5.2. **Moderating Variable: Employee Resilience**

Questionnaire Items

1. I effectively collaborate with others to handle unexpected challenges at work.
2. I resolve crises competently at work.
3. I re-evaluate my performance and continually improve the way I do my work.
4. I successfully manage a high workload for long periods of time.
5. I seek assistance at work when I need specific resources.
6. I learn from mistakes at work and improve the way I do my job.

5. SIGNIFICANCE OF THE STUDY

This study is significant because it examines the intricate relationship between leadership styles (independent variable) employee performance (dependent variable), considering employee resilience as a moderator and job satisfaction as a mediator.

Enhanced Leadership Strategies:

Understanding how different leadership styles impact employee performance can guide organizations in adopting more effective leadership strategies tailored to their workforce, potentially improving overall productivity.

Resilience as a Moderator:

Investigating employee resilience as a moderator allows for a nuanced understanding of how individual traits influence the leadership-employee performance dynamic. This insight can be crucial in developing targeted interventions for employees facing challenges.

Job Satisfaction as a Mediator:

Exploring job satisfaction as a mediator helps uncover the mechanism through which leadership styles influence employee performance. This knowledge can inform interventions aimed at enhancing job satisfaction, thereby positively affecting overall performance.

Holistic Workplace Improvement:

By considering both individual traits (resilience) and psychological mechanisms (job satisfaction), the study offers a holistic perspective on how to improve the workplace environment, contributing to employee well-being and organizational success.

6. LIMITATIONS

While studying the relationship between leadership styles, employee performance, and themoderating role of employee resilience, this study encounters several limitations. Firstly, caution should be exercised in generalizing the findings, as the research may be confined to a specific context, industry, or organizational culture. Additionally, the subjectivity inherent in measuring variables such as leadership styles, employee performance, and job satisfaction introduces a source of bias. To establish the link between leadership styles and employee performance is a difficult task and changes overtime therefore it is not possible to capture it. External influences, like economic conditions or industry trends, could act as confounding variables not consideredin the study. Furthermore, the resilience on self-reported data for variables like job satisfaction introduced the possibility of bias. The intricate interplay between variables, especially the role of employee resilience as a moderator and job satisfaction as a mediator, adds complexity that may impact the precision of their defined roles. Addressing these limitations is crucial for a more comprehensive understanding of the dynamics between leadership styles and employee outcomes.

7. CONCLUSION

In conclusion, while the study sheds light on the relationship between leadership styles, employee performance, and the moderating role of employee resilience, as well as the mediating effects of job satisfaction, several limitations should be acknowledged. These include potential issues of generalizability, the challenge of establishing causation, the influence of external factors, possible measurement biases, time sensitivity, and consideration related to sample size and diversity. Recognizing these limitations is crucial for a nuanced understanding of theresearch findings and for guiding future investigations in the field of organizational behaviorand leadership.

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The Role of Human Capital in Strengthening Energy Mix-Climate Change Relation: A Study of Selected Low and High Vulnerable Economies.

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Abstract

Changes in climate adversely affect the human and biological system. Human activities include the uses of land for urbanization and misuse of fossil fuel for energy, agriculture and industry etc. increases carbon emission in the atmosphere. Adaptive capacity of human is influenced by socio-economic factors such as skills, resources, technology and governance. The aim of current research are: a) to identify the factors that can reduce vulnerability in low and high vulnerable countries, b) to find the factors that can moderate the effect of climate change in these countries, c) to compare the effect of these factors in high and low vulnerable economies. Panel Quantile Regression is used as an econometric technique to get the final results of the study. Sample is comprised of 40 low and high vulnerable countries, and data range from 1995-2020. Division of sample countries is based on the ranking of ND-GAINS. Data for present study is collected from ND-GAINS, WDI and PWT. Results revealed negative relationship between Human Capital and climate change vulnerability. Moreover, human capital along with energy-mix reduces climate change vulnerability in case of low and high vulnerable countries. Communication and education increases capacity-building skills and knowledge which help to reduce the risk associated with hazard and prepare us to deal with that hazard. Present study is conducted to highlight the importance of Socio-Economic factors in strengthening energy-mix climate change relation. Policy makers and governments are concerned about change in climate as it is causing adverse impact on the society and environment. To cope the adverse impact of climate change there is a need to develop adaptation measures which is necessary to safeguard environment and society. This issue is more critical in developing nations because these nations are unable to counter climate related risk. They lack suitable infrastructure, technology, adaptive capacity, human and physical capital while developed nations have incorporated adaptation measures in their developmental agendas using investment in technology and human power.

Key Words: Human Capital, Vulnerability, Energy Mix, renewable energy.

1. Introduction

The excessive use of energy bring different challenges to the environment in the form of carbon emission that is a main cause of climate change. Due to health issues linked with carbon emissions, clean energy such as renewable energy is an effective alternative to fossil-fuel (Wang et al., 2018). Renewable energy can tackle climate change by reducing CO2 emission in the atmosphere. In the energy mix inclusion of renewable energy has become an important part in the energy policies of world (Dong et al., 2018).

Human-induced climate change is affecting all the nations of world. Adaptation measures are required to mitigate its effects (Abbass et al., 2022). Due to global warming, consequences in the form of shortage of food, failure of crops, disruption of water system, and destruction to infrastructure and settlements, harm to human health further increases (Field & Barro, 2014).

Over past two decades, in the world approximately 11,000 weather related extreme events reported which affected almost 94.9 million people, approximately 475,000 died from these events and these disasters incurred the loss of 2.56 trillion USD (Eckstein et al., 2021). Climate change is causing more vulnerable impact on poor economies as compared to developed economies (Amegavi et al., 2021). Unfortunately developing nations are suffering a lot due to extreme weather events because of weak socio-economic status, poverty and poor environment (Hamidi et al., 2020). Developing countries are not able counter climate-related risks because these countries lack suitable infrastructure, technology, adaptive capacity and more importantly human and physical capital as compared to developed countries (Millner & Dietz, 2015). Climate-related hazards are responsible for significant consequences due to lack of adaptation and readiness to combat these events (Sarkodie & Strezov, 2019).

Energy is the need of an economy without which development is not possible. Greenhouse gases are increasing rapidly and fossil-fuel is the primary cause of it. To address this issue, countries are focusing on the use of renewable energy to cut these emissions (Sarkodie et al., 2020; Wang et al., 2018). The transition of moving from traditional sources to renewable energy sources i.e. solar, wind, hydro, tidal etc. is increasing adaptive capacity (Ellabban et al., 2014), reducing GHGs and improving living standard (Zahid et al., 2021).

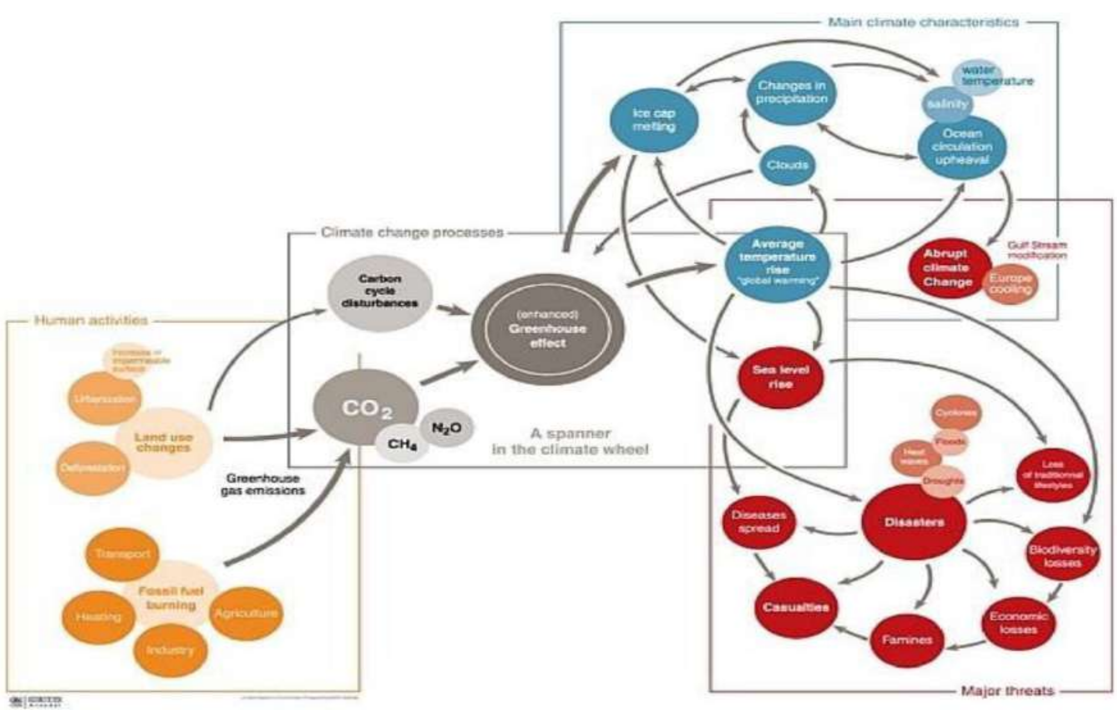
Climate change is main economic, environmental, social and political problem in many countries of world. Many recent studies have confirmed the variability of impact of changes in climate on human population and their environment. Many countries have accepted this fact and implemented different measures to reduce the impact of human activities on environment.

Human activities include the uses of land for urbanization and misuse of fossil fuel for energy, agriculture and industry etc. increases carbon emission in the atmosphere (Cao et al., 2017). Due to increase in carbon emission in the circulation average temperature increases, sea-level rises and number of incidence of natural disaster increases. These disasters increases famine, financial loss, death toll increases, decreases biodiversity and spread different diseases (Rekacewicz & Bournay, 2005). Figure 1 below represents the process of climate change, its characteristics and threats that are related to climate change.

Figure 1. Climate change: process, characteristic, and threats.

Source: Rekacewicz and Bournay (2005)

Many developed countries are reducing the consumption of fossil fuel which is the major source of climate change and promoting the use of renewable energy sources (RES) aims to provide energy to the society from environment friendly sources (McInerney & Bunn, 2019). Use of RES reduces greenhouse gas emission (Gielen et al., 2019). Renewable energy is specified as climate mitigation strategy by different studies (Chen et al., 2011; Searle and Malins, 2015; Ziska et al., 2009). These resources provide many advantages to the population and it reduces GHGs emission that help to improve the health of people and protect them from different respiratory diseases (Sahoo, 2016; Baqir et al., 2019; Dong et al., 2019).



In European Union many western countries has changed their policies with their main focus is on mitigation of climate change and energy emission (Kedward & Ryan-Collins, 2022). For sustainable economic recoveries fostering energy policies include: curb fossil consumption, accelerate efficient energy, investment in renewable energy, energy security, resource management and climate mitigation (Hainsch et al., 2020; Christou, 2021; Schoenefeld, 2021).

The relationship between human capital and climate change vulnerability of low and high vulnerable economies is represented in graph 1. These graph indicate that vulnerability is high when human capital is low and vice versa.

Graph 1: Impact of Human Capital on the Vulnerability to Climate change

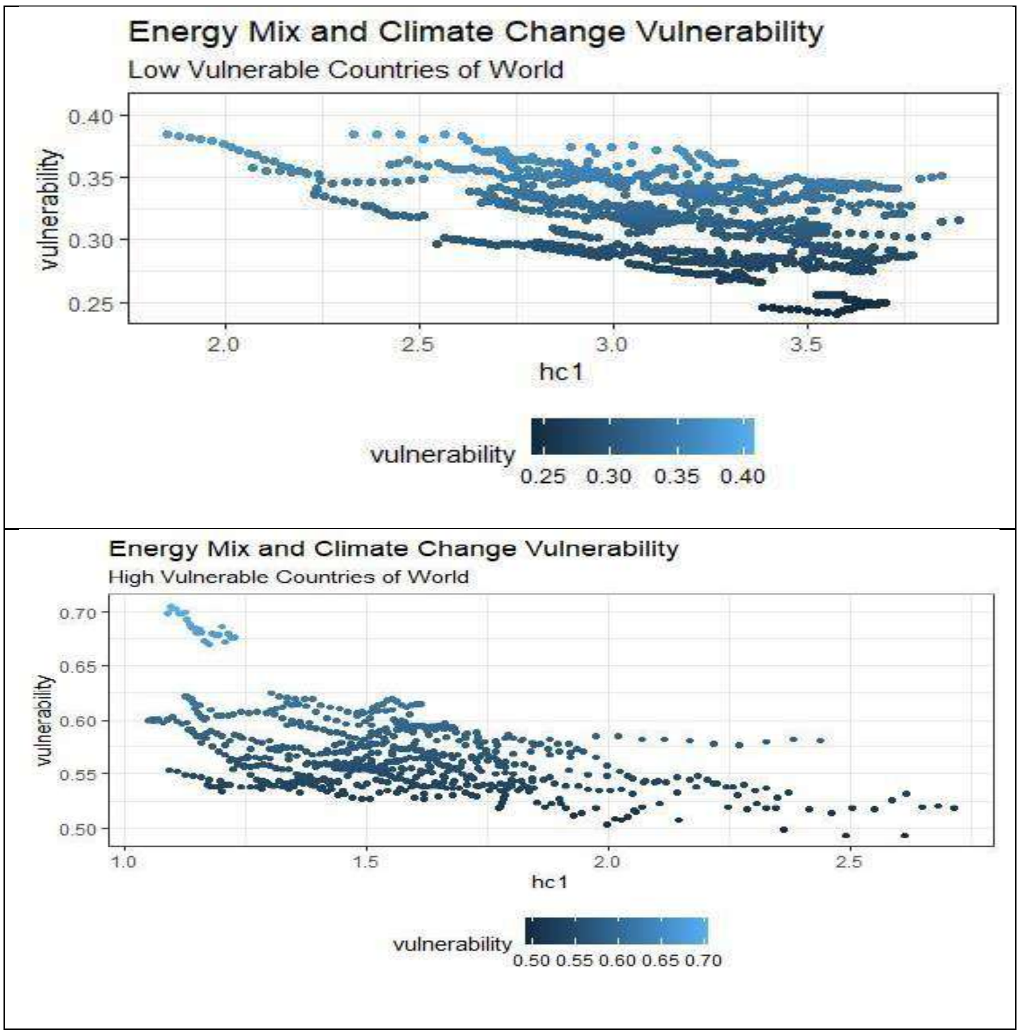
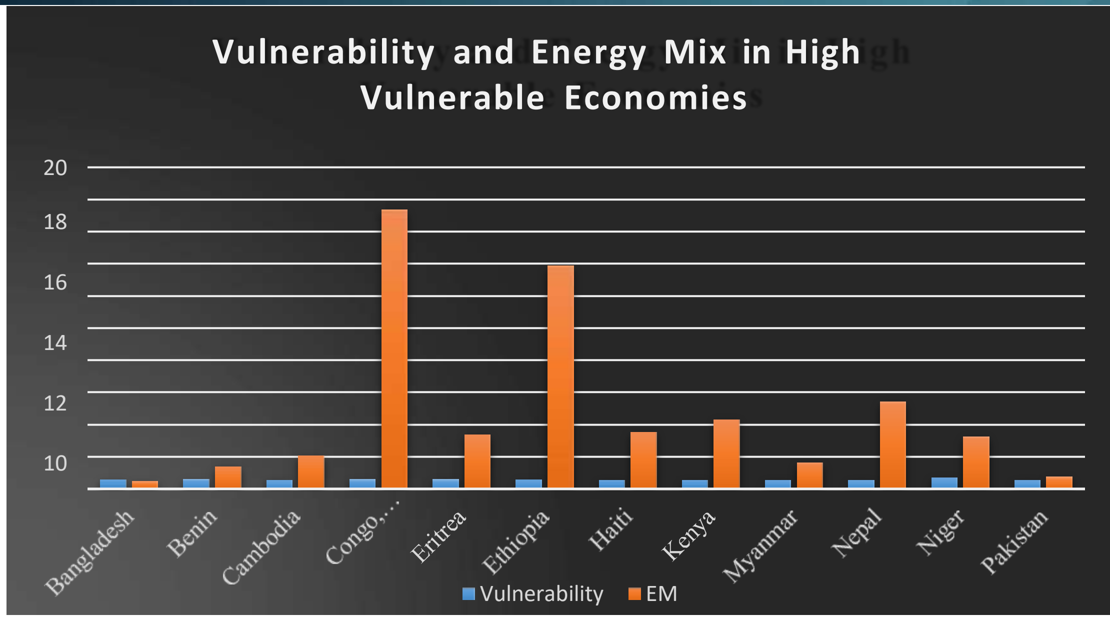


Figure 2 represents vulnerability and energy mix in high vulnerable economies.

Figure 2: Energy Mix and Vulnerability to climate change in High Vulnerable Countries



Data Source: WDI, ND-GAINS

This figure indicate that use of renewable energy alone does not reduce vulnerability of high vulnerable countries. There is a need to incorporate moderator or facilitator that have the ability to maximize the reward of using renewable energy. We can maximize the benefits of renewable energy through Education by encouraging people to install panels at micro-level (homes).

The aim of current research are: a) to identify the factors that can reduce vulnerability in low and high vulnerable countries, b) to find the factors that can moderate the effect of climate change in these countries, c) to compare the effect of these factors in high and low vulnerable economies. The result of current study will provide the guidance to improve their adaptive capacity.

Organization of this study is as follows: Literature review, theoretical framework, methodology, results discussion and conclusion.

2. Literature Review

Many researchers have discussed climate change and its impact in their research papers. Lemos et al. (2007) mentioned the factors that can create adaptive capacity are knowledge and information that encourage those institutions that authorize evolutionary change and raise the level of education and income. Investment in knowledge and information is necessary for the creation of adaptive capacity. Mertz et al. (2009) argued that there is a need of innovative, robust, institutional, and flexible, governance, policy and inclusive structure to limit the uncertainties associated with climate change, to support the population of developing countries to better adapt to these adaptations.

Manandhar et al. (2011) in their research explored that in Nepal farmers were responding quickly to changes in climate but their responses were limited to short-term. In the long-run these responses were inadequate to cope the adverse impact of climate change. Lebel (2013) identified few evidences indicating the direct influence of local knowledge in reducing vulnerability to climate change. Out of these contributions, most of them were based upon responses to existing changes in climate opposed to long term variations in climate.

Regmi and Bhandari (2013) conducted research to explore the ways to overcome the barriers in implementing the adaptations in Nepal. These barriers are institutional framework, available technology and knowledge. These barriers should be removed for the implementation of effective adaptation measures. Lucas et al. (2017) studied different challenges for the deployment of renewable energy in the small developing Pacific Island which is most vulnerable to changes in climate and identified successful examples of using RE in this region. Many barriers also exist in this region that prevent the use of RE at larger scale. These barriers include lack of data on RE, socio-cultural impediments, scarcity of financial resources, costly infrastructure, need for regulatory framework and policies, and shortage of human resources.

Mahmood et al. (2019) used 3SLS regression method to examine the impact of renewable energy, economic growth and human capital on carbon emission in Pakistan. Income level in Pakistan and renewable energy contributes to carbon emission while human capital mitigate the effect of CO2 emission. Sarkodie et al (2019) studied the impact of social, economic and governance readiness measures on the climate change vulnerability of 192 countries. This study used Pooled OLS, PMG and Panel Quantile Regression. Africa is most vulnerable economy due to high exposure and sensitivity but less adaptive capacity while developed economies are less vulnerable due to high adaptive capacity. Least-developed nations with less adaptive capacity are more vulnerable to changes in climate (Edmonds et al., 2020).

Amegavi et al (2021) used panel Quantile Regression to study the impact of readiness on the vulnerability of 51 African countries for the time of 1995-2018. Results indicate negative impact of adaptation readiness on the climate change vulnerability. Tessema et al. (2021) studied the Ethiopian rural community's vulnerability to climate stress i.e. droughts. Land cover is the major factor which affect the sensitivity of droughts in those areas. Major factors that affect the adaptive capacity are annual income, number of owned livestock and educational level of head household. The livelihood vulnerability is attributed to higher sensitivity and low capacity to adapt. Sensitivity of community to droughts is determined by health infrastructure, access to assets, water supply quality and bio-physical factors such as soil fertility and size of land holding while adaptive capacity determined by level of social group relation, education and factors such as holding of land and number of owned livestock (Tessema et al., 2021). Tang et al. (2021) examined the moderation effect of IQ and Education on environmental pollution. IQ and education act as a facilitator that facilitate renewable energy to reduce environmental pollution.

Sarkodie et al. (2022) used 2SLS method to investigate the effect of readiness on the vulnerability of 192 countries for the period of 1995-2017. Findings indicate that less developed countries with lower adaptive capacity are more vulnerable to climate change while high income countries with adaptation and readiness are less susceptible to climate change. Joof et al. (2023) conducted their study to investigate the effect of climate change and renewable energy on biodiversity in BRICS countries. NARDL method is used to investigate this problem. Findings indicate that CO2 emissions are harmful to environmental quality. Moreover, decrease use of renewable energy worsen the biodiversity loss while promotion of renewable energy reduces biodiversity loss.

Saeed et al. (2023) conducted their study to compare climate change and adaptation in lower-middle income, upper-middle income and high-income countries by using Driscoll–Kraay standard-error method for panel data over the period of 1995-2020. Developed nations such as France, USA, Germany, Ireland, Sweden, Australia, New Zealand, Austria, Canada, Belgium, UK, Denmark and Switzerland are extremely adaptive countries due to readiness for the adaptation. While developing nations with their low level of readiness are more vulnerable to changes in climate. Developed nations are less vulnerable to climate change because of their rich capital-resources, well-established economies, good governance and timely effective strategies.

Previously, few studies have focused on the importance of education to tackle the problem associated with climate change. Current study is conducted to highlight the importance of socio-economic factors to reduce climate change vulnerability. Current study is conducted to fill the gap in the vulnerability literature. Different studies have discussed climate change vulnerability in different context while these studies have ignored the facilitating role of human capital in reducing climate change vulnerability.

3. Theoretical framework:

The dilemma of climate change first discussed in the first assessment report of IPCC in 1990. The pattern of climate change, its drivers and effect of changes in climate on ecological and socio-economic system are highlighted in this report (Intergovernmental Panel on Climate Change, 1992). The results of this discussion contributed to the organization of UNFCCC (1992/1994). After the Rio Earth Summit in 1992, UNFCCC goals to stabilize greenhouse gas emissions. In 1994 UNFCCC became active and set framework for agreements such as Koyoto protocol and Paris agreement. Paris agreement was adopted after the failure of Koyoto agreement to reduce greenhouse gas emissions and reduce global temperature (Pachauri et al., 2014; Baste and Watson, 2022). Paris Agreement in 2016 set adaptation goal "strengthening adaptive capacity, improving resilience, and lessening vulnerability to climate change to contribute to sustainable development." This agreement emphasize capacity building for under-developed economies and demand developed nations to support developing countries in their climate-related capacity building (McCarthy, 2001) (IPCC, 2018).

Rapid increase in CO2 Emission is linked with rapid development by utilizing more resources. Emerging and developed economies are at the forefront of carbon emission per capital as compared to developing economies (Froemelt et al., 2018).

Adaptive capacity of human is influenced by socio-economic factors such as skills, resources, technology and governance. The enabling properties of both societal and natural assets are also involved in the adaptive capacity, including technological, financial and information context and resources including environment, social network, infrastructure, public policy, institutional governance and political influence within which assets are held (Ensor & Berger, 2009). Climate change adaptations involve complex set of institutional and socio-economic interactions (Smithers and Smit, 1997; Schipper and Burton, 2009). Adaptation history indicate that both human and natural system are adapting to ecologic and environmental stresses. According to Smith 1994 and Smithers and Smit (1997) adaptive responses are better explained by role and intent of government, timing, scale, duration, effect and form. Multiple factors influence adaptive capacity include social, economic, technological, governance and human. Social network, social capital, traditions, customs, values, cognition level and perceptions affect the capacity of community to adapt to risk associated with climate change (Adger et al., 2006).

Organizations, institutions and people can use skills and resources to anticipate, cope and recover from natural hazards. Communication and education increases capacity-building skills and knowledge which help to reduce the risk associated with hazard and prepare us to deal with that hazard (Pismel et al., 2023).

Figure 3 presents the role of human capital in strengthening Energy Mix-Climate Change Relation.

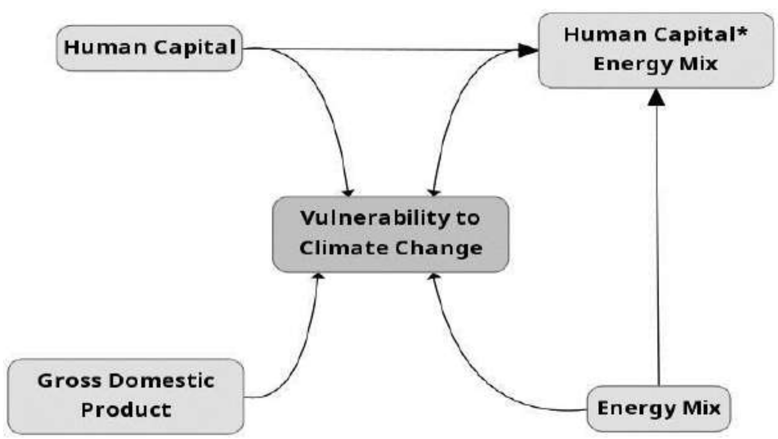


Figure 3: Role of Human Capital in reducing Energy Mix-Climate Change Relation

4. Methodology:

4.1 Data Source:

Data for this paper is collected from WDI, ND-GAINS and PWT. Below table 1 represents variables, their source and transformation.

Table 1: Variables and their Transformation

Variables	Transformation	Source
Vulnerability	V_{it} "Index"	ND-GAINS
Human Capital	HC_{it} "average years of schooling and return to education"	PWT
Energy-Mix	EM_{it} "ratio of renewable to non-renewable energy"	WDI
GDP US$	$lnGDP_{it}$ "ln(GDP US$)"	WDI

4.2 Sample Selection Criteria:

Sample of 40 Low and 40 high vulnerable countries of world are selected for this analysis. Countries are selected on the basis of ranking of ND-GAINS (*ND-GAINS*, 2023). The less vulnerable countries are mostly upper income and upper middle-income countries while high vulnerable countries are mostly under developed and developing countries.

4.3 Model Specification:

This study constructs on the model which depends on the relationship between climate change vulnerability, human capital, energy mix and GDP.

Vulnerability = *f* (Energy Mix, Human Capital, Gross Domestic Product)

Where,

Vulnerability is used as dependent variable in the paper. Notre Dame University is the producer of "Global Adaptation Index". This index is worldwide accepted to assess climate changes since 1995 (Abdelzaher et al., 2020). Vulnerability is composed of three components which are weighted equally. These are exposure, sensitivity and ability to adapt.

The definitions of components of vulnerability index are:

1) Exposure: "The *exposure* of the sector to climate-related or climate-exacerbated hazards which is mostly a function of biophysical attributes"
2) Sensitivity: "the *sensitivity* of that sector to the impacts of the hazard"
3) Adaptive Capacity: "*adaptive capacity* of the sector to cope or adapt to these impacts"

Energy mix is used as explanatory variable in the analysis which is the "ratio of renewable energy to non-renewable energy" (Dai et al., 2023).

$$EM = \frac{Renewable\ Energy}{Non{-}Renewable\ Energy}$$

Human capital is used as explanatory variable as well as a facilitator in the analysis that have capability to moderate the impact of climate change. It is based on "average years of schooling and return to education"

GDP is used as a control variable in the analysis which represents the growth of economy.

The econometric equation of model is as follows:

$$V_{it} = \alpha_{\circ} + \beta_1 EM_{it} + \beta_2 EM^2_{it} + \beta_3 EM_{it} {*}HC + \beta_4 EM^2_{it} {*}HC + \beta_5 \ln GDP_{it} + \mu_{it} \quad (1)$$

This paper uses the methodology provided by Haans et al. (2016) to find mediation effect. EM and EM2 will confirm the existence of U or inverted U-shaped curve. First cross product will describe how HC changes the linear effect of EM on Climate change vulnerability while cross product with EM2 will describe how HC changes non-linear effect of EM on Vulnerability.

4.4 Econometric Technique:

The first step is to estimate summary statistics which provide basic information about the variables used in analysis. After checking for multicollinearity of data panel DF unit roots test by Fisher is used to check the stationarity of data. This test confirms the mixed order of Integration of variables.

In the next step, Westerlund, Pedroni and Kao test of co-integration are used to confirm the existence of long-run relation between variables.

This study uses Quantile Regression for Panel Data to get the final results. This method allows researchers to account unobserved heterogeneity (Canay, 2011). It is used to control heterogeneity across quantiles, cross-sectional dependence and unconditional distribution (Sarkodie & Strezov, 2019).

5. Discussion of Results:

Summary statistics is the initial step of analysis. It provides basic information about all the variables used in the analysis. As the mean value of vulnerability, HC and lnGDP are greater than their standard deviation, these variables are over-disbursed while the mean value of EM is less than its standard deviation, and EM is under-disbursed. Table 2 provides the summary statistics of data of less vulnerable countries.

Table 2: Summary Statistics of Low vulnerable countries

Low Vulnerable Countries							
Variables	**Mean**	**Median**	**Minimum**	**Maximum**	**Standard Deviation**	**Skewness**	**Kurtosis**
Vulnerability	0.320387	0.323927	0.241105	0.408288	0.03233	-0.17955	2.404515
EM	0.3421	0.138525	0	7.532877	0.752833	6.342432	51.45873
HC	3.16561	3.204533	1.854199	3.89154	0.37974	-0.71349	3.376959
lnGDP	25.976	26.19076	20.99624	30.6232	1.929748	-0.31965	2.92703

Author's own Estimation

The mean value of vulnerability, HC and lnGDP are greater than their standard deviation so these variables are over-disbursed while the mean value of EM is less than its standard deviation, and EM is under-disbursed. Table 3 provides the summary statistics of data high vulnerable countries.

Table 3: Summary Statistics of Low vulnerable countries

High Vulnerable Countries							
Variables	**Mean**	**Median**	**Minimum**	**Maximum**	**Standard Deviation**	**Skewness**	**Kurtosis**
Vulnerability	0.573312	0.567435	0.493146	0.704934	0.039845	1.010027	3.999339
EM	5.550944	3.192264	0.007097	59.97317	7.697701	3.060058	15.34891
HC	1.574133	1.542946	1.049339	2.713408	0.309265	0.88573	4.018675
lnGDP	22.566	22.67177	18.86742	26.50528	1.634992	0.024681	2.510526

Author's own Estimation

VIF is estimated to detect the problem of multicollinearity. Table 4 and 5 represents VIF which indicate that there is no problem of multicollinearity. Explanatory variables have no linear association with other explanatory variables.

Table 4: Variance Inflating Factor

Low Vulnerable Countries				
	Vulnerability	**EM**	**HC**	**lnGDP**
Vulnerability	-			
EM	1.015084	-		
HC	1.370223	1.000993	-	
lnGDP	1.09825	1.068271	1.076329	-

Author's own Estimation

Table 5: Variance Inflating Factor

High Vulnerable Countries				
	Vulnerability	**EM**	**HC**	**lnGDP**
Vulnerability	-			
EM	1.067409	-		
HC	1.339065	1.031593	-	
lnGDP	1.005672	1.008039	1.125733	-

Author's own Estimation

In the next step unit roots are estimated to check the order of integration. Results of Fisher's DF and IPS unit root test are presented in table 6.

Table 6: Unit Root for Panel Data

Low Vulnerable Economies

	Fisher's Dickey Fuller Unit Root Test				Im-Pesaran-Shin Unit Root test			
	At Level		At First Difference		At Level		At First Difference	
Variables	Statistics	P-Value	Statistics	P-Value	Statistics	P-Value	Statistics	P-Value
Vulnerability	116.73	0.0046			-2.2615	0.011		
EM	52.9	0.9916	99.09	0.0727	4.3745	1	-2.1513	0.0157
HC	530.8	0			7.1211	1	-3.1741	0.0008
lnGDP	225.62	0			-3.6376	0.0001		
High Vulnerable Economies								
	Fisher's Dickey Fuller Unit Root Test				**Im-Pesaran-Shin Unit Root test**			
	At Level		**At First Difference**		**At Level**		**At First Difference**	
Variables	**Statistics**	**P-Value**	**Statistics**	**P-Value**	**Statistics**	**P-Value**	**Statistics**	**P-Value**
Vulnerability	85.42	0.31	131.7	0.0002	-2.0548	0.0199		
EM	148.7	0			-3.1403	0.0008		
HC	153.8	0			6.9208	1	-58.223	0
lnGDP	51.69	0.99	97.73	0.08	2.4131	0.9921	-13.5101	0

Author's own Estimation

Estimates of unit root have identified mix order of integration of variables used in the analysis. Table 7 presents order of integration.

Table 7: Order of Integration

Low Vulnerable Countries		
Variables	**Fisher's Dickey Fuller Unit Root Test**	**Im Pesaran Shin Unit Root test**
Vulnerability	I(0)	I(0)
EM	I(1)	I(1)
HC	I(0)	I(1)
lnGDP	I(0)	I(0)
High Vulnerable Countries		
Variables	**Fisher's Dickey Fuller Unit Root Test**	**Im Pesaran Shin Unit Root test**
Vulnerability	I(1)	I(0)
EM	I(0)	I(0)
HC	I(0)	I(1)
lnGDP	I(1)	I(1)

Author's own Estimation

Before moving to final step of analysis it is necessary to confirm the long-run relationship between variables used in analysis. For this purpose Kao, Westerlund and Pedroni co-integration test are used in the analysis which confirm the existence of long-run relationship between variables. Their results are presented in table 6.

Table 8: Co-integration for Panel Data

Co-integration Test for the sample of Low Vulnerable Countries								
Kao test for co-integration			**Pedroni test for co-integration**			**Westerlund test for co-integration**		
	Statistics	**P-Value**		**Statistics**	**P-Value**		**Statistics**	**P-Value**
Modified Dickey–Fuller t	-4.2818	0.000	Phillips–Perron t	-5.4795	0.000	Variance ratio	-3.6933	0.0001
Dickey–Fuller t	-3.5304	0.0002	Augmented Dickey–Fuller t	-4.9355	0.000			
Augmented Dickey–Fuller t	-2.5539	0.0053						
Unadjusted modified Dickey–Fuller t	-5.1777	0.000						
Unadjusted Dickey–Fuller t	-3.9103	0.000						

Co-integration Test for the sample of High Vulnerable Countries

Kao test for co-integration			**Pedroni test for co-integration**			**Westerlund test for co-integration**		
	Statistics	**P-Value**		**Statistics**	**P-Value**		**Statistics**	**P-Value**
Unadjusted modified Dickey–Fuller t	-1.4615	0.0719	Phillips–Perron t	-5.6116	0.000	Variance ratio	-3.0667	0.001
Unadjusted Dickey–Fuller t	-1.4257	0.077	Augmented Dickey–Fuller t	-5.597	0.000			

Author's own Estimation

Panel Quantile Regression is used to estimate the final results of this study. The same technique is used by Sarkodie and Strezov (2019). Final results of model are presented in table 9.

Table 9: Panel Quantile Regression in case of Low Vulnerable Countries

Low Vulnerable Countries				
Vulnerability	**Coefficient**	**Std. Error**	**z-value**	**P-Value**
HC	-0.03809	0.0000292	-1303.82	0.000
EM	-0.000129	0.0000319	-4.05	0.000
EM2	0.027505	0.0000892	308.33	0.000
EM*HC	-0.009975	0.0000169	-590.01	0.000
EM2*HC	-0.007479	0.0000295	-253.68	0.000
lnGDP	-0.005586	0.00000532	-1050.92	0.000
Ecmt-1	-1.15446	0.0230535	-50.08	0.000

Author's own calculations

There is inverse relationship between human capital and climate change vulnerability. 1 unit increase in HC will reduce vulnerability by 0.03 units. Human capital through knowledge and skills reduces pollution as well as climate change vulnerability (Tang et al., 2021). Growth also reduces vulnerability. Vulnerability reduces with the increase in energy-mix while increase in EM2 increases vulnerability. The relationship of EM and EM2 with vulnerability support U-shaped curve. The cross-product of EM and HC reduces vulnerability while the cross-product of EM2 and HC also reduces vulnerability.

These results of first cross-product indicate how HC changes the linear effect of EM on vulnerability. Its negative value indicate that cross-product of EM and HC reduces vulnerability. These results of second cross-product indicate how HC changes the non- linear effect of energy-mix on vulnerability. Its negative value also indicate that cross-product of EM2 and HC reduces vulnerability. HC along with energy-mix reduces the vulnerability of climate change. The negative and significant value of ECM_{t-1} indicate that convergence hypothesis hold for this analysis. This model have ability to converge back to equilibrium in respond to any shock (Narayan & Smyth, 2006).

Table 10 represents the results of PQR in case of high vulnerable countries.

Table 10: Panel Quantile Regression in case of high Vulnerable Countries

High Vulnerable Countries				
Vulnerability	**Coefficient**	**Std. Error**	**z-value**	**P-Value**
HC	-0.02551	0.0012612	-20.23	0.000
EM	-0.00076	0.0000284	26.89	0.000
EM2	-0.000087	0.00000423	-20.57	0.000
EM*HC	-0.000058	0.0000298	-1.97	0.049
EM2*HC	0.000064	0.00000298	21.59	0.000
lnGDP	-0.00829	0.000565	-20.94	0.000
Ecmt-1	-0.02088	0.00186	-14.68	0.000

Author's own calculations

Results indicate inverse relationship between HC and Vulnerability. HC reduces Vulnerability. 1 unit increase in HC will reduce vulnerability by 0.02 units. Human capital through knowledge and skills reduces pollution as well as climate change vulnerability (Tang et al., 2021). Growth also reduces vulnerability. Both EM and EM2 are negative. Vulnerability reduces with the increase in energy-mix (Dai et al., 2023). The cross-product of EM and HC reduces vulnerability indicate that

HC along with energy-mix reduces the vulnerability of climate change while the cross-product of EM2 and HC increases vulnerability in case of high vulnerable countries. The negative and significant value of ECM_{t-1} indicate that convergence hypothesis hold for this analysis. This model have ability to converge back to equilibrium in respond to any shock.

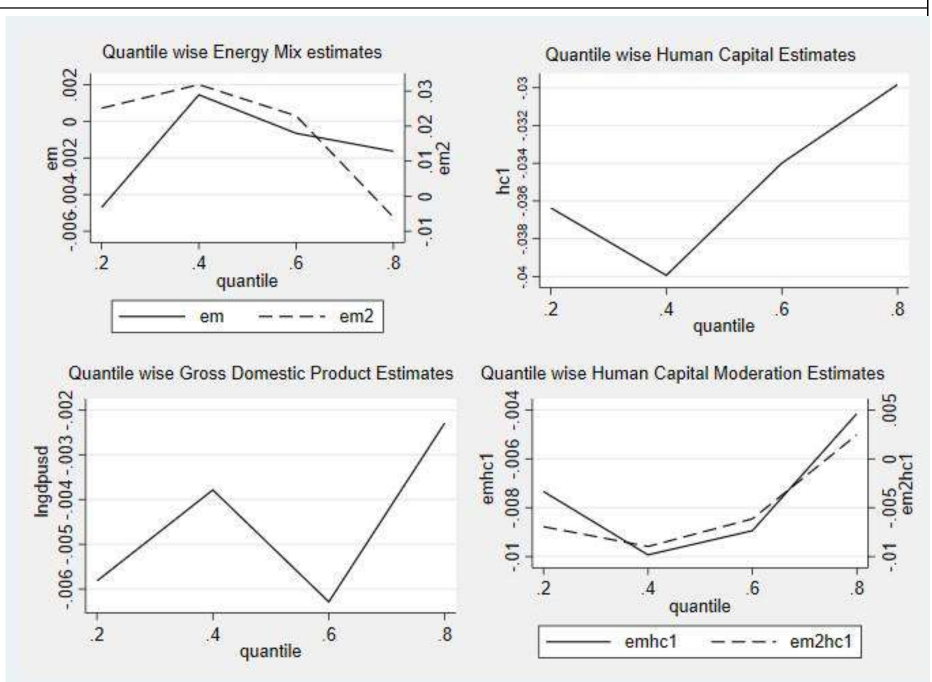
Quantile-wise graph estimates the effect of explanatory variables with the change in dependent variable (Graph 2).

In case of less vulnerable countries, this graph indicate that with increase in vulnerability EM increases while EM2 decreases support inverted u-shaped relationship. EM is of inverted u-shaped where vulnerability is high as compared to low vulnerability. In the second panel, HC increases with the increase in the size of vulnerability. Third panel indicate quantile-wise estimates of GDP which shows N-shaped relationship of GDP and vulnerability. GDP first increases with the increase in vulnerability then decreases and again increases with the increase in the size of vulnerability. Panel four presents quantile-wise HC moderation estimates. Both cross-products increases with the increase in the size of vulnerability.

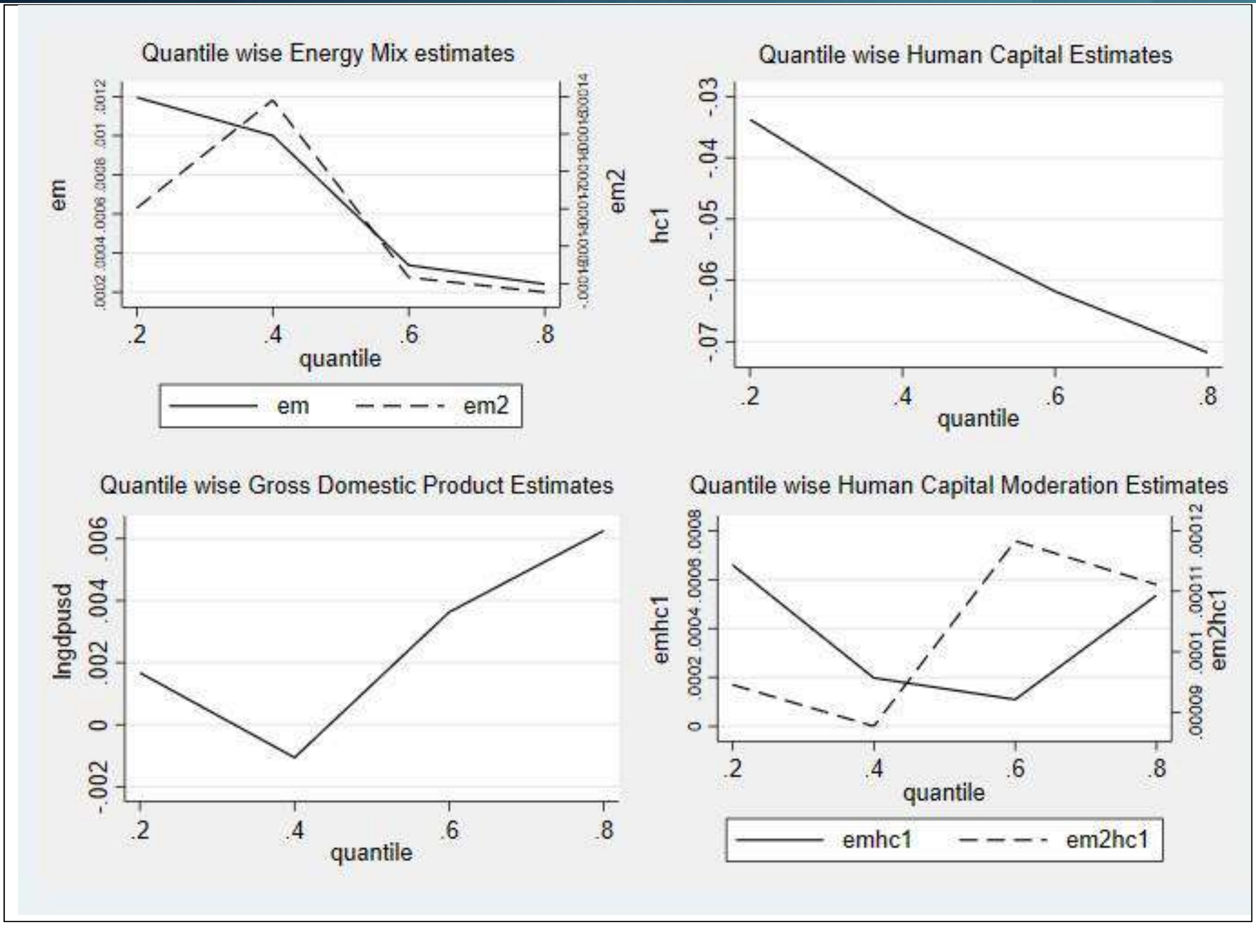
In case of high vulnerable countries, this graph indicate that with increase in vulnerability EM and EM2 decreases. In the second panel, HC decreases with the increase in the size of vulnerability. Third panel indicate quantile-wise estimates of GDP which indicate that GDP increases with the increase in vulnerability. GDP first decreases with the increase in vulnerability then increases with the increase in the size of vulnerability. Panel four presents quantile-wise HC moderation estimates. Both cross-products increases with the increase in the size of vulnerability.

Graph 2: Quantile-wise Estimates

Low Vulnerable Countries



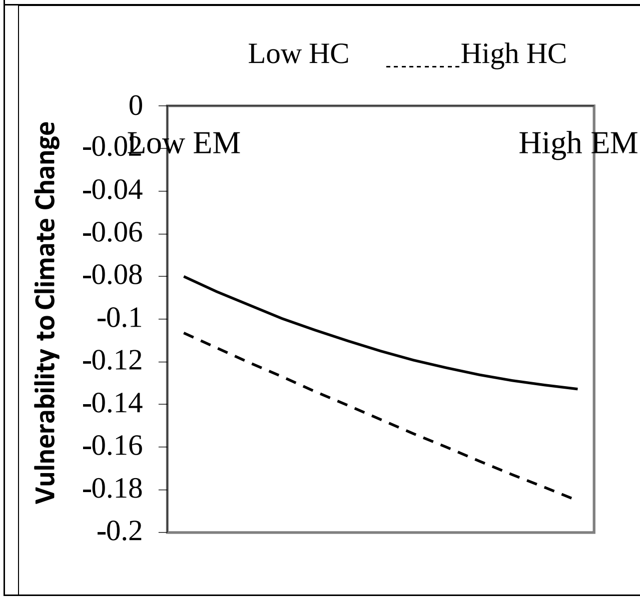
High Vulnerable Countries

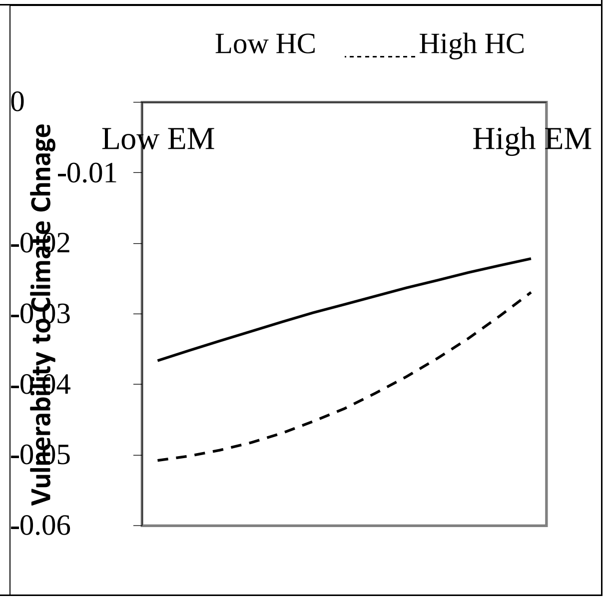


Graph 3 is drawn by using methodology of Dawson (2014). This graph shows that climate change vulnerability is high at low HC and Low EM, while vulnerability reduces when both EM and HC are high. High EM and HC have potential to reduce climate change vulnerability. The intensity of human capital to reduce vulnerability is high in case of low vulnerable countries as compared to high vulnerable countries because sample of low vulnerable countries are high and upper middle-income countries. Developed nations such as France, USA, Germany, Ireland, Sweden, Australia, New Zealand, Austria, Canada, Belgium, UK, Denmark and Switzerland are extremely adaptive countries due to readiness for the adaptation. While developing nations with their low level of readiness are more vulnerable to changes in climate. Developed nations are less vulnerable to climate change because of their rich capital-resources, well-established economies, good governance and timely effective strategies (Saeed et al., 2023).

Graph 3: Impact of Energy Mix and Human Capital on Climate change Vulnerability

Low Vulnerable Countries	High Vulnerable Countries





Author's own Estimation

6. Conclusion:

Adaptive capacity of human is influenced by socio-economic factors such as skills, resources, technology and governance. The aim of current research are: a) to identify the factors that can reduce vulnerability in low and high vulnerable countries, b) to find the factors that can moderate the effect of climate change in these countries, c) to compare the effect of these factors in high and low vulnerable economies.

Panel Quantile Regression is used as an econometric technique to get the final results of the study. Sample is comprised of 40 low and 40 high vulnerable countries and data range from 1995-2020. Data for present study is collected from ND-GAINS, WDI and PWT.

Results revealed negative relationship between Human Capital and climate change vulnerability. Moreover, human capital along with energy-mix reduces climate change vulnerability in case of low and high vulnerable countries.

Previously, few studies have focused on the importance of Human Capital to tackle the problem associated with climate change. Communication and education increases capacity-building skills and knowledge which help to reduce the risk associated with hazard and prepare us to deal with that hazard. Present study is conducted to highlight the importance of Socio-Economic factors in strengthening energy-mix climate change relation.

People and government need to make difficult decision and hard choices to avoid losses caused by climate change. Vulnerable communities should respond to changes in climate without any delay to enable them to on-going changes in climate. Some countries do not add disaster prevention in school curriculum which reflect educational vulnerability to deal with the risk of disaster. Disaster management should also be the part of school curriculum.

People and government need to make difficult decision and hard choices to avoid losses caused by climate change. Vulnerable communities should respond to changes in climate without any delay to enable them to on-going changes in climate. Some countries do not add disaster prevention in school curriculum which reflect educational vulnerability to deal with the risk of disaster. Disaster management should also be the part of school curriculum.

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Appendix:

List of Low Vulnerable Countries

Rank	Country	Income Group	Vulnerability	Rank	Country	Income Group	Vulnerability
1	Switzerland	Upper	0.255	21	Greece	Upper middle	0.327
2	Norway	Upper	0.257	21	Poland	Upper	0.327
3	Austria	Upper	0.284	23	United States	Upper	0.329
4	Germany	Upper	0.293	24	Portugal	Upper	0.335
5	United Kingdom	Upper	0.296	25	Malta	Upper	0.338
5	Sweden	Upper	0.296	26	Belarus	Upper middle	0.345
7	Spain	Upper	0.3	27	Belgium	Upper	0.346
8	Canada	Upper	0.301	28	Kyrgyzstan	Lower middle	0.35
8	Luxembourg	Upper	0.301	28	Russian Federation	Upper	0.35
10	Czech Republic	Upper	0.303	28	Turkey	Upper middle	0.35
11	Finland	Upper	0.31	31	Netherlands	Upper	0.351
11	France	Upper	0.31	32	Denmark	Upper	0.354
11	New Zealand	Upper	0.31	33	Kazakhstan	Upper middle	0.358
14	Israel	Upper	0.316	34	Saint Lucia	Lower middle	0.359
15	Ireland	Upper	0.319	35	Estonia	Upper	0.363

16	Australia	Upper	0.32	36	Bulgaria	Upper middle	0.365
17	Iceland	Upper	0.321	36	Cyprus	Upper	0.365
18	Slovenia	Upper	0.322	38	Slovakia	Upper	0.366
19	Italy	Upper	0.323	39	Bosnia & Herzegovina	Upper middle	0.369
20	Chile	Upper middle	0.325	40	United Arab Emirates	Upper	0.37

List of high Vulnerable Countries:

High Vulnerable Countries							
Rank	**Country**	**Income Group**	**Vulnerability**	**Rank**	**Country**	**Income Group**	**Vulnerability**
143	Kenya	Low	0.525	163	Ethiopia	Low	0.563
143	Maldives	Upper middle	0.525	163	Sierra Leone	Low	0.563
145	Laos	Lower middle	0.526	165	Mauritania	Lower middle	0.571
146	Sao Tome & Principe	Low	0.528	165	Solomon Islands	Low	0.571
147	Myanmar	Lower middle	0.53	167	Benin	Low	0.572
147	Pakistan	Lower middle	0.53	168	Afghanistan	Low	0.579
149	Comoros	Low	0.531	168	Tonga	Lower middle	0.579
149	Haiti	Low	0.531	170	Uganda	Low	0.58
151	Guinea	Low	0.532	171	Micronesia	Low	0.585
151	Senegal	Low	0.532	172	Dem. Rep. of the Congo	Low	0.586
153	Papua New Guinea	Low	0.536	172	Rwanda	Low	0.586
154	Bangladesh	Lower middle	0.541	174	Eritrea	Low	0.591
155	Gambia	Low	0.545	175	Central African Rep.	Low	0.593
156	Burkina Faso	Low	0.547	176	Mali	Low	0.598
157	Malawi	Low	0.548	177	Liberia	Low	0.603

157	Vanuatu	Low	0.548	178	Sudan	Low	0.618
159	Zimbabwe	Low	0.554	179	Guinea-Bissau	Low	0.658
160	Burundi	NA	0.558	179	Chad	Low	0.658
160	Yemen	Low	0.558	181	Somalia	Low	0.673
162	Madagascar	Low	0.561	182	Niger	Low	0.675

"Impact of Leadership Styles on EmployeePerformance: A Moderating Role of Employee Resilience"

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Abstract

Leadership styles have been studied by several researchers and have been a topic of interest for many. This study investigates the influence of different leadership styles on employee performance, examining the moderating role of employee resilience and the mediating role of job satisfaction. The research aims to contribute valuable insights to the fields of organizational psychology and leadership development. By investigating how leadership styles interact with employee resilience and job satisfaction, this study seeks to provide detailed understanding of the aspects shaping employee performance in contemporary workplaces. The findings aim to provide a comprehensive understanding of the intricate dynamics among leadership, job satisfaction, employee resilience, and ultimately, employee performance in organizational settings.

Key Words: *leadership styles, autocratic leadership, laissez-faire, job satisfaction, employee resilience*

1. INTRODUCTION

Problem Statement

In the contemporary workplace, effective leadership is pivotal for achieving organizational success and maintaining a motivated and productive workforce. Leadership is responsible for harmonization and incorporation of both human and material resources to reach desired goals & meet the objectives of the organization.

With the level of interest shown by many scholars in the topic of leadership and its styles, various leadership theories have emerged (Khan et al., 2012). These theories are primarily focused on portraying the fundamentals of the different types of actions and the conducts of leaders (Humphreys and Einstein, 2004).

It's been so long since organizations aimed to search for exceptional leadership that is fit for carrying them to success. As a result of the endless endeavors of the scholars in differing the approach in which leaders behave and various numbers of leadership theories and concepts have been established over time. For instance, Lewin's Leadership Style (1939) has named three leadership styles, democratic, autocratic and Laissez-faire (Billing, 2015), whereas "Grid" was then described by Robert Blake and Jane Mouton (Moloy, 1998) in 1964. Simultaneously, Hersey and Blanchard (1969) have consequently established the Leadership theory presently known as the situational leadership theory (McCleskey, 2014). That being the case, leadership styles and their importance are not uncertain and abstruse; this can be demonstrated by the large number of works undertaken on the topic across developing and developed countries alike (Babatunde, 2015; Iqbal et al., 2015; Mohammed et al., 2014; Zumitzavan and Udchachone, 2014).

Leadership styles characterized by varying degrees of autonomy, support and motivation, can significantly influence the performance of employees. To comprehensively understand the complex relationship, this study aims to investigate the impact of different leadership styles, (namely, authoritarian and laissez-faire) on employee performance, with a specific focus on job satisfaction as a mediator and employee resilience as a moderator.

While previous research has explored the relationship between different leadership styles and employee performance or job satisfaction separately, there is a linked understanding of how these factors interact with each other and to what extent influence one another. Additionally, the role of employee resilience, a critical yet often under-explored factor, in moderating the relationship between leadership styles and employee performance remains a significant gap in existing literature. Therefore, this research Seeks to address the following research questions.

Research Questions:

1. What is the impact of autocratic leadership style on employee performance?
2. What is the impact of laissez-faire leadership style on employee performance?
3. To what extent job satisfaction mediates the relationship between leadership styles and employee performance?
4. To what extent does employee resilience moderate the relationship between leadership styles and employee performance?

Research Objectives:

The main aim of doing this study was to investigate the impact of different leadership styles on the performances of the employees with a moderating effect of employee resilience.

2. LITERATURE REVIEW

Review of the Key Theories

2.1. Leadership

Leadership is one of the world's most seasoned and a universal phenomenon in humans, (Bass, 1990). From ancient to modern history, leadership has played a vital and integral role in developing groups, societies, and nations. Over time, leadership has been defined in terms of a leaders' behaviors. Bass attempted to define leadership from the classics of Western, Egyptian, Greek, and Chinese literature as early as the 6th century BC.

Even though, the *Oxford English Dictionary* noted the appearance of the word leader in the English language as early as the year 1300, the word leadership did not appear until about 1800 (Bass, 1990; Stogdill, 1974). The concepts of leadership can be tracked back to ancient times, but the definitions and classifications of leadership start from the early 20th century, (Rost, 1991).

Even though leadership has been well researched over the years, there is still the need for a universally accepted definition. According to Kumar (2014), Leadership is defined as a process by which a person influences others to achieve an objective and directs the organization in a way that makes it more cohesive and well-reasoned or rational. These can be accomplished by applying different attributes of leadership such as beliefs, values, ethics, character, knowledge, and abilities. Leadership is the blended participation of vision, resources, and values that can lead to positive changes. It is the capacity to construct people's trust and enthusiasm and make a desire to be driven within them.

2.2. Leadership Styles

Memon (2014) defines it as the style of leadership that provides direction, encourages people, and plans to implement. Leadership styles are seen as the approaches that are used by leaders when leading organizations, departments, or groups, (Mehmood & Arif, 2011). Leaders who look for the most effective leadership style may find that a fusion of techniques is useful because there's no best leadership style, (Darling & Leffel, 2010). Leadership styles are viewed as a merger of various characteristics and behaviors used by the leaders to interact with their subordinates, (Coetzee & Coetzee, 2011).

2.3. Autocratic Leadership

Autocratic leaders are said to be classic and dominating. Autocratic leaders expect their subordinates to work accordingly to what they want. Usually, autocratic leaders retain the decision-making rights with them, (Obiwuru, et al., 2011). Autocratic leaders want their followers to perform and implement the services and strategies according to the narrow way. Iqbal, Anwar, and Haider (2015) conducted a study to determine the impact of leadership styles on organizational performance. The study stated that autocratic leaders are much less creative and only promote one-sided conversation. Which critically affects the motivation level as wellas the satisfaction level of the employees. The autocratic leadership style is known to beeffective for a short-term only.

Moreover, it is a type of leadership characterized by a person's individual control over the actions of all group members. Usually, Autocratic leaders make choices based on their beliefs and judgements and rarely consider the follower's advice, (Cherry, 2019).

2.4. Laissez-faire Leadership

Laissez-faire leadership is also known as delegate leadership. In this type of leadership style, the leaders are hands-off and allow group members to make the decisions. The leadership ofLaissez-Faire is the characteristic of leaders who avoid having any responsibility or making any decisions, (Robbins, 2007). Leaders contemplate subordinates as entirely responsible for any decision and give their assistants the complete freedom and power to make work decisions, (Chaudhry & Javed, 2012).

It is the style of leadership in which the leader does not believe in his own supervisory capacity and rather lets his subordinates have the authority of decision-making. These leaders have no clear goals as to how they can work and do not help the group to make decisions and therefore;it leaves too much burden for the subordinates, (Bass & Bernard, 1985).

2.5. Job Satisfaction

Different authors have various approaches towards defining job satisfaction. One of the most often used definitions of job satisfaction is the one given by Spector. According to him, job satisfaction means employee satisfaction that is defined as a “psychological process that energizes and maintains human activity in relation to work, tasks, or projects” (Spector, 1997). Hoppock has defined job satisfaction as any fusion of psychological, physiological and environmental set of conditions that cause a person truthfully to say I am satisfied with my job (Hoppock, 1935). According to Kaliski (2007), job satisfaction can be defined as something that is perceived as feelings of accomplishment and how successful an employee is in their job.

2.6. Employee Resilience

To concentrate on individual resilience in the organizational settings, the concept of ‘employee resilience’ has been proposed, (Näswall et al., 2015). Definition of Employee Resilience can be stated as, “employee’s potential, facilitated and supported by the organization, to utilize resources to continually adapt and flourish at work, even if/when faced with demanding circumstances” (Näswall et al., 2015, p. 1). Luthans (2002, p.702) defined it as a “developable capacity to rebound or bounce back from adversity, conflict, failure, or even positive events, progress, and increased responsibilities”. Employee resilience has profound implications for promoting individual competence (Masten, 2001), enhancing individual responses to stressful circumstances (Yousef & Luthans, 2005), and improving job performance (Cooper et al., 2019).

It is argued that employee resilience contributes to performance drivers, including positive employee attitudes which leads to increased employee performance. (Näswall et al., 2015). Furthermore, employee resilience may also be viewed as a protective factor on employees’ actions to change in the workplace (Shin et al., 2012). Employee resilience is the ability of the employees that are supported and facilitated by organizations to emphatically cope, adapt, and even shine in response to dynamic and challenging environments, (Nguyen et al.,2016; Kuntz et al., 2017; Prayag, 2018).

2.7. Employee Performance

Performance can often be defined simply in an output terminal that is needed for the achievement of pre-decided goals. Performance concerns the job that has been done, how it has been done and what has been achieved. The Oxford English Dictionary confirms this definition by including the phrase "carrying out" into the definition of performance. ‘The accomplishment, execution, carrying out, working out of anything ordered or undertaken’ (ACHUNGUH, 2020).

Employee performance is defined differently by various scholars. It is a term typical to the human resource field where employee performance refers to the ability of the employees to achieve organizational goals more effectively and efficiently. Organizations require employees who perform well to contribute to achieving the organizational goals, to deliver their specialized products and services, and to gain competitive advantage.

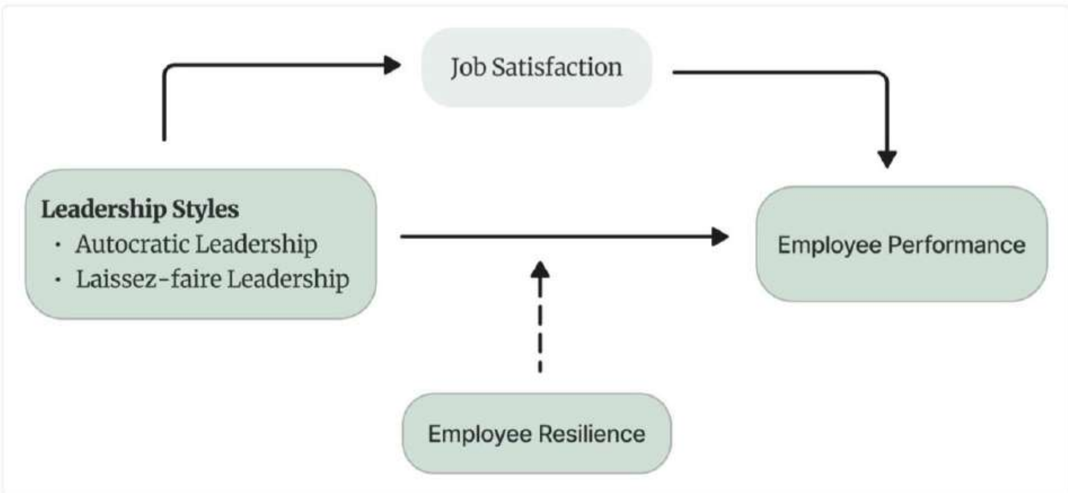
Relationship between leadership styles and employee performance

The relationship between leadership styles and employee performance has been the subject of extensive research in organizational behavior and management. Different leadership styles have varying impacts on job satisfaction and overall performance of the employee. Literature has underlined leadership as a crucial element in the organizational behavior landscape, whereby it is one of the flexible impacts of individual and organizational interactions (Obiwuru et al., 2011).

The relationship between autocratic leadership style and employee performance is a partial one. This is because Autocratic leaders make decisions unilaterally without much input from their subordinates. This style can lead to quick decision-making but may result in lower employee morale and motivation, (Tannenbaum, R., & Schmidt, W. H., 1958). Autocratic leadership has been associated with higher levels of task completion and efficiency in certain situations where quick decision-making is crucial (Likert, 1961). However, various studies suggest that autocratic leadership may lead to lower job satisfaction and creativity among employees (Bass, 1981).

Whereas the relationship between Laissez-fair leadership style and employee performance can be positive as Laissez-faire leaders provide minimal guidance, allowing employees to make decisions on their own. Previous research indicates that this leadership style may be effective in situations where employees are highly skilled and motivated, requiring minimal supervision (Bass, 1981). While this style can promote creativity, it may also lead to a lack of structure and accountability. Laissez-faire leadership has also been linked to reduced productivity and lower job satisfaction due to a lack of clear guidance and support (Bass & Avolio, 1990).

Conceptual framework



Hypothesis Development

From the information we have gathered as of now and the conceptual framework, we were ableto draw the following hypothesis:
H1: Autocratic Leadership style has a positive impact on employee performance. H2:
Laissez-Faire Leadership style has a positive impact on employee performance.
H3: Job Satisfaction mediates the impact of Autocratic leadership style on employee performance.
H4: Job Satisfaction mediates the impact of Laissez-Faire leadership style on employee performance.
H5: Employee Resilience moderates the impact of Autocratic leadership style on employee performance.
H6: Employee Resilience moderates the impact of Laissez-Faire leadership style on employee performance.

3. RESEARCH METHODOLOGY

This section of the undertaken study discusses the research method and how different strategiesof methods are used to realize the objectives of the research.

Research methods are the basic prototypes where the theoretical values are assessed and hence, research methods talk about the ways through which specific paradigms are followed and give the generalization about results.

3.1. Research Design

The study employs a mixed-methods approach, combining both qualitative and quantitative methods for the purpose of understanding the impact of leadership styles on employee performance, with a moderating role of employee resilience, and mediating role of job satisfaction.

3.2. Sampling

Quantitative Phase

A simple random sampling will be used to collect data from the employees of various industries. The sample size will be determined according to the total population of different industries for the purpose of calculating the impact of leadership style on employee performance with a moderating role of employee resilience.

Qualitative phase

Purposive sampling will be used to select a subset of participants from the quantitative sample for interviewing purposes. This will allow us to understand the impact of leadership styles on employee performance.

3.3. Data Collection

Quantitative data

A structured questionnaire will be distributed among team members. A five-point Likert scale questionnaire will be used. The development of the Likert scale will be dependent on the following variables; leadership styles (autocratic and laissez-faire), job satisfaction, employee resilience, and employee performance.

Qualitative Data

Interviews will be conducted with team members to understand their experiences and perceptions. Open-ended questions will be used to explore their interactions with different leadership styles and how it affects their work.

4. MEASUREMENT

Undoubtedly, creating a well-rounded measurement for the research topic involves various aspects like having a clear understanding of the variables and what appropriate scales to use. The measurement structure with appropriate scales and the questionnaire items for the research on the impact of leadership styles on the employee performance are suggested below.

SCALE

We will be using interval scale for all our variables.
Interval scale: 5-point Likert Scale (1= Strongly Disagree, 5= Strongly Agree)

4.1. Independent Variable: Leadership styles

Autocratic Leadership Style's Questionnaire items (Anyango,2015; Chaudhary, 2014; Iqbal, et al., 2015; Lumbasi, 2015)

1. Leader has absolute power over his/her subordinate.
2. Subordinates have little power for making suggestions.
3. Leader distrust his/her subordinates.
4. Group members are rarely trusted with decisions or important tasks.

Laissez- Faire Leadership Style's Questionnaire Items (Anyango, 2015; Iqbal, et al., 2015; Chaudhary, 2014)

1. In complex situations my supervisor allows me to work my problems out in my own way.
2. My supervisor stays out of the way as I do my work.
3. As a rule, my supervisor allows me to appraise my own work.
4. My supervisor gives me complete freedom to solve problems on my own.
5. In most situations I prefer little input from my supervisor.
6. In general, my supervisor feels it's best to leave subordinates alone.

4.2. **Dependent Variable: Employee Performance Questionnaire Items**

1. I feel my working performance is good.
2. I view my productivity on the job as good.
3. I think my performance score in my current position is good.
4. The supervisor peer review evaluation of my performance is good.

4.3. **Mediating Variable: Job Satisfaction**

Questionnaire Items

1. I feel I am being paid a fair amount for the work I do.
2. I am not satisfied with the benefits I receive.
3. When I do a good job, I receive the recognition for it that I should receive.
4. I sometimes feel my job is meaningless.
5. I like the people I work with.
6. I do not feel that the work I do is appreciated.
7. The benefits we receive are as good as most other organizations offer.
8. I don't feel my efforts are rewarded the way they should be.

4.4. Moderating Variable: Employee Resilience

Questionnaire Items

1. I effectively collaborate with others to handle unexpected challenges at work.
2. I resolve crises competently at work.
3. I re-evaluate my performance and continually improve the way I do my work.
4. I successfully manage a high workload for long periods of time.
5. I seek assistance at work when I need specific resources.
6. I learn from mistakes at work and improve the way I do my job.

5. SIGNIFICANCE OF THE STUDY

This study is significant because it examines the intricate relationship between leadership styles (independent variable) employee performance (dependent variable), considering employee resilience as a moderator and job satisfaction as a mediator.

Enhanced Leadership Strategies:

Understanding how different leadership styles impact employee performance can guide organizations in adopting more effective leadership strategies tailored to their workforce, potentially improving overall productivity.

Resilience as a Moderator:

Investigating employee resilience as a moderator allows for a nuanced understanding of how individual traits influence the leadership-employee performance dynamic. This insight can be crucial in developing targeted interventions for employees facing challenges.

Job Satisfaction as a Mediator:

Exploring job satisfaction as a mediator helps uncover the mechanism through which leadership styles influence employee performance. This knowledge can inform interventions aimed at enhancing job satisfaction, thereby positively affecting overall performance.

Holistic Workplace Improvement:

By considering both individual traits (resilience) and psychological mechanisms (job satisfaction), the study offers a holistic perspective on how to improve the workplace environment, contributing to employee well-being and organizational success.

6. LIMITATIONS

While studying the relationship between leadership styles, employee performance, and the moderating role of employee resilience, this study encounters several limitations. Firstly, caution should be exercised in generalizing the findings, as the research may be confined to a specific context, industry, or organizational culture. Additionally, the subjectivity inherent in measuring variables such as leadership styles, employee performance, and job satisfaction introduces a source of bias. To establish the link between leadership styles and employee performance is a difficult task and changes overtime therefore it is not possible to capture it. External influences, like economic conditions or industry trends, could act as confounding variables not considered in the study. Furthermore, the resilience on self-reported data for variables like job satisfaction introduced the possibility of bias. The intricate interplay between variables, especially the role of employee resilience as a moderator and job satisfaction as a mediator, adds complexity that may impact the precision of their defined roles. Addressing these limitations is crucial for a more comprehensive understanding of the dynamics between leadership styles and employee outcomes.

7. CONCLUSION

In conclusion, while the study sheds light on the relationship between leadership styles, employee performance, and the moderating role of employee resilience, as well as the mediating effects of job satisfaction, several limitations should be acknowledged. These include potential issues of generalizability, the challenge of establishing causation, the influence of external factors, possible measurement biases, time sensitivity, and consideration related to sample size and diversity. Recognizing these limitations is crucial for a nuanced understanding of theresearch findings and for guiding future investigations in the field of organizational behaviorand leadership.

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Investigate the Impact of Leadership Styles on Young Employee Turnover,The Moderating role of Motivation and Organizational Commitment. (A Conceptual Study)

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Abstract:

This study aims to examine the complex factors that impact the attrition of young workers in department stores, with particular attention to the vital variables of motivation, leadership styles, and organizational commitment. The retail industry, which is known for its dynamic nature, consistently struggles to hold on to young people. Also, this study will be helpful in explaining the complex interactions between these factors and how they together affect employee turnover. A quantitative approach will be used to gather information in department stores using Questionnaire in order to quantify organizational commitment, uncover motivating factors, and evaluate different leadership styles. This study will use statistical analyses, to examine how organizational commitment, motivation, and leadership styles are related to employee turnover through SEM. The results will bring significant insights to the industry, allowing department stores to customize methods that encourage a more stable, driven, and dedicated workforce, thereby reducing the difficulties related to young employee turnover.

Keywords:

Leadership Styles, Young Employee Turnover, Motivation and Organizational Commitment

Introduction

Context: The way a leader guides and interacts with their team is referred to as their leadership style. The impact of distinct leadership philosophies on staff attrition can vary. As an illustration, a transformational leadership approach that emphasizes inspiring and motivating staff members frequently results in increased job satisfaction and decreased turnover. On the other side, because they might foster a lack of support and involvement, autocratic or laissez-faire leadership philosophies may increase employee discontent and attrition. An organization's work atmosphere, employee morale, and retention rates are all significantly impacted by the leadership style used.

In this motivation and Organizational commitment become important moderators. Motivated workers are more inclined to actively participate in their jobs, which leads to a greater sense of fulfillment and engagement. Conversely, Organizational commitment indicates how much staff members share the company's beliefs and objectives.

High employee turnover rates among younger staff members continue to be a chronic difficulty in the dynamic world of department shops, raising serious concerns. The efficacy of the staff, especially with regard to attracting and maintaining young talent, is intrinsically linked to the success of the retail industry. For an organization to succeed over the long term, it is critical to comprehend the variables impacting employee turnover in this situation.

Gap: Limited comprehensive research specifically addresses the interplay between leadership styles, motivation, organizational commitment, and young employee turnover within departmental stores. This gap hinders the development of targeted strategies to enhance employee retention and satisfaction in this sector.

Significance: This is of great importance for several reasons. Firstly, departmental stores operate in a fast-paced and competitive environment, making employee turnover a costly and disruptive issue. Secondly, young employees constitute a substantial portion of the workforce in retail, and understanding their unique dynamics is essential for effective management. Thirdly, insights gained from this study can inform evidence-based strategies, allowing departmental stores to create supportive work environments that resonate with the motivations and commitments of their young employees.

Purpose: The purpose of this research is to systematically investigate the impact of leadership styles on young employee turnover, considering motivation and organizational commitment as crucial moderating factors. Ultimately, the goal is to contribute to the development of targeted strategies that mitigate turnover challenges, foster a positive workplace culture, and bolster the overall success of departmental stores in a highly competitive retail landscape.

Literature Review:

In the article by Andreas Schneider and Tobias Schröder "Ideal Types of Leadership as Patterns of Affective Meaning: A Cross-cultural and Over-time Perspective" the macro level, as described in Max Weber's classic work and reflected in contemporary management literature, is reflected in its micro-level affective meaning. Within his three-dimensional emotional space, Osgood identifies specific patterns that correspond to leadership styles. People evaluate authoritarian/transactional leadership as proactive and powerful, not passive or aggressive. Charismatic transformational leadership is perceived to be similarly positive and powerful but involves a much higher level of activity: arousal. Finally, coercive leadership is passive, coercive, and proactive. Based on Heise's cybernetic-symbolic interactionist theory of emotion control, we compare the cultural expressions of American and German business executives at different points in time. We demonstrate a contrasting synthesis of the change in US manager stereotypes from transactional to charismatic leadership and coercive leadership expectations in Germany.The implications of (1) intercultural communication and (2) emotional meaning as indicators of social change in Germany have been discussed in the article.[i]

In the article "An Empirical Study of Employees' Motivation and its Influence on Job Satisfaction "by Bayad Jamal Ali and Govand Anwar Human resource management is believed to become increasingly important in today's world because people and their knowledge are the most important aspects that influence business productivity. The author believes that One of the key aspects of human resource management is measuring employee satisfaction. Companies should ensure that worker satisfaction is high, which is a prerequisite for increased productivity, responsiveness, quality, and service recognition. The goal of the research "An Empirical Study of Employees' Motivation and its Influence on Job Satisfaction" was to analyze the level of satisfaction and work motivation of employees. influence of culture on employee satisfaction was also discussed. The theoretical framework of the research was to include concepts such as job satisfaction, motivation, and reward differentiation. The research establishes that the relationships and communication between employees and managers are One of the organization's greatest strengths.[ii]

The article "Job Satisfaction and Employee Turnover Intention: A Case Study of Private Hospital in Erbil" was written by Govand Anwar and Inji Shukur. retaining employees longer and reducing employee turnover was considered a major challenge for HR managers these days. The main objective of the study was to find a correlation between job satisfaction and employee turnover intention at Erbil Private Hospital. A quantitative method with 144 participants from Erbil Private Hospital was used to analyze Correlation between job satisfaction which acts as an independent factor and turnover rate as a dependent factor, the result shows that the Turnover rate has a positive and weak correlation with intention to quit. The result was established that most of the employees would quit if they got a better option.[iii]

In the article by “Barnad” and “Paul Steinmeier” Leadership was presumed as an elusive phenomenon and its construction remains controversial. The reason was established that leadership is a subtle combination of factors that are often characterized without reference to changes over time. Students view the two leaders of Israel's largest kibbutz movement in half a century as charismatic, but research shows they initially believed in the conversions; Then, as limited democracy and declining work efficiency undermined members' confidence, competing leaders threatened their power, and they protected it by imposing an extremist ideology that they had previously rejected, legitimizing autocracy. Extremism has led to crises that have caused distrust and mass departures. Leaders then adopt a charismatic, egocentric posture, convincing their followers only when innovative mid-level people fill the leadership vacuum left by the leaders' dysfunction. Leaders create and bring movements to success. This has led researchers to mistakenly subscribe to these views, supported by the vague concept of charismatic leadership and by selected students who ignore the dominance of top leaders. oligarchs as irreplaceable movement leaders. The study highlights the changing mix of long-term leadership, the need for conceptual clarity when developing leadership theories, and the essential nature of close contact between researchers. research with practice in recognizing apparent changes in the ethics of leaders and changes in the beliefs of followers, and the important role of this field. Theory was analyzed and Suggestions for further research were also given.[iv]

The article “Leadership Style and Employee Turnover” by Geeta Ann Sulamuthu and Halimah Mohd Yusof suggests that the trend of frequent job replacement is a cause for concern for HR managers, especially in Asia. A high turnover rate is considered a major disadvantage for any company, considering the costs of replenishment and work stoppages. Losing a good employee can negatively impact a company's competitiveness, lower the morale of other employees, and reduce productivity and quality of work. Several factors influence an employee's decision to quit a job. These include management, organizational structure, employee attitudes, and potential, external job demands, employees' own evaluation of job-related organizational decisions, pay, job satisfaction, internal experience, job satisfaction, job stability, job prospects, salary compensation, supervisor's social support, and organizational politics. These powerful factors can lead to behavioral biases that influence an individual's evaluation of job satisfaction, which in turn can lead to staying with the company. The article has attempted to explore the factors that can significantly influence the turnover intention of employees within an organization. The purpose of the particular study was to investigate the effects of transformational and transactional leadership styles on turnover intentions.[v]

One of the most difficult problems organizations face that has been suggested by Arwa Alkhawaja in the article “Leadership Style and Employee Turnover A Mythical Relationship or Reality?” is employee turnover. A large body of data suggests that a bad relationship between managers and leaders at work and their followers is the primary cause of employee turnover. Studies, however, that appear to contradict one another appear to indicate that workers depart from good managers almost as frequently as they do from poor bosses. What other elements might be the primary reasons for employee turnover if the relationship between the leader and followers is not the only factor in an employee's decision to leave their job? The aim of this study is to investigate how to keep exceptional employees without requiring managers, leaders, or workers to make unjustified compromises while enabling an organization to grow and succeed as a whole. It was determined that followership and leadership philosophies directly affect how long employees stay on the job. However, the influence of a leader's style is more noticeable and significant than previously thought. It is crucial to take into account the cultural diversity of the workforce as well as the religious and spiritual demands of the employees, in addition to other elements like psychology and work styles. Bad leadership is not the only kind of leadership that has an impact on employee turnover; good leadership can also have blind spots when it comes to their own style of leadership. Still, a crucial constraint is the lack of leaders' and followers' voices. conducting in-depth interviews with a few leaders and a few followers to learn more about the interplay between leadership and following wishing to minimize staff churn as quickly as possible.[vi]

- **Leadership Styles:**

A leader's behavioral approach to directing, inspiring, and influencing subordinates is referred to as their leadership style.

- **Young Employee Turnover:**

The percentage of workers who quit the organization in a specific time frame is known as employee turnover. Turnover rates are usually calculated regularly or annually by organizations. In order to evaluate the success of their hiring practices, they may also decide to compute the turnover rate for recent personnel.

- **Motivation:**

Motivation is the process of persuading and encouraging an individual to behave in a certain way. In the case of an organization, motivation is the process of encouraging and prompting employees to perform their best to meet the objectives of the organization.

- **Organizational Commitment:**

Organizational commitment refers to the extent to which employees are dedicated to and emotionally connected with their organization. It involves their willingness to invest time and effort in their work, their identification with the values and goals of the organization, and their intention to remain with the organization. In essence, organizational commitment reflects the strength of the bond between employees and their workplace, influencing their motivation, job performance, and willingness to stay with the company.

Relationship of Variables

Young employee turnover is dependent on leadership style. Organizational commitment and employee motivation to work are taken as moderators. It has been determined from the existing research that employee turnover has a positive relation with leadership style.

Hypothesis:

- Leadership style affects employee turnover.
- Motivation moderated the relationship between leadership style and young employee turnover .
- Organization commitment moderates the relationship between leadership style and young employee turnover.
- Leadership style affects young employee turnover with motivation and organization commitment acting as moderator.

Methodology:

- **Quantitative**
- **Type of Study** (Exploratory)
- **Population(**Departmental Stores**)**
- **Sampling** (Convenience Sampling)
- **Unit of Analysis**(Individual)
- **Scale/Measurement**(Ordinal Sx)

Theoretical Framework:

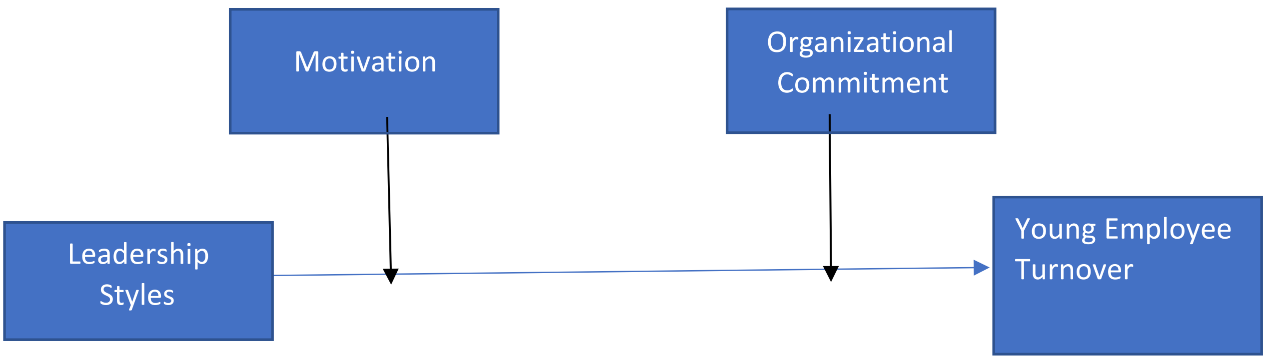
<u>Variables:</u>

Independent Variable: Leadership Styles

Dependent Variable: Young Employee Turnover

Moderating Variables: Motivation, Organizational Commitment

<u>Model:</u>



- **Sample Questions:**

To assess the level of motivation, the following questions are taken into consideration.[vii]

1. I feel a sense of personal satisfaction when I do this job well.
2. My opinion of myself goes down when I do the job badly.
3. I take pride in doing my job as well as I can.
4. I feel unhappy when my work is not up to my usual standard.
5. I like to look back at a day's work with a sense of a job well done.
6. I try to think of ways of doing my job effectively.

For Calculating organizational commitment the following questionnaire is taken underconsideration.[viii]

1. This organization really inspires the very best in me in the way of job performance.
2. It would take very little change in my present circumstances to cause me to leave this
1. organization.
2. I am extremely glad that I chose this organization to work for over others I was
3. considering at the time I joined.
4. There's not too much to be gained by sticking with this organization indefinitely.
5. Often. I find it difficult to agree with this organization's policies on important matters
6. relating to its employees.
7. I really care about the fate of this organization.
8. For me this is the best of all possible organizations for which to work.
9. Deciding to work for this organization was a definite mistake on my part.

Multifactor Leadership Questionnaire (MLQ) will be used to assess leadership style[ix]

Transformational Leadership Styles

1. I go beyond self-interest for the good of the group
2. I consider the moral and ethical consequences of decisions.
3. I talk optimistically about the future.
4. I reexamine critical assumptions to question whether they are appropriate
5. I help others to improve their strength

Transactional Leadership Styles

1. I make clear what one can expect to receive when performance goals are achieved.
2. I keep track of all mistakes
3. I am satisfied with the Employee Stock Purchase Program.

Passive/Avoidant Leadership Styles

1. I wait for things to go wrong before taking action.
2. I avoid making decisions

For calculating employee intention to turnover following questions are taken into consideration[x]

1. I would quit my present job for a similar position with better pay in another organization at the least opportunity.
2. Continuation with my present employer will not fulfill my life expectation.
3. As soon as I can find a better job, I will quit this organization.
4. I often think about quitting my job.
5. I will probably look for a job outside of this organization within the next 3 years
6. It is very unlikely that I would ever consider leaving this organization
7. I prefer very much not to continue working for this organization.
8. I will likely actively look for a new job in the next year

Significance of Study:

This is of great importance for several reasons. Firstly, departmental stores operate in a fast-paced and competitive environment, making employee turnover a costly and disruptive issue. Secondly, young employees constitute a substantial portion of the workforce in retail, and understanding their unique dynamics is essential for effective management. Thirdly, insights gained from this study can inform evidence-based strategies, allowing departmental stores to create supportive work environments that resonate with the motivations and commitments of their young employees.

Contribution of Study:

Practical Contribution: Management can benefit from knowing how leadership philosophies affect youthful employee attrition in department stores. Leaders can adopt more effective ways by having a better understanding of which leadership styles are linked to improved retention rates. This realization could result in focused leadership development initiatives that improve overall business success and worker happiness.

Theoretical Contribution: Contributions to theory include expanding on previously held beliefs. The present study has the potential to enhance or broaden the theories of leadership. Our comprehension of the complex impacts of leadership can be improved, for instance, by pinpointing particular leadership philosophies that affect employee turnover in the setting of department shops. This has the potential to result in the creation of a leadership paradigm that is more complete.

Academic Contribution: This study may add to the body of knowledge already available on organizational commitment, motivation, employee turnover, and leadership. On the basis of this work, researchers could expand by undertaking other investigations to corroborate results or looking into other variables affecting the link. Publishing such studies would enhance scholarly conversations and serve as a foundation for upcoming leadership and organizational behavior investigations.

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International Journal of Social Sciences & Educational Studies 2409-1294

Comparative Study on Personality Traits, Emotional Regulationand Psychological Distress in Psychology and Medical Students

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ABSTRACT

Psychology and medical students are known to experience high levels of stress and psychological distress, which can have negative impacts on their well-being and academic performance. This study aimed to investigate the relationships between personality traits, emotional regulation, and psychological distress among psychology and medical students.
Emotional regulation has effect on psychological well-being of both medical and psychology students. Personality traits and emotional regulation are significant predictor of psychological distress. Psychological distress is found to be higher in psychology students than medical students.
Gender differences were also observed, and Women have higher levels of psychological distress as compared to men. These findings suggest that personality traits and emotional regulation may have an impact on psychological distress among psychology and medical students, with potential implications for interventions and support services for these populations.

Keywords: Psychological distress, Emotional Regulation, Personality traits, Students

INTRODUCTION

It has been noted that students' mental health issues have increased in frequency in recent years. Due to the heavy workload, time commitment, and pressure of the clinical setting, medical and psychology education is among the most demanding and stressful educational programs. This increases the likelihood of psychological issues like stress, worry, and depression. Depression is known to be a dangerous medical condition that can impair a person's capacity for function. Students studying psychology and medicine who are depressed may exhibit extreme unhappiness, pessimism, and a decline in academic performance. It is a well-known fact that stress is a bodily reaction that calls for adjustments on the mental, physical, or psychological levels.

Students studying psychology and medicine deal with high levels of stress, which may be attributed to their intense competition, a lack of breaks, and the vast quantity of medical information they must learn. In addition to academic stress, students' personality characteristics in both domains can have a significant impact on stress, anxiety, and depression. In addition to personality qualities, emotional intelligence is seen to be crucial for students' psychological health. Strong communication abilities, self-awareness, flexibility, the capacity to handle unfamiliar situations, empathy, and stress tolerance are characteristics of emotionally intelligent individuals. Given the high-chasing technology and workload expectations, these traits are typically essential for success in the medical and psychological fields.

Strong communication abilities, self-awareness, flexibility, the capacity to handle unfamiliar situations, empathy, and stress tolerance are characteristics of emotionally intelligent individuals. Given the high-chasing technology and workload expectations, these traits are typically essential for success in the medical and psychological fields. Students in both disciplines appear to benefit from emotional intelligence in terms of stress prevention. In this situation, emotional intelligence can have a moderating function in preventing the development of stress and psychological suffering in medical and psychology students by improving an individual's capacity to manage challenging situations and regulate negative emotions.

Personality Traits

While there are numerous definitions of personality, the majority concentrate on the traits and behavioural patterns that can be used to forecast and interpret an individual's actions (Cherry, 2022). Funder (2004) defines personality as a person's distinctive thought, emotion, and behaviour patterns as well as the psychological processes that may or may not underlie these patterns. According to Larsen and Buss

(2005), personality refers to a person's ordered, comparatively stable psychological mechanisms and features that affect how they interact with and adjust to their social, physical, and intrapsychic contexts. In order to understand each individual human being as a complex whole construct and provide a credible scientific explanation of human individuality, personality psychology is the scientific study of the entire personality as well as pertinent things like perception, attention, cognition and memory, neurons, and brain circuits (McLeod, 2021).

According to Mayer (2007), personality is an ordered, growing system within an individual that reflects the collective behaviour of that person's primary psychological subsystem. According to Pervin et al. (2005), a person's personality is defined as those characteristics that account for recurrent emotional, cognitive, and behavioural inclinations.

Emotional Regulation

Emotion regulation is the term used to describe the capacity to appropriately manage and respond to an emotional event. People commonly use unconscious emotion management strategies to handle difficult situations during the day. Most of us use a variety of methods to manage our emotions, and we can use these methods in different situations to adapt to our environment. Some of these are in good health, while others are not. It doesn't harm to use healthy coping strategies, including going for walks to release stress. Strong emotions can often be subsided with their assistance, facilitating a deeper comprehension of the circumstances that gave rise to the emotional experience (Rolston & Richardson, 2011). According to Gross (1998), emotion regulation is the process by which an individual is aware of the specific feelings they experience and how to express them. Whether deliberate, voluntary, or involuntary, emotional regulation refers to the skills, behaviours, and methods that are used to control, suppress, or augment emotional outbursts and emotions. Emotional regulation is the process of activity that affects the emotion, how, and when emotions are experienced (Gross, 2002). Emotion regulation is a component that aids in knowing how emotions function and the skill needed to control emotions rather than allowing them to control you (Dietz, 2012). Emotions are intricate, full-body responses that involve modifications in the domains of personal practise, behaviour, and outside labour. Reactions occur when someone approaches a situation and evaluates it in relation to their objective. This description acknowledges an ongoing combination of events with an intuitively imagined real or fantastic background, a second-order consideration for and evaluation of the environment by the individual, and a third-order expressive response (Gross, 2007).

Psychological Distress

When expectations, losses, or perceived threats overwhelm a person, they experience the negative stress reaction. Negative mood and physiological reaction are often involved. It is detrimental since it jeopardises people's health and results in physical and psychological maladjustment. This is the intended meaning of the word generally (American Psychological Association). Psychological distress arises when you are faced with demands that you cannot manage. These stresses could include catastrophic encounters, significant life events, regular stressors like marital, family, and job stress, as well as health problems. Individuals react to stress and life transitions in different ways.

Psychological distress manifests as tiredness, depression, anxiety, avoiding social situations, fear, fury, and moodiness (Borysenkyo, 2007). Psychological distress arises when you are faced with demands that you cannot manage (Health-e- university). a negative emotional state in which the exact nature of the feeling is ill-defined or difficult to identify. For instance, newborns' stranger anxiety is more accurately referred to as stranger discomfort because the infant's negative behaviour, which usually consists of wailing, makes it impossible to identify the emotion in question (American Psychological Association). Psychological distress is the term used to describe unpleasant feelings or emotions that you may encounter when you feel overburdened. Your daily activities and interactions with others around you may be disrupted by these feelings and sensations (Stallman, 2010). Being extremely disturbed increases your risk of developing long-term mental and physical health problems. This is a result of the prolonged mental and physical reactions to stress that you are experiencing. When uncomfortable emotions lead to psychiatric problems or mental illness, it is more difficult to adjust (mental illness). Individuals with attention deficit disorder or anxiety disorders, such as panic attacks, concern, and post-traumatic syndromes, may coexist with heart difficulties and significant levels of distress (Benson & Casey).

LITERATURE REVIEW

It is unclear how emotion regulation strategies especially those utilised by international students relate to stress perception among college students.
Studies have shown a strong correlation between mental health and emotional regulation. It also guards against mental illnesses. The present study aims to investigate the relationship between emotion regulation and mental health in college students, specifically in the context of the pandemic.
Personality traits are crucial for contentment in life. Relationships among Egyptian college students often follow the broad pattern found in other studies (Ahmed et al., 2022).

Different study and learning strategies are probably used by students with different personality types. Nonetheless, there has never been any research done on this link in relation to medical education. This study investigated the relationships between the learning styles and personality traits of medical students.

Pearson correlation was utilised to evaluate the extent to which personality traits predicted the learning method selection, and linear regression analysis was performed to investigate the relationship between the variables.

Personality factors, particularly conscientiousness and neuroticism, predicted the choice of learning procedures. Consciousness, which exhibited a positive correlation with seven distinct learning strategies, was the most important predictor of students' usage of learning procedures. For neuroticism, there were negative relationships and expectations. There was less of a relationship between the other three traits. These relationships between extraversion and using academic resources, openness and information processing, and attitude were discovered, as were the relationships between agreeableness and information processing and extraversion and attitude. Every personality characteristic affects at least one learning strategy, with neuroticism and conscientiousness being the most affected. The foundation for individualised coaching and mentoring in medical education is laid by this study (Albar et al., 2022).

Emotion regulation has been found to be associated with mental well-being of university students especially in the sub-scale of Cognitive Reappraisal. It has been discovered that cognitive reappraisal predicts students' mental well-being, suggesting that altering one's perspective on a certain circumstance may aid in improving one's mental health. (Shah et al. 2022).

In contrast to a beginning research literature on **the role of emotions** in learning and instruction, research on how emotions impact student and teacher development. Scholar investigating the impact of emotions on students and teachers. In primary, secondary, and post-secondary education settings, research has been done on students' emotions in relation to personality, self-regulation, persistence, contextual perfectionism, self-compassion, resilience, and relatedness variables. The studies have examined students' emotions ranging from global engagement and satisfaction constructs to discrete hope and gratitude experience. Regarding specific prospects for future research on academic emotions in an Asian educational context, study findings and methods are described (Hall, 2019). University students appear to be particularly vulnerable to the substantial risk of psychopathology, which manifests in emerging adults, either developing or getting worse. Interventions aimed at addressing nascent mental health concerns or transdiagnostic causal risk factors in these young individuals have the potential to provide substantial effects.

Our objective was to create a transdiagnostic group intervention that would improve graduate students' ability to regulate their emotions and lower their chance of developing mental health issues. The intervention consisted of group discussions, supervised practise, psychoeducation, and skill instruction based on the Unified Protocol for Transdiagnostic Treatment of Emotional Disorders (e.g., mindful emotion awareness, cognitive flexibility, countering emotion-driven behaviours). Moreover, most of the college and university mental health clinics are not equipped to offer early intervention, preventative, or psychoeducational treatments to the large number of students who might benefit from them. According to the findings, these obstacles might be removed in further versions of the intervention to effectively assist emerging adults enrolled in graduate programmes (Bernstein et al., 2021).

Anxiety or depression are well-predicted by emotion regulation. **Behavioural emotion regulation** has a direct influence on coping with negative emotion. Although it is interesting to explore more about the behavioural emotion regulation, most of the existing measures cannot assess it separately.

The way that individuals view, and value unpleasant affective states influences how their bodies react to stressful situations and acts as a moderator of the relationship between negative emotions and behavioural and physiological consequences. People's cultural backgrounds have an impact on how they perceive negative emotions and become aware of their internal emotional states, which can change the outcomes of giving negative sentiments significance. The purpose of the current study was to determine if the quantity and length of students' cortisol reactions to a standardised laboratory stressor, as well as their performance on a task, were correlated with their judgements of their anxiety levels. The participants were East Asian and European American students. Two hundred undergraduate students were selected from a large pool of students taking psychology courses. They had to complete challenging verbal and maths tasks as part of the Trier Social Stress Test (TSST). Cortisol reactivity was lower in participants who were European Americans and valued anxiety more. Valuing anxiety was associated with better speech performance in students from both cultural backgrounds; the strength of this association depended on cortisol levels. Our results highlight the significance of considering the cultural environment and whether negative emotions are perceived as a help or a hindrance when reacting to demanding and frightening situations (Choi et al., 2023).

Pakistani understudies and their families have a predisposition towards clinical training, even though they are aware that it can be challenging due to the vast amount of knowledge to learn and the multiple tests to pass. As a result, only those understudies who successfully complete clinical school can graduate with a degree, enter the workforce as certified professionals, and engage in meaningful contemplative practise. Consequently, the clinical universities cause a great deal of stress and anxiety for the students, which ultimately affects their emotional states and emotional intelligence. From Government Clinical and Dental School, a sample of 300 clinical understudies was selected. Information assortment was accomplished by agreement examination. The Profound Guideline Survey (Gross and John, 2003) and the Beck Uneasiness Stock by Aaron Beck (BAI) (1988) were used to examine the relationship between tension and the near to home guideline.

The results indicate a strong positive correlation between tension, expressive concealment, and feeling guidelines as well as a significant negative correlation between anxiety and mental reappraisal. Orientation is closely tied to both tension and guidelines that are close to home. In comparison to men, women experience higher levels of anxiety, and as compared to male clinical understudies, female clinical understudies employ a more expressive emotion concealment guideline system. Clinical studies exhibit significantly higher levels of anxiety, which necessitates appropriate interventions to lower anxiety levels and teach students sound at-home guidelines to continue living better, transformed lives (Saleem et al., 2019).

According to an Assessment of the last 30 years' worth of literature, **psychological distress** is a universal problem that has persisted over time. There is evidence linking depressed students to worsening academic performance and unhealthy lifestyle choices. These findings also emphasise the need for suitable policies and resources to support students during what is clearly a trying time. Further investigation identified several academic, environmental, and sociodemographic factors as possible causes of stress in students. It's true that the responsibilities of a university lifestyle are demanding by nature, but you don't have to be upset by them. Rather, a study of the connections between psychological traits of college students and psychological discomfort indicates that these traits might be ideal targets for intervention to ensure that students are best equipped to manage the demands of college, and more focus in this area is advised. The psychological wellbeing of students is frequently negatively impacted by the stressful environment in medical school. The prospective students must have a thorough awareness of how medical students cope with psychological suffering. (Sharp & Theiler, 2018)

There were notable associations discovered between the students' increased anxiety level and their age and gender. The age groupings of the students and stress levels were significantly correlated. Many medical students are feeling uneasy on a psychological level. To address their mental health concerns, these students ought to enrol in intervention programmes (Sahu et al., 2020).

University students' psychological well-being and academic satisfaction are correlated. This study investigated how students' psychological well-being and academic satisfaction related to COVID-19 and year-end stress. Standardised self-filled measures for anxiety, depression, stress, psychological well-being, academic satisfaction (a subjective measure of students' quality of life in the classroom), and an ad hoc measure for COVID-19-related stress on the learning process were employed in this cross-sectional study. Participants were first- through third-year students in eight different health-related areas at Geneva, Switzerland. Descriptive statistics and hierarchical regression analysis were applied. In June 2020, 433 students (15%) out of the 2835 invited students completed the survey. When it came to predicting mental health, academic pleasure performed better than COVID-19 stress on the learning experience, which mainly predicted stress and anxiety.

Lower levels of academic satisfaction were substantially connected with stress, melancholy, and anxiety, whereas psychological well-being was positively correlated with higher grades. Stress and anxiety were significantly correlated with being a woman, but not with psychological well-being or depression. Stress was only associated with lower ages. The academic year had no impact on mental health, and the academic instruction itself had a negligible impact. Academic enjoyment is a stronger predictor of students' overall mental health than COVID-19 stress on the learning process. Training institutions should address the root factors that can enhance students' academic happiness in addition to making sure they receive a sufficient and consistent education, especially throughout the COVID-19 era (Tran et al., 2022).

Theoretical Framework

Numerous well-established psychological theories and notions about gender differences, emotional regulation, psychological distress, and personality traits can be incorporated into the theoretical framework for this study. The Big Five personality traits model openness, conscientiousness, extraversion, agreeableness, and neuroticism is one helpful framework. Given its frequent correlation with negative emotions like anxiety and sadness, neuroticism may play a significant role in explaining the connection between psychological distress and personality features. The theory of emotional regulation, which contends that people may control their emotions by using a variety of techniques like reappraisal and suppression, is another pertinent approach. Improved psychological well-being and decreased psychological distress have been associated with effective emotional control. Regarding gender disparities, the social role hypothesis postulates that gender roles and cultural expectations such as the notion that women are more prone to endure stress from caring responsibilities may be the cause of gender differences in psychological discomfort. Finally, understanding how personality traits and emotional regulation may influence psychological distress in medical and psychology students may be aided by the application of the transactional model of stress and coping. According to this approach, psychological discomfort can be influenced by a variety of individual elements, including personality traits and coping mechanisms, which are considered while evaluating stressors. Overall, this research can offer important insights into the elements that lead to psychological distress in medical and psychology students, as well as the relationship between personality traits and emotional regulation. This is because it draws from these theoretical frameworks.

Conceptual Framework

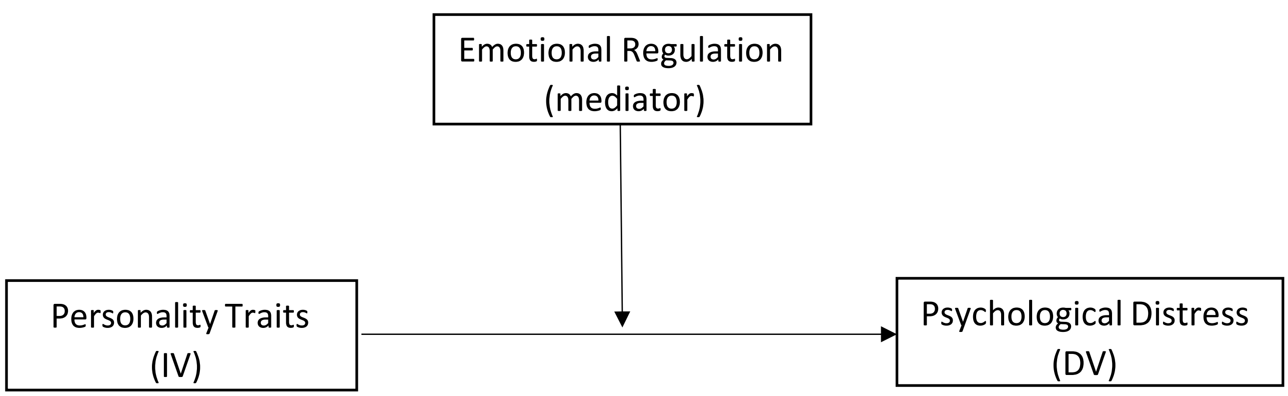

Figure 1: Conceptual Framework

HYPOTHESES

H_1. There is likely to be significant relationship between personality traits, emotional regulation and Psychological Distress in psychology and medical students.
H_2. Personality trait and emotional regulation are likely to predict the psychological distress in psychology and medical students.
H_3. There are likely to be gender difference in personality traits, emotional regulation, and psychological Distress.
H_4. Demographics are likely to predict personality trait, emotional regulation, and psychological distress.

H_1. There is likely to be significant relationship between personality traits, emotional regulation and Psychological Distress in psychology and medical students.
Personality traits refer to enduring patterns of thoughts, feelings, and behaviours. The expectation here is that certain personality traits will be associated with emotional regulation and psychological distress in both psychology and medical students. For example, individuals with specific personality traits may have distinct ways of regulating their emotions, which in turn can influence their psychological well-being.

Emotional regulation involves the ability to manage and control one's emotions. The anticipation is that the level of emotional regulation will be correlated with both personality traits and psychological distress. Individuals who possess effective emotional regulation skills may experience lower levels of psychological distress, while those with difficulties in regulating their emotions may be more prone to distress.

Psychological distress encompasses various emotional and mental health challenges. The statement suggests an expected connection between personality traits, emotional regulation, and the level of psychological distress experienced by psychology and medical students. Certain personality traits and emotional regulation strategies may serve as protective factors or risk factors influencing the overall psychological well-being of these students.

H_2. Personality trait and emotional regulation are likely to predict the psychological distress in psychology and medical students.

Personality traits are enduring patterns of thoughts, feelings, and behaviours. The anticipation here is that specific personality traits possessed by individuals will be indicative of their likelihood to experience psychological distress. For example, certain traits such as neuroticism or low resilience might be associated with a higher susceptibility to psychological distress. Personality traits can act as predisposing factors that influence how individuals respond to stressors or challenges.

Emotional regulation refers to the ability to manage and control one's emotions. The expectation is that the effectiveness of emotional regulation strategies will be linked to the level of psychological distress. Individuals with strong emotional regulation skills may be better equipped to cope with stressors, reducing the likelihood of experiencing significant psychological distress. On the other hand, difficulties in regulating emotions might contribute to heightened distress in response to challenging situations.

Psychological distress encompasses various emotional and mental health difficulties. The statement suggests an anticipation that both personality traits and emotional regulation will serve as predictors, indicating the potential to forecast or explain the likelihood and severity of psychological distress in psychology and medical students.

H_3. There are likely to be gender difference in personality traits, emotional regulation, and psychological Distress.

In terms of gender differences, the social role theory suggests that gender differences in psychological distress may be due to societal expectations and gender roles, such as women being more likely to experience stress related to caretaking responsibilities.

Research in psychology often explores personality traits, which are enduring patterns of thoughts, feelings, and behaviours. Some studies suggest that there may be gender differences in specific personality traits. For example, research has proposed that women, on average, may be more nurturing and empathetic, while men, on average, might exhibit higher levels of assertiveness.

Emotional regulation refers to the ability to manage and control one's emotions. Some studies propose that there could be gender differences in how individuals regulate their emotions. For instance, societal expectations and socialization might influence how men and women express or suppress certain emotions.

These differences can impact how individuals cope with stress and navigate emotional experiences. Psychological distress encompasses a range of emotional and mental health challenges. The statement suggests that there might be variations between genders in terms of experiencing psychological distress. Factors such as societal expectations, cultural influences, and biological differences could contribute to variations in the prevalence and manifestation of psychological distress among men and women.

H_4. Demographics are likely to predict personality trait, emotional regulation, and psychological distress.

Demographic factors such as age, gender, cultural background, and socioeconomic status may influence the development and expression of personality traits. For example, individuals from different age groups or cultural backgrounds might exhibit variations in traits like openness, conscientiousness, extraversion, agreeableness, and neuroticism. These demographic influences can shape life experiences, values, and socialization, contributing to differences in personality.

Demographic variables can impact how individuals learn to regulate their emotions. Cultural norms, societal expectations, and life experiences associated with specific demographics may influence emotional regulation strategies. For instance, people from collectivist cultures might have different approaches to emotional expression and regulation compared to those from individualistic cultures. Age and life stage can also influence the development of emotional regulation skills.

Demographic factors are known to be associated with variations in psychological distress. For example, research has shown that certain demographic groups, such as individuals of lower socioeconomic status or specific age ranges, may be more vulnerable to experiencing psychological distress. Cultural factors, including stigma surrounding mental health, can also impact how psychological distress is perceived and reported across different demographics.

METHOD

To conduct the research, an institutional consent letter will be obtained from the Institute of Applied Psychology. Participants will be informed about the nature and purpose of the research, as well as the confidentiality of all the obtained information. All queries regarding the research will be clarified. The data will be collected through online mode using Google Forms and by hand on paper. The scales will be in the English language since young adults will be capable enough to comprehend the items. The goal of the research will be delineated to the participants. A non-probability purposive sampling strategy will be used for sampling. A correlational cross-sectional research design will be employed, and data will be taken from young adults aged between 18 to 26 years. The research will explain the inclusion and exclusion criteria, and participants will be provided with a consent form to get their consent to take part in the study. Questionnaires will be given to the participants to fill up. They will then be provided with a Demographic Information sheet, The Personality Inventory for DSM V, Emotional Regulation Questionnaire, and Kessler Psychological Distress Scale. Participants will be thanked for participating in the research, and the entire dataset will be entered into SPSS version-26 for calculations. Firstly, reliability analysis will be run to check the reliability of the scales and their subscales. The initial objective of the study will be to assess the relationship between study variables. Pearson product-moment correlational analysis will be run to find out the nature of the relationship between Personality traits, Emotional Regulation, and Psychological Distress in medical and psychology students. Multiple linear regression will be run to see the predictors of Psychological Distress.

RESUManag

A research study examining the connection between psychological discomfort, emotional regulation, and personality features in psychology and medical students would probably investigate the following:

A comparison of psychology and medical students' emotional management skills and personality features.

The connection between psychological distress in both student groups and personality traits and emotional control skills.

To comprehend how personality characteristics and emotional control contribute to the emergence of psychological suffering in students intending to become psychologists or doctors.

To determine the potential causes of the variations in psychological discomfort levels between medical and psychology students.

To shed light on the mental health and general wellbeing of students who want to work in psychology and medicine, as well as to pinpoint areas in need of assistance and intervention.

To increase knowledge of the elements that lead to students' psychological suffering and the creation of research-based tactics that support their mental health and general wellbeing.

CONCLUSION

It can be inferred that personality traits, emotional regulation, and psychological distress will be significantly correlated. Emotional regulation will influence the psychological well-being of both medical and psychology students. Personality traits and emotional regulation will be significant predictors of psychological distress. Gender differences will also be observed in the study variables, with psychology students expected to experience more psychological distress compared to medical students. Similarly, women are projected to have higher levels of psychological distress than men. Pearson product-moment correlation is expected to show that personality traits, emotional regulation, and psychological distress in psychology and medical students will be significantly correlated. Emotional regulation is anticipated to have a negative correlation with psychological distress, indicating that an increase in emotional regulation will lead to a decrease in psychological distress. Pearson correlation analysis is expected to show that emotional regulation and psychological distress will be negatively correlated with personality traits. Gender is expected to be significantly correlated with emotional regulation, psychological distress, and personality traits. An independent sample test will be run to find gender differences in psychological distress, emotional regulation, and personality traits of psychology vs. medical students. The mean of medical and psychology students will indicate that female students are higher on distress than males. There will be no significant educational type of difference in emotional regulation, psychological distress, and personality traits in psychology and medical students.

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Structural Changes Required to Facilitate Knowledge Culture in Banks

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Abstract:

Researches have been conducted focusing on the importance of knowledge sharing culture in organizations since the authors could not find any study on enablers of knowledge sharing culture in Pakistani banks. This is a theoretical research study aimed to examine knowledge sharing structures of banks from view point of facilitation of knowledge culture. Overall design of the research study is review of literature and extraction of enablers of knowledge sharing from contemporary literature. Research methodology consists of literature discourse. The research comprises of in-depth review of literature to unveil the enablers of knowledge sharing culture in banks. As a result, the study found fifteen total factors (i.e. shared language, social ties, training and education, organizational climate, collaboration, IT skills T-shaped skills trust, strategies and policies, organizational structures, rewards and incentives, leadership, human resources, resources and funding, and individual characteristics) that can help to create knowledge sharing culture in banks. The stakeholders (management, employees, board of directors, regulators, customers, depositors, society at large, analysts etc.) can benefit from findings of this study. Future researches can construct a model of this phenomenon and classify the enablers in order of their driving and dependence powers for uncovering structural relations and hierarchies. The study subject to limitations commonly applied to studies of literature discourse.

Introduction

Banking, the business of loans, is the highly leveraged form of business. Despite generating tremendous data and information the banking organizations are not materially benefiting from knowledge management (Ito, 2001). There is a typical and traditional style of the processes. The job routines are run in mechanistic manner. There is little arrangement for creating, capturing, sharing, and retaining the knowledge as an organizational memory (Ito, 2001). The concept of knowledge management is relatively new for banks. The research with particular reference to the knowledge management in banks is at its infant stage. The main reasons for this deficit are the conventional vertical structures of banks. In fact, the present structures do not support the knowledge culture. Rather these organizational structures hinder the applications of knowledge management. We believe that major re-engineering of the structure is required to support the knowledge culture in banks. The banking is a vulnerable business which is subject to rapid changes and is highly sensitive to the market fluctuations but is being run in mechanistic manner with a bureaucratic touch (Ito, 2001). We have planned to conduct a study on the knowledge management perspectives and the changes required in the organizational structure to promote the knowledge culture in banks. The focus the study will be on changes required for making the tacit knowledge explicit as for as possible. There are many technological tools developed by researchers of the KM domain to capture the tacit knowledge and codify the same. Few techniques are reproduced below which were summarized by Nyame-Asimah in their conference paper (Nyame-Asimah 2009) in order to grasp the idea.

- Learning laboratory technique,
- Collective cognitive mapping system,
- Executive cognitive support,
- Enterprise knowledge portal and personal information portal,
- Knowledge management suites,
- Emails, and
- Electronic discussion boards and brainstorming applications.

The preliminary review of the research reveals that sudden crashes in banks are common. The banks collapse on their peak time. The concepts of the burnout syndrome and premature aging syndrome apply on banks in true sense in the real world. Every next bank is suffering form one of these two ills. Root causes trigger down to KM. Knowledge, the most valuable asset, is not dealt with seriously in banks; resultantly the errors in judgment in credit decisions are repeated. Frequent structural changes and mergers also jeopardy the prospects nurturing knowledge culture. Banks being the organizations in special type of business need hybrid structures. Their structure should have features of vertical, horizontal, virtual networking, and matrix type because the task environment consists of variety of natural segments. The task environment segments are altogether different from each other e.g. geographical representation of a bank, ATM services, credit, treasury and recovery are different functions. All functional segments can only be managed properly if proper knowledge culture prevails. The research problem is that there is a dire need of knowledge sharing in financial institution in general and banks in particular. But currently there is issue of developing the culture of knowledge sharing in Pakistan. Investigation of enablers of knowledge sharing is call of the day. Objective of this study is to generate the list of enablers of knowledge sharing culture in Pakistani banks. Before proceeding to literature review and methodology we must discuss the problem in exact and reason for selecting the subject bank. Daft in his book "Understanding the Theory and Design of Organizations" argues that as much as 80 percent of the knowledge may be tacit knowledge which is not easily captured and transferred. (Daft, 2008). The argument is very valid in case of banks. So the problem lies in form of: Required changes in organizational structure of banks so that structure should facilitate the knowledge creation, retention, and sharing. The study consists of five parts i.e. introduction, review of literature, methodology, conclusion and discussion.

Literature Review

Structural effectiveness of organization can be judged through "Spatial Model of Effectiveness". The changes in organizational design can be perused in the context of effectiveness of organizations (Quinin and Rohrbaugh 1983). Organizational design of the banks can be improved to nurture the knowledge in the context of nature of the functions of major departments. It can be examined as to whether the environment is homogeneous, heterogeneous, stable or changing in order to align the structure with overall goals of the bank (Slocum and Hellriegel 2001). Managers operating in stable environments of task will probably install mechanistic structures while managers working in unstable environments will choose organic management systems (Slocumand hellriegel 2001). The structure of the organization should facilitate the collection of information from customers, suppliers, competitors, governmental agencies, and a multiplicity of action groups so that management can make better decisions

(Slocum and Aellriegel 2001). The researches have drawn attention towards capitalizing on organizations most important strategic asset i.e. knowledge (Shea et al., 2023). Researchers documented the enhanced performance of the organizations where the knowledge management practices have been implemented as compared to those who failed in its implementation (Chatterjee, Chaudhuri, & Vrontis, 2023). Therefore, the organizational performance and knowledge management practices are significantly and positively related to each other (Shea et al., 2023). Having the multiple dimensions, one of the most important is the coordinating mechanism that supports to convert the resources into capabilities (Demir et al., 2023). The three dimensions of KM that makes this conversion possible are i) acquiring the knowledge ii) dissemination of acquired knowledge iii) responsiveness to that knowledge. Firstly, the acquisition of knowledge corresponds to creation, location or finding the knowledge from various sources such as relationship with suppliers, customers or competitors. Second, dissemination of knowledge mirrors the internalization, socialization, externalization and combination of knowledge. Lastly, knowledge responsiveness reflects how responsive is the firm towards different types of knowledge that can be accessed by it in accordance with the timeliness of response (Acevedo & Diaz-Molina, 2023). Probst and Raisch (2005) analyzed the possibilities of the organizations' sustainable growth by categorizing the reasons of failure i.e. burnout syndrome and premature aging syndrome. The 'personal torture' of the work stress has popularly been described as burnout. This subjective experience comprises of emotions, peers, negative cognitions, attitude towards work and one' job role. The outcomes of burnout include psychological discomfort, anxiety, depression and physical pathologies. Not only the prevention of negative outcomes of psychological risk factors is important but the promotion of human talent development and well-being at workplace is crucial as well. The employees most vulnerable to this burnout are front-line employees more frequently in direct contact with the customers as their job involves emotional satisfaction of customers. The negative impacts of burn out are evident on both organizational and personal results (Benitez et al., 2023; Niazi, et al., 2023). For avoiding the burnout syndrome in organizations including banking sector following steps are necessary:

- Stabilization of growth,
    - Stabilization of the organization,

- Stabilization of the leadership.

To avoid the premature aging syndrome in the banks following steps are necessary:

- Open-up of the system,
- Investment in growth and change,
- Cultural changes.

Both the syndromes are of different nature but result in the same way (Probst and Raisch 2005; Abbass et al., 2021). Focusing on long-term financial and economic benefits, sustainable value is created by sustainable financial institutions (Bhaskaran, Sujit & Mongia, 2023). The organizational culture where the intrinsic and extrinsic motivations of the employees are encouraged, they show more inclination towards continuous improvement activities, enjoy cooperation with peers in order to improve the service quality and solution of problems for the improvement of organization performance and effectiveness (Lin et al., 2023; Qazi, et al., 2020). Extraction of soft knowledge should be considered in a dynamically real time environment where there is a continuous interaction among learners who harness user-friendly tools for learning (Nyame-asiamah 2009; Niazi, et al., 2019). The banks should design procedures and embed them in collaborative platforms persuading employees to record their ideas and share them with staff depending on the size of the particular setting (Nyame-Asiamah 2009). It is imperative to implement any change in organizational structure of a bank unless intended recipients have received, understood, and evaluated the channels of flow of information (Ito 2002). Human beings have become most valuable asset due to tacit knowledge embedded in their minds which is difficult to access (Leng, Hanum and Nasaruddin 2006). Organizational adaptability hinges on the ability of managers to not only envision and implement new organizational forms but also to direct and control people within them (Miles et al 2001). Organizations should be understood as integrated and dynamic whole (Miles et al 2001). In future economy, the collective entrepreneurialism in which management, employees, and customers establish working relationships will be more focused (Bown, Siehl, and Schneider 1989). Many nonfinancial and non-attitudinal factors like knowledge place people in networks of forces that keep them in their jobs placed for long times (Mitchell et al 2001). The techniques of decision tree can be used for making decisions pertaining to the selection of organizational designs of banking organizations (Duncan 1979; Basit, et al. 2020). The institutionalization of employment conditions and worker management relations is often perceived as an implementation to the flexibility of structural change (Adler 2001).

Table 1: List of Enablers of Knowledge Sharing Culture in Pakistani Banks.

Sr. no.	**Factors**	**Source**
	Trust factor	(Abbas et al., 2013; Lei, 2016; Sahibzada et al., 2023)
	Strategies and policies	(Veer & Rowley, 2020; Roy, 1991; Abasimel, 2023)
	Organizational structures	(Veer & Rowley, 2020; Oliveira & Pinheiro, 2021)
	Rewards and incentives	(Veer & Rowley, 2020; Fayyaz et al., 2020)
	Leadership	(Veer & Rowley, 2020; Zayed Alarabi Khalifa, 2012)
	Human Resources	(Veer & Rowley, 2020; Khan, & Zaman, 2022)
	Resources and Funding	(Veer & Rowley, 2020; Makela, 2007)
	Individual characteristics	(Oliveira & Pinheiro 2021; Memon, et al. 2020)
	Shared Language	(Lei, 2016; Zulkifli, et al. 2023; Rehman, et al. 2015)
.	Social Ties	(Kubo, Saka, & Pan, 2001; Lei, 2016; Morris, 2015)

.	Training and Education	(Zayed Alarabi Khalifa, 2012; Abrams, et al. 2003)
.	Organizational Climate	(Sahibzada et al., 2023; Shea et al., 2023; Fernández-Muñiz, 2021)
.	Collaboration	(Abubakar et al., 2019; Suryani, et al. 2021)
.	IT Skills	(Abubakar et al., 2019; Chatzoglou, & Vraimaki, 2009)
.	T-shaped skills	(Abubakar et al., 2019; Cader, et al., 2013; Yao, et al. 2023)

Methodology

Since it is a theoretical descriptive study therefore interpretivism is used as research philosophy. Literature discourse is used as research method. Renowned data bases such as Wiley-Blackwell, JStor, Emerald, Science-Direct, Taylor & Francis etc. are explored through google search engine for finding contemporary research studies on the phenomenon. Approximately two hundred and fifty papers were downloaded and critically reviewed. The most relevant studies are also reported here to set the context of the study. Different keywords are used while reviewing the literature such as knowledge culture, knowledge management, tacit knowledge, knowledge sharing, importance of knowledge sharing in banks etc. The stakeholders in this phenomenon include regulators, banks' management, employees, international community, public at large, customers etc. Managers and senior officers are considered to be the people on helm of affairs of the bank hence have necessary background of problem to be investigated. Technique of ascertainment is the Literature discourse coupled with expert opinion. This type of the studies are commonly conducted to clarify the elements of conundrum phenomena viz: (Tariq, et al., 2023; Niazi, et al., 2023; Basit, et al., 2023; Shaukat, et al., 2023; Niazi, Saleem, Basit, Iqbal & Khan 2023; Niazi, Qazi, Aziz, Basit, & Niazi, I. A. K. 2023; Niazi, Qazi, Butt, Niazi, I. A. K., & Basit 2023; Qazi, et al.,2023; (Niazi, Qazi, Sarwar, Niazi, I. A. K., & Basit, 2023; Qazi, et al., 2022; Javaid, et al., 2022; Ali, et al., 2021; Naeem, et al., 2021).

The results of this study are unique. This study attempted to prepare a list of enablers of knowledge sharing in banks that will help the bankers and the regulators to formulate the policy. It will also help future researchers to investigate how these are woven. It also provides basis for investigation for future studies. Since it is a theoretical study which simply generated the list of enablers of knowledge sharing in banks therefore, the future researches can construct a model of this phenomenon, classify them in order of dependence and statistically evaluate the same as done in many of the studies viz Niazi et al., 2023; . The study has some limitations. An exhaustive list of enablers could be generated for the future studies.

Conclusion

In order to create knowledge culture in banks traditional structures need to be aligned and changed. As a result of literature discourse, a list of enablers of knowledge sharing culture in Pakistani banks has been extracted (Table 1). It shows the list of fifteen enablers of knowledge sharing culture in Pakistani Banks. It is also necessary to create seriousness in banks to capture tacit knowledge which in this world of information has become the most important. Particularly when information technology and other techniques have been identified to capture tacit knowledge it is imperative to not to make the beneficial use of this leverage in highly information generating businesses. There is active research in the area of exploiting the tacit knowledge and organizational theory and design, therefore, the beautiful blend of the two areas of research can be conveniently used in the benefit of the banks.

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esearches have been conducted focusing on the importance of knowledge sharing culture in organizations since the authors could not find any study on enablers of knowledge sharing culture in Pakistani banks. This is a theoretical research study aimed to examine knowledge sharing structures of banks from view point of facilitation of knowledge culture. Overall design of the research study is review of literature and extraction of enablers of knowledge sharing from contemporary literature. Research methodology consists of literature discourse. The research comprises of in-depth review of literature to unveil the enablers of knowledge sharing culture in banks. As a result, the study found fifteen total factors (i.e. shared language, social ties, training and education, organizational climate, collaboration, IT skills T-shaped skills trust, strategies and policies, organizational structures, rewards and incentives, leadership, human resources, resources and funding, and individual characteristics) that can help to create knowledge sharing culture in banks. The stakeholders (management, employees, board of directors, regulators, customers, depositors, society at large, analysts etc.) can benefit from findings of this study. Future researches can construct a model of this phenomenon and classify the enablers in order of their driving and dependence powers for uncovering structural relations and hierarchies. The study subject to limitations commonly applied to studies of literature discourse.

Introduction:

It is established in research that banking is a business of loans (Haas 2010; Niazi, et al., 2023). Loan portfolio management and recovery of loans in the core issue of banking sector. The non-performing-loans adversely affect the performance of banks hence their impact is conspicuous in financial figures. Basic loan cycle consists of application, approval, disbursement, recovery of loans and ultimately the profitability. Knowledge is the counter product of the banking processes. Visually we can look at the loaning process as follows (Figure 1):

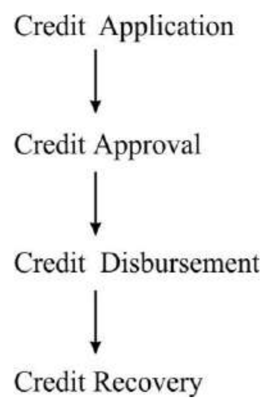

Figure 1: Loaning Process

The process is connected with the performance of the bank as giving in below diagram that is simple linear relationship between loan recovery and performance as visualized (Figure 2).

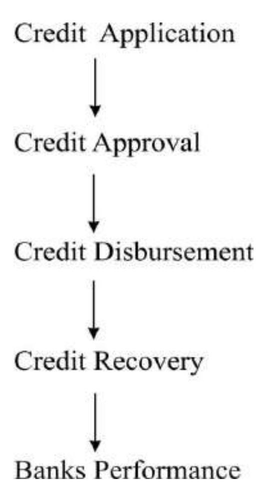

Figure 2: Relationship between Loan Recovery and Performance

The bank, that is able to exploit its knowledge or intangible assets, has competitive edge on other banks. In order to exploit the intangible assets, the banks evolve the process of strategic management. For the purpose of the study in hand, we can define the strategic management as "the analysis, decisions, and actions an organization undertakes in order to create and sustain competitive advantage (Dess et al. 2005). In strategic management literature, different concepts have been evolved from other disciplines like economics, sociology, organizational behavior and human resource management (Niazi, et al., 2023). There are three popular theories and one remarkable framework adopted by the strategic management researchers from other domains. Institutional theory, social network theory, organizational learning theory and resource based view (a framework) are concepts adopted from other domains (Abbass et al., 2021). New topics also emerged in the domain of strategic management like e-commerce, international strategic management, and international entrepreneurship (Buton et al. 2011). In literature, we also find Potter's model which enlightens upon new factors of production, inter alia, the traditional ones. According to Porter, traditional factors are land, labor and capital, whereas, new factors include technology, infrastructure and knowledge (Qazi, et al., 2020). New factors of production are more important and relevant in case of banks. The banks, that in fact, are the sets of networks, technology, infrastructure and knowledge, necessitate a different view from other forms of business say manufacturing. The framework of Resource Based View (RBV) is particularly relevant to the new factors of production, hence highly relevant in case of banks (Niazi, et al., 2019).

Literature Review:

There surpassed a lot of research in the domain of banking and it is virtually impossible to comprehend the literature but still we are confident to at least have reviewed the studies critical to the issue in hand. The banking is considered as social relation and has conceptual roots in the idea of the house banking or relationship banking that establishes behavior pattern consistent with idea of long term relations (Elsas et al. 1998; Niazi, et al., 2019). But the bank customer relations are always expressed and written in black and white. In order to sustain success in business the companies need to keep a balance between the extremes (Probst et al. 2005). These relational strategies have distinguished peculiarities. The credit strategies must be quite clear (Chovancova 2006) and according to the environment. The strategies of banks complement the business environment of a country. Smooth functioning of the legal system, in fact, requires all the institutions to complement (Lu et al. 2008). The argument of Santikian (2009) that the borrowers are ultimate head of a bank can only be weighed if the ties of the banks and the borrowers are strategically strong. Although every year the bank loans increase as compared to previous year but still the growth rates are not satisfactory (Tanbir et al. 2009; Qazi, et al., 2020). Measurement of the relationship aspect in the banking sector is essential due to the sensitivity of assets and liabilities (Afzal et al. 2009; Abbass et al., 2021) particularly, the degree of the strength of the strategic tie between loannee and the bank. There are arguments for and against the weak and strong strategic processes and in this context. Yao (2009) argue that weak strategic and legal systems and under developed financial markets sometimes augment the economic development.

The globalization, the dispersal and the anonymity of the shareholding of listed banking and financial institution facilitate the contagion of default (Jehlen, 2010). There exists systemic risk or the threat of contagion (Simpson 2010). In the well functioning environment, banks lend to SMEs (i.e. at grass roots level) but, on the other hand, to large enterprises and government (Haselmann 2010; Niazi, et al., 2023). While granting the credits, the particularities of the activity and the sectors are taken into account (Sbarcea 2010). Strategy of creditor protection, bank ownership and bank size are important determinants of the composition of very portfolio of credits (Haas 2010; Niazi, et al., 2023).

Corruption is also associated with bad loans. Loan defaults are low in faster growing economies (Goel et al. 2011) because they have well functioning recovery strategies and well documented economies. The fragile system of banking drags the economy towards financial crisis. Financial crisis and decline in output occur in a sequence and complement each other (Serwa 2011). Global integration of financial sector contributes to the propagation of financial shocks from one economy to another through the banking channels (Chava et al. 2011), in other words, the weak system for banking of one country has implications for other countries as well. Some of the banks have already shown seriousness towards the issue and have started appointing strategic cells reportable directly to the board rather than CEO and impact is conspicuous in returns (Aeb et al. 2011; Basit, et al. 2020). Banking organizations now have evolved a strategy to estimate credit risk through internal rating approaches (Bastos 2010) and record the processes in black and white. The businessmen become uncontrollable greedy and willfully default and government have to announce bailout packages in USA (Paul 2009) where there is reportedly world's best banking system. It is the question of strategy of a bank that abstains default if it is taken care of in letter and spirit. Currently the laws do not cover all emerging issues particularly relating to knowledge management and information technology (Azmi 2010). Future research must be done for understanding interconnections between profitability, risk, liquidity, capital, competition, knowledge and strategic management (Wilson et al. 2010).

Resource Based View (RBV) in Banks: Traditional banking processes less emphasize on the intangible assets that majorly consists of knowledge. Knowledge, dimensions of knowledge (i.e. tacit and explicit knowledge) and explication of tacit knowledge are less explored areas of banks (Salim, et al., 2017). The two sets of new resources are continuously gaining importance i.e. network ties and knowledge (Delis, et al., 2015). Network ties consist of cooperation, coordination, relationships and organizational capabilities. Knowledge consists of tacit knowledge (based in minds of people) and explicit knowledge (in documents and express processes), therefore, it can be visualized that banks have sources of sustainable competitive advantage (Dias, 2016). Exploiting the intangible assets' network and knowledge and enhancing intangible assets are real source of competitive advantage. In the case of banking particularly the tacit knowledge can prove to be a source that can mitigate risk of likelihood of default and the risk of severity of loss. These resources help in taking correct credit and recovery decisions (Deyoung, Torna, & Winton, 2015). They can also facilitate the recovery and ensure the quality of recovery decisions (Hopkins, & Hopkins, 1997). The credit decision environment consists of interactive communication, common sense, awareness, compatibility with technological agility, control and safe custody (Ding, et al., 2023). The recovery decision of environment consists of atmosphere in general and account-wise assessment process portfolio (i.e. regular or default). The default may be "voluntary default" or "involuntary default" (Ioannidou, & Ongena, 2010). Loan portfolio management is majorly concerned with control of default irrespective of its being voluntary or involuntary (von Blomberg, & Reijers, 2023). Control of default means pertinence to severity of loss (Stanley, Roger, & McManis, 1993). This study, in particular, pertains to mitigation of risk severity of default (Tian, Wang, & Wu, 2023). Issue of severity of loss can be addressed properly after carefully analyzing the internal and external environment of recovery (Segura, & Suarez, 2023). Internal analysis of recovery environment includes following:

- Contractual analysis,
- Nature of loan (long, medium or short),
- Nature asset financed,
- Security type,
- Quality of contractual documents,
- History of client,
- Motivation level of top management,
- Motivation level of staff and
- Level of cooperation of other departments.

The analysis of external environment for recovery of bank loans include following:

- Economic conditions of the country,
- Legal environment ,
- Inflation,
- Competition,
- Trade associations,
- Creditors,
- Customers,
- Government,
- Markets and
- Communication

Having analyzed the environment, the allocation of resources (i.e. budget, equipment, vehicles and personnel) is the next step. Personnel may be analyzed as intellectual capital, social and informational capital. Recovery decisions include assessment, consultation, approval and actions (Yuan, Zhong, & Lu, 2022). Recovery decisions mean deciding about normal, special, litigation (self or outsourcing) etc. The actions based on these decisions may be reminders, visits, notices, suits, legal notices, fines prosecution and so on (Adão, et al., 2022). Corporate level strategy must be stepwise quick, knowledge base, perpetual and effective. We have developed following model Figure 1 based on generic process of loaning.

Methodology

This is a theoretical research study that follows post-positivism as research philosophy and induction as research approach. The design of the study is unique in nature and consists of literature survey and uses the primary concepts of discrete mathematics. Methodology of research envisages on use of elementary concepts of geometry, free hand drawing and directed graphs from discrete mathematics for modelling the phenomena. The model is constructed in the environment of resource based view. The authors considered an array of multi-criteria-decision-making methods viz used by Tariq, et al., 2023; Niazi, et al., 2023; Basit, et al., 2023; Shaukat, et al., 2023; Niazi, Saleem, Basit, Iqbal & Khan 2023; Niazi, Qazi, Aziz, Basit, & Niazi, I. A. K. 2023; Niazi, Qazi, Butt, Niazi, I. A. K., & Basit 2023; Qazi, et al.,2023; Niazi, Qazi, Sarwar, Niazi, I. A. K., & Basit, 2023; Qazi, et al., 2022; Javaid, et al., 2022; Ali, et al., 2021; Naeem, et al., 2021 but since the topic under study is relatively less researched area and need preliminary propositions therefore the authors decided to use discrete mathematics as research methodology. This methodology gives liberty to the authors to present their findings in form of lines, colors, symbols, shapes and background that carries meaning and conveys message like algebraic or mathematical terms.

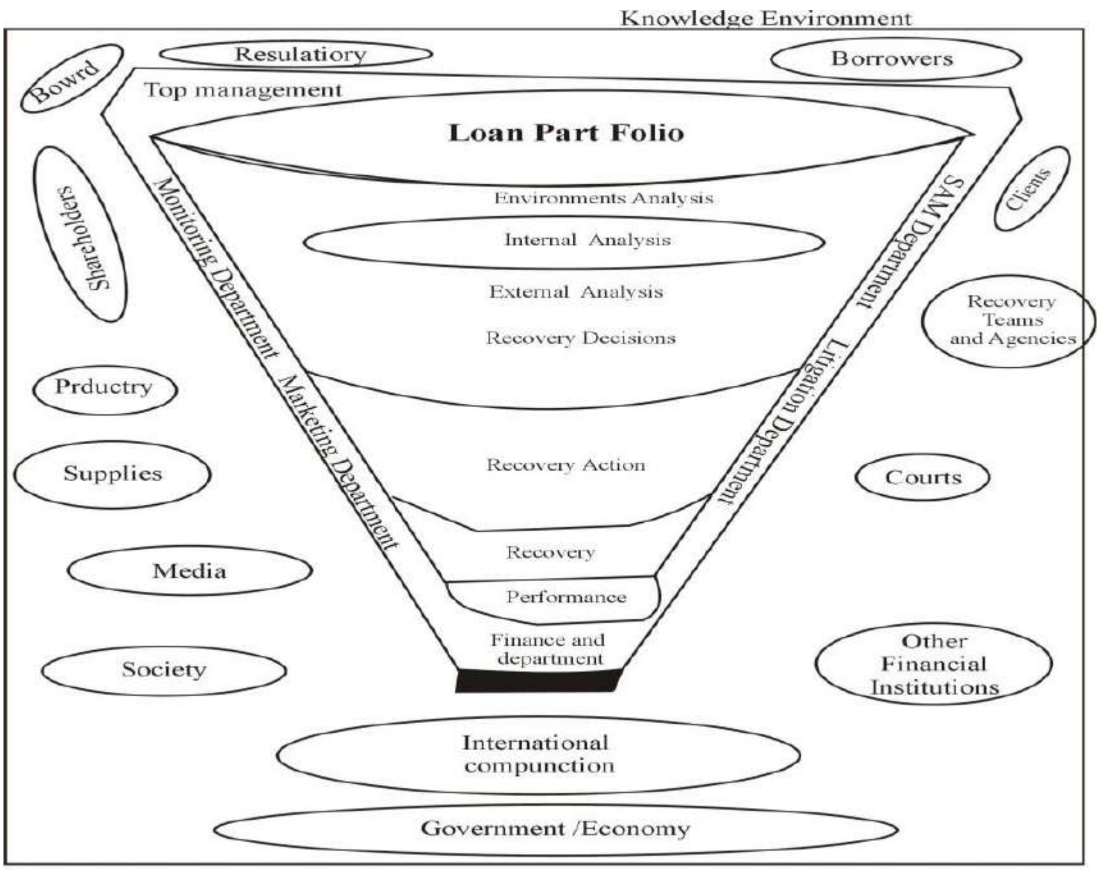

Figure 3: Strategic Management Model for Loan Portfolio—a Resource Based View

Loan portfolio is placed in a funnel of environmental and other analysis within the internal departmental net and external social nets. The social nets include borrowers, regulatory authorities, shareholders, industry, suppliers, media, society, government, other financial institutions, courts, clients internal and others. The knowledge and ties of internal and external as shown in the model help to mitigate the risk of severity of loss and funnel the loans into performance.

Conclusion:

Implications of the model consist of the ability to mitigate the risk of severity of loss. This is a theoretical research paper aimed to develop a model of strategic management for banks' loan portfolio management and sustainable competitive advantage for banks. Overall design of the study consists of review of literature and conceptual modeling based on real time bank loaning processes using elementary concepts of discrete mathematics (i.e. geometry, drawing and directed graphs. The model has been constructed on the basis of descriptive research (i.e. intensive review of literature). It has been presented in taking into consideration the theory of resource based view. As a result the study advanced a graphical strategic bank loan portfolio management model. The model has valuable practical as well as theoretical implications for commercial banks. The banks must give importance to the intangible assets. The model developed on the basis of descriptive study demonstrates the vitality of knowledge in development of a strategy for managing the loan portfolio. The model also provides framework for future research. It is equally beneficial for all other stakeholders (i.e. regulators, government, customers, depositors, analysts, society at large etc.) because it provides deeper understanding of the phenomena. However, the research findings should be used with caution since the study being theoretical and conceptual does not advances any statistical proof and is subject the all limitations applied the theoretical studies.

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Comparative Study of Fashion-Apparel Buying Behavior of Generation X, Y and Z

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Abstract:

This study aims at the highly competitive market where customers differ in their demographics, interests, and priorities. They were categorized in generations X, Y, and Z and considered different. It is quite difficult for businesses to address an audience of three different generations. To overcome this problem, we conduct a study on the comparative of fashion-apparel buying behavior of generations X, Y, and Z. It aims to build a deep understanding of customer's demographics by recognizing their purchase patterns their interest while making a transaction. The comparison permits businesses to become more acquainted with their clients by identifying what is required in the market. The primary determination of this research is to introduce the logical reasoning behind different generations' purchasing behavior and attitude. The study analyses the mindset of distinct age groups in terms of the reference group, promotion consciousness, body cathexis, and fashion apparel purchasing. This study has been conducted in the context of Pakistan from the customer of the fashion apparel industry. The data has been collected through a self-administered adopted questionnaire. The multistage sampling technique has been a customer with a sample of 384 respondents visiting the malls located in Lahore. Ridit Analysis techniques have been used for data analysis. In this way, this study helps businesses to know the behavior of their customers. It further provides insights to the marketers to adopt better marketing strategies while targeting the customers. According to results, Generation X, Y, and Z have different buying behaviors regarding fashion apparel. Generation X has different from each other. Generation Y and Z also have different buying behavior regarding fashion apparel. Still, on some points, generation Y and Z have the same results on the last statement, but we can't say that they have the same buying decision-making power or change to each other regarding fashion apparel. The study identifies various segment divisions utilized to fragment clients and help them design effective marketing strategies. It creates opportunities for the

different vendors to understand other age groups, the consuming behavior, and specify their products according to it. It further eases the businessmen to understand the selection criteria for generations and plan their apparel products to set the pricing, promotional, and market strategies.

Background of Study and Contemporary Literature

This chapter contains an introduction by exploring the buying behavior of fashion apparel of generation X, Y, and Z. The study is to examine the behavior of generations X, Y, and Z towards apparel brands from the viewpoint of fashion Apparel, in-store promotion, reference group, body cathexis and purchasing high-quality criteria. In the highly competitive market where the customer differs in terms of their demographics, interests, and priorities, they were categorized in generations X, Y, and Z and considered different. It is quite difficult for businesses to address an audience of three different generations. It describes the problem statement and defines the research gap. The research has led us to find the research objective and questions. Then explain the key terms and provide insights to the marketers to adopt better marketing strategies while targeting the customers. The purpose of this study has also been described at the end of this chapter. Previous studies have been conducting on the significance of clothing product qualities for generation Z buyers. In previous studies, the main objective of the research paper is to search and theorize various factors that affect teenager's obtaining forms. In the present study, we identify the buying behavior of generations regarding fashion apparels product and compare to each other. Correlative approaches are offered for the experience and concentrated on style consumers – condensing generally on coinage hypothesis and colors- generality hypothesis. These are visible as probably applicable procedures because style is edgy about "freshness ", therefore coinage generality (further concerned with introducing new commodities and ideas) is logically essential. Due to the fact style shopping for may want to have a good deal to do with projecting film of the way shoppers see themselves (or would like to be visible, etc.) and due to the fact, there may be proof to indicate that shopping for in additional immature calls is associated forcefully to the expression of colors, more fabulous than could have been the case with inside the history. The amalgamation of those approaches, its long hauls argued, may want to catalyze an increase in style branding, primarily grounded fully on an additional segmentation of favor calls. Fashion creation, in turn, can be more significantly focused and use principles from each coinage and colors-generality hypothesis.

The research has been conducted among three-generation X, Y, and Z. The age group of Generation Xers belongs to 1965 to 1980 while the Generation Y (also known as Millennials) ranges from 1981 to 1996 where the Millennials are equal in the age span of 16 years to their preceding generation. In contrast, those born from 1997 on are part of a different group, namely generation Z (Dimock, 2019). Generation Xers are exceptionally influenced by innovation, variety, change, and decisions, prompting perplexing and tricky practices in Generation X's purchasing behaviors (Hoffrichter, Wildes, et al.

1999). Next comes Generation Y, also known as Millennials. They were conceived from 1981 to 1996 and grew up with the growing technology (Lister 2018). They were considered very responsive and active towards web-based shopping, e-buying and spurred buying at their ease. Eventually, this generation of people is reshaping from sluggish to the conventional advertisement and promotional strategies. They select where to eat, picks the hairdresser, clothing brand, or boutique and stale food depending upon the Facebook and Instagram promotions and advertisements delivered to their way (Lister, 2018). The comparative examination of generations X, Y, and Z will be analyzed for their shopping conduct and buying association for garments. For the three of these purchases, Generation X esteem the retail insight and available administration higher than Generation Y. For Generation X, the buying cycle begins with a retailer the shopper believes, who offers guidance for picking the correct item. In contrast, for Generation Y, the buying measures begin with picking those products. Consumers of Generation Z, specifically aged 16 and over, are presumed to make spending by making quick decisions. Generation Z purchasers have been recognized as impressive as they are the original of advanced locals brought into the world with computerized chromosomes in their DNA. Ultimate of the people in the world present vesture harmonious with “world system, " The fashion vesture sector has turned more other by vesture brands, personalization, notification, and race within the market place. However, they can be better ready to attract and continue their target buyer group, if consumer's preferences can identify by industrialists and retailers of fashion vesture. Therefore, this study aims to research the dimension of fashion apparel shopping among consumers. Style has been creating inside our current circumstances and the society we live in which. That is why it is presently borne with the adolescent these days that it can't be disregard regardless of the pay class the family or an individual has a place in. Through investigations, it was evident that purchasers pay a premium for creator-style wear and only for the everyday design pieces of clothing the estimating is unique. Plainly inside the style business, there is diverse strata's design. Producers focus on the sticker price related to high and low-end style clothing is set as per the customer's mindfulness, moderateness, and commonality towards the brand (Subhani and Osman, 2011). Previous studies have been conducting on the significance of apparel creation attributes for generation Z buyers. Identified the priorities of generations X, Y, and Z and compared each generation's buying behavior that no one has done so far, we have done to work on it. So we identify the buying decision attitude of ages and compare to each other that's results help the marketer make the strategy of sales products and produces products. Marketers have a problem understanding the buying behaviors of Generation X, Y, and Z. They can’t understand the priority of different ages of people; that study provides the marketer with the opportunity. An essential factor of decision-making for generations X, Y, and Z, should be studied comparatively. Which helps for an entrepreneur they can design the product according to the demand of generations. The study's primary purpose is to integrate the attitudes of generation X, Y, and Z towards apparel brands from the lookout of fashion Apparel, in-store promotions, reference Group, body Cathexis, and buying choice criteria. This purpose will help businesses get insights into their customers, identify a need in the market segment, and determine how it can best meet the needs of those products.

- To ascertain the comparative of fashion-apparel buying behaviors of generation X, Y, and Z.
- To rank the factors critical to buying decision of each generation.
- To juxtapose the ranking results of each generation.
- To formulate recommendations for marketers.

Identified the priorities of generations X, Y, and Z and compared each generation's buying behavior that no one has done so far, we have done to work on it. We identify buying decision attitude of each age separately. Then we compare the ranking to juxtaposition, which shows that that's what the most significant or least important statement is for each generation. It discovered that sentiment and hedonic worth, on the side of style involvement, sensory cues, and in-save promotion, respectively impact on the spot style-orientated impulse purchase. These findings assist fast-style stores to apprehend the impulse shopping for conduct of younger Vietnamese clients to efficaciously complex retailing-blend approach to reinforce the income and as a result, sustainably develop the business. The maximum essential issue of a successful in-keep presentation is for shops to apprehend their clients and their conduct in step with Terrazas (2006). Strategic presentations can then devise that assist to boom income, primarily via unplanned purchases with using consumers. One approach can be to pick out the commonality of products offered with the assistance of using list-consumers, which attractively shows complementary merchandise after those, not unusual place merchandise. Displaying the maximum famous merchandise bought with the aid of using your customers in the return of the shop may be any other approach - this forces the patron to stroll beyond and face with the assistance of using as many different objects first. It is likewise not unusual to place exercise to separate favorite things (strategic show). Bread and milk, for instance, will maximum probably be displayed at the two maximum contrary ends of the shop so that you can pressure the client beyond some merchandise, encouraging impulsive shopping in route to the opposite vital product (Terrazas, 2006). Shopping trolleys designed to deal with children require strategic trolley top presentations to trap the youngsters' interest due to the fact youngsters play a massive function in purchasing trends (Terrazas, 2006). Kolkata, Blackwell, and Engel (1970) figure source congress as follows. " When an interacting congress of man or woman or possibly a single individual impact the mindset or conduct of any other existent, that congress countries to exist a source congress for the inspirited existent. The institution serves as an assessment or normative agent for the particular. These social elements encompass small organizations, family members, friends, and purchaser social reputation or position. Each individual is speaking with others in small or large organizations. Reference organizations are immediately or indirectly influencing the shopping for conduct of the individuals. Aghajanian, S., & Ebrahimi, A. (2020). Giving to LaBat and DeLong, body cathexis is "the evaluative component of self-perception and is characterized as good and regrettable inclinations toward one's body" and is a "basic piece of self-perception and self-idea"(LaBat a Delong, 1990). A study concerning the connection between body cathexis and fulfillment with attire fit uncovered that to be sure; there is an encouraging connection between fulfillment with the physique and gratification with the attack of apparel. The present examination examines the relationship between completion with an onslaught of attire and style interest for teens. The apparel style adopts a central part in molding apparel industrialism. As ways of life modification, type in Pakistan is pleasant more extended, as in the Cowboy movie nations. Innovation, thoughts, and ways of life are moving simultaneously and rapidly. Organizations and products that offered unexciting and normal items for quite a long period have presently repeated their article. New winning styles, characters, and structures are being dispatched individually season by them.

Methodology

This comparative study uses positivism as a research philosophy with a deductive approach. It is a cross-sectional primary data-based study. The population under study is generation X, Y, and Z, whereas the phenomenon under study is their priorities while taking buying decisions as customers. The data was collected by surveying the customers from within generations X, Y, and Z. Sample size of the questioner consists of more than 384 (Krejice & Morgan, 1970) considered for this study (128 respondents from each generation). Data has collected through the Likert scaled questionnaire (Kaushal, 2013) applied the quota sampling technique according to customers' visitors at malls and then convenience sampling. Further, two shopping malls selected to hand-deliver questionnaires to the customers to collect data. RIDIT analysis will be used as a method of investigation. The authors considered an array of research methodologies that are commonly use in qualitative and quantitative to investigate this type of phenomena e.g. ((Niazi, Azim, & Ahmed, 2012; Basit, et al., 2019; Niazi, et al. 2019; Basit, et al., 2020; Qazi, et al., 2020; Abbass, et al., 2021; Ali, et al., 2021; Basit, et al., 2021; Qazi, et al., 2022; Basit, et al., 2023; Niazi, et al., 2023; Niazi, Qazi, Aziz, Basit, & Niazi, 2023; Niazi, Qazi, Butt, Niazi, & Basit, 2023; Niazi, Qazi, Sarwar, Niazi, & Basit, 2023; Niazi, Saleem, Basit, Iqbal, & Khan, 2023; Qazi, et al., 2023; Shaukat, et al., 2023; Tariq, et. Al., 2023).The present study has been conducted on the buying behavior of fashion apparel of different generations X, Y, and Z. It is quite difficult for businesses to address an audience of three different generations. To overcome this problem, we propose a study on the comparative of fashion-apparel buying behavior of generation X, Y, and Z. The Quantitative research approach is used to conduct the primary data. It is essential to decide the research type being performed whether to use preliminary data or secondary data. Research design answers the question of how to analyze the subject in a better way. In other words, it is a complete strategic plan of data collection and analysis. According to Saunders etc. (2012, p.170), research can be exploratory, exploratory, or descriptive. A comparison study wishes to look deeper into a specific subject to increase the understanding of the subject being studied. On the other hand, descriptive research wants to gain a clear picture of the studied subject, and it wants to be able to conclude a general pattern. Comparative study often aims at defining the buying behavior of generations to understand the subject being studied (Saunders et al., 2012). The current research describes the descriptive study in nature. This study has a descriptive nature to understand the relationship of variables present in the research instrument is composed of the closed-ended questions in the standardized structure that helps to view wider and comprehensive results of conclusions and ultimately giving its results in numerical form. Numerical data is used to check the association between variables. This study is quantitative as Quantitative research design uses typical tools and methods to generate authenticated and consistent data for research resolutions (De Vaus &de Vaus, 2001). The population in the current study are the generations X, Y, and Z that consist of males and females. Respondents are targeted Generations X 1965 to 1980 (Age between40-55), Generations Y 1981to1996 (Age between24-39), Generations Z 1997 to onwards who visited the shopping malls. Customers of fashion apparel, particularly those who visit shopping malls, local bazaars, are the unit of analysis for this study. We conduct the data from the consumer who visit shopping malls also local bazaars. The whole list of our target population is not defined, so multi-stage sampling technique. Generation-based proportional quota sampling has been used h here. Quota sampling was used according to the number of generations X, Y, and Z visited at shopping malls in Lahore. Ridit examination becomes the first proposed through I. Bross implement to look at vehicle accidents, cancer, schizophrenia, and numerous commercial enterprise control and conduct studies. RIDIT evaluation is" distribution-free" within the feel that it no longer expects the circulation of the populace beneath Neath look at. Suppose that there are m gadgets and n ordered classes indexed from the maximum desired to the least desired inside the scale, then RIDIT evaluation is going as follows.

1. Compute ridits for the reference facts set.

    (a) Choice a populace to function reference facts set. For a Likert scale review, the reference facts set maybe the whole replies of the study if the masses can't be without difficulty identified.

    (b) Compute frequency fj for every class of responses,

Where in j = 1, 2, 3 …, n

Calculate mid-factor gathered frequency Fj for every class of responses.

$$F_1 = \frac{1}{2} f_1$$

$$Fj = \frac{1}{2} f1 + \sum_{k=1}^{j-1} fk$$

Where j =2, 3…n

Compute Ridit value R for every class of responses with inside the

Reference statistics set.

$$RJ = \frac{Fj}{N}$$

Where j = 1, 2, 3, n.

N is the wide broad variety of reactions from the Likert scale examination of interest. By description, the anticipated cost of R for the orientation statistics set is usually 0.5.

2. Calculate Ridits and imply Ridits for assessment statistics sets. Note that an assessment statistics set is constituted of the frequencies of replies for every class of a Likert scale element. Since there are m Likert scale objects on this illustration, there may be m assessment statistics sets.

a) Calculate Ridit valuer r_{ij} for every cate object.

$$riJ = \frac{RJ\,\pi ij}{\pi i}$$

Where I = 1, 2, 3 …, m.

πij is the frequency of class j for the scale object, and πi is a brief shape for the outline of frequencies for measure object I throughout all classifications, i.e.

$$\pi_{i=} \textstyle\sum_{k=1}^{n} \pi ik$$

b) Calculate suggest ridit ρi for every Likert scale item.

$$\text{Pi}{=}\textstyle\sum_{k=1}^{n} rik$$

c) Calculate confidence inside verbal for ρi. When the dimensions of the reference information set could be very big relative to that of any evaluation information set, the 95% confidence interval language of any ρi is:

$$\rho i \pm \frac{1}{\sqrt{3\pi i}}$$

Sample Size of 384 generations (128 respondents from each generation) selected for collecting the data who visited the shopping malls of located in Lahore (Krejcie & Morgan (1970) Monkey survey, Confidence level 95%). If you need to symbolize the important thing traits of the populace pattern a proportional amount of every one of them. For example, in case you realize that the populace is 60 in step with cent male and forty in step with cent girl and also you want of one hundred in effort with cent general pattern size, you'll constantly pattern till you attain the one's numbers and then you'll stop. So, in case you have already got forty ladies for your survey, however now no longer the 60 men, you'll retain to pattern men, however even though actual ladies' respondents come along, you'll include patterning men, due to the fact you received it already "met the quota." The trouble is that you need to determine the specific capabilities on which the quota can be based. Is it going to be with the aid of using age, gender, religion, training, etc.? It is vital to have the technique to access the data collection. In this study, the structured questionnaire in printed form with five points Likert scale extending from "strongly disagree" to "strongly agree" as the data collection instrument. The questionnaire is very helpful in comparing the buying behavior of generations X, Y, and Z. Instrument reliability has been calculated. Since the Kruskal-Wallis value is significantly greater than x2(19-1), it can infer that the opinions about the measure items between the respondents are statistically altered somehow. Primary data collection for this study was conducted over three months in Lahore, the largest city in Pakistan. During these months, quantitative data were collected from women and men of different age groups, as shown in the descriptive statistics. Respondents were asked to fill the questionnaire to keep in mind the buying behavior of generations. Data has been ridit analysis, collected from customers who have visited shopping malls in Lahore.

Analysis

Table 1: Generation X Ridit for the reference data set

Statements X	Strongly Disagree(1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree(5)	Total
1	1	1	22	91	13	128
2	1	51	30	45	1	128
3	10	72	27	18	1	128
4	2	4	12	103	7	128
5	4	1	1	104	18	128
6	1	89	26	10	2	128
7	4	67	39	15	3	128
8	2	87	34	3	2	128
9	13	89	0	1	2	105
10	2	12	34	80	0	128
11	2	3	8	103	12	128
12	4	64	37	21	2	128
13	2	75	27	23	1	128
14	4	110	10	4	0	128
15	1	2	0	118	7	128
16	0	72	32	21	3	128
17	1	10	43	70	4	128
18	3	76	16	30	3	128
19	3	62	33	29	1	128
20	0	10	7	108	3	128
Fi	60	957	438	997	85	2537
Fi/2	30	478.5	219	498.5	42.5	
Fj	30	538	1254	1953.5	2494.5	
Rj	0.011	0.212	0.49	0.77	0.98	

Table 2: Generation Y Ridit for the reference data set

Statement(Y)	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1	7	98	16	6	1	128
2	7	76	35	8	2	128

3	11	54	29	32	2	128
4	5	52	37	29	5	128
5	33	79	9	4	3	128
6	9	42	23	50	4	128
7	3	52	27	32	14	128
8	2	50	38	32	6	128
9	3	32	28	28	5	96
10	2	29	33	25	7	96
11	5	67	38	12	6	128
12	4	57	32	28	7	128
13	11	65	28	21	3	128
14	1	38	35	46	8	128
15	7	72	25	21	3	128
16	3	72	29	17	7	128
17	10	91	19	7	1	128
18	5	83	13	20	7	128
19	9	52	32	34	1	128
20	5	52	32	34	5	128
Fi	142	1213	558	486	97	2496
Fi/2	71	606.5	279	243	48.5	
Fj	71	748.5	1634	2156	2447.5	
Rj	0.028	0.299	0.654	0.863	0.980	

Table 3: Generation Z Ridit for the reference data set

Statement Z	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
1	21	45	32	18	12	128
2	22	47	30	14	15	128
3	28	44	27	21	8	128
4	12	15	47	40	14	128
5	29	53	27	13	6	128
6	13	24	33	38	20	128
7	10	22	31	30	35	128
8	19	24	36	33	16	128
9	19	49	36	12	10	126
10	11	18	29	13	8	79
11	20	44	31	23	10	128
12	15	34	36	34	9	128
13	17	39	20	30	22	128
14	19	24	32	37	16	128
15	28	35	29	27	9	128
16	15	36	31	27	19	128
17	21	50	36	17	4	128
18	17	45	23	33	10	128
19	10	29	39	40	10	128
20	13	39	38	26	12	128
Fi	359	716	643	526	265	2509
Fi/2	179.5	358	321.5	263	132.5	
Fj	179.5	717	1396.5	1981	2376.5	

Rj	0.071	0.285	0.556	0.789	0.947

Table 4: Generation X Ridit for Comparison data sets

X	S.D	D	N	A	S.A	Pi
1	0.0003	0.0003	0.0086	0.0358	0.0051	0.0501
2	0.0003	0.0201	0.0118	0.0177	0.0003	0.0502
3	0.0039	0.0283	0.0106	0.0070	0.0003	0.0501
4	0.0007	0.0015	0.0047	0.0405	0.0027	0.0501
5	0.0015	0.0003	0.0003	0.0409	0.0070	0.05
6	0.0003	0.0350	0.0102	0.0039	0.0007	0.0501
7	0.0015	0.0264	0.0153	0.0059	0.0011	0.0502
8	0.0007	0.0342	0.0134	0.0011	0.0007	0.0501
9	0.0051	0.0350	0	0.0003	0.0007	0.0411
10	0.0007	0.0047	0.0134	0.0315	0	0.0503
11	0.0007	0.0011	0.0031	0.0405	0.0047	0.0501
12	0.0015	0.0252	0.0145	0.0082	0.0007	0.0501
13	0.0007	0.0295	0.0106	0.0090	0.0003	0.0501
14	0.0015	0.0433	0.0039	0.0015	0	0.0502
15	0.0003	0.0007	0	0.0465	0.0027	0.0502
16	0	0.0283	0.0126	0.0082	0.0011	0.0502
17	0.0003	0.0039	0.0169	0.0275	0.0015	0.0501
18	0.0011	0.0299	0.0063	0.0118	0.0011	0.0502
19	0.0011	0.0244	0.0130	0.0114	0.0003	0.0502
20	0	0.0039	0.0027	0.0425	0.0011	0.0502
			W=5918.223			

Table 5: Generation Y Ridit for Comparison data sets

Y	S.D	D	N	A	S.A	Pi
1	0.0004	0.0024	0.006	0.0392	0.0028	0.0508
2	0.0008	0.0032	0.014	0.0304	0.0028	0.0512
3	0.0008	0.0128	0.011	0.0216	0.0044	0.0506
4	0.0020	0.0116	0.014	0.0208	0.0020	0.0504
5	0.0012	0.0016	0.003	0.0316	0.0132	0.0506
6	0.0016	0.0200	0.009	0.0168	0.0036	0.051
7	0.0056	0.0128	0.010	0.0208	0.0012	0.0504
8	0.0024	0.0128	0.015	0.0200	0.0008	0.051
9	0.0020	0.0112	0.011	0.0128	0.0012	0.0382
10	0.0028	0.0100	0.013	0.0116	0.0008	0.0382
11	0.0024	0.0048	0.015	0.0268	0.0020	0.051
12	0.0028	0.0112	0.012	0.0228	0.0016	0.0504
13	0.0012	0.0084	0.011	0.0260	0.0044	0.051
14	0.0032	0.0184	0.014	0.0152	0.0004	0.0512
15	0.0012	0.0084	0.010	0.0288	0.0028	0.0512
16	0.0028	0.0068	0.011	0.0288	0.0012	0.0506
17	0.0004	0.0028	0.007	0.0364	0.0040	0.0506
18	0.0028	0.0080	0.005	0.0332	0.0020	0.051

19	0.0004	0.0136	0.012	0.0208	0.0036	0.0504
20	0.0020	0.0136	0.012	0.0208	0.0020	0.0504
W=6233.7024						

Table 6: RIDIT for comparison data sets (Z)

Z	S.D	D	N	A	S.A	Pi
1	0.0047	0.0071	0.0127	0.0179	0.0083	0.0507
2	0.0059	0.0055	0.0119	0.0187	0.0087	0.0507
3	0.0031	0.0083	0.0107	0.0175	0.0111	0.0507
4	0.0055	0.0159	0.0187	0.0059	0.0047	0.0507
5	0.0023	0.0051	0.0107	0.0211	0.0115	0.0507
6	0.0079	0.0151	0.0131	0.0095	0.0051	0.0507
7	0.0139	0.0119	0.0123	0.0087	0.0039	0.0507
8	0.0063	0.0131	0.0143	0.0095	0.0075	0.0507
9	0.0039	0.0047	0.0143	0.0195	0.0075	0.0499
10	0.0031	0.0051	0.0115	0.0071	0.0043	0.0311
11	0.0039	0.0091	0.0123	0.0175	0.0079	0.0507
12	0.0035	0.0135	0.0143	0.0135	0.0059	0.0507
13	0.0087	0.0119	0.0079	0.0155	0.0067	0.0507
14	0.0063	0.0147	0.0127	0.0095	0.0075	0.0507
15	0.0035	0.0107	0.0115	0.0139	0.0111	0.0507
16	0.0075	0.0107	0.0123	0.0143	0.0059	0.0507
17	0.0015	0.0067	0.0143	0.0199	0.0083	0.0507
18	0.0039	0.0131	0.0091	0.0179	0.0067	0.0507
19	0.0039	0.0159	0.0155	0.0115	0.0039	0.0507
20	0.0047	0.0103	0.0151	0.0155	0.0051	0.0507
W= 6228.0192						

Table 7: Ridit Value and Rank of Generation X

S. No	Statements	Ridit Value of X	Ridit ranking
1	I Purchased apparel when I want to treat myself to something special	0.0503	10
2	I Purchased apparel to keep up with the trends	0.0502	2
3	I Purchased apparel for the sake of variety in my collection of clothes	0.0502	7
4	I got for apparel shopping only during sales	0.0502	14
5	I enjoy looking for discounts when I purchase apparel	0.0502	15
6	Cost is never a barrier when I purchase apparel	0.0502	16
7	I Purchase apparel that seems similar to the ones worn by my favorite actor/actress in a movie	0.0502	18
8	I purchased a particular brand because I get apparel of my fitting in one go without any need for alteration	0.0502	19
9	Parents have a say in my purchase decision *If you are dependent on your parents then answer it.	0.0502	20
10	Spouse has a say in my purchase decision *If you have a spouse then answer it	0.0501	1
11	I am tempted to buy more clothes during the sales season	0.0501	3

12	I purchase clothes that are very loud in colors and design	0.0501	4
13	I prefer purchasing from malls because we have many brands to choose from.	0.0501	6
14	Once I like a. particular brand, I stick to it	0.0501	8
15	I buy only when I need clothes	0.0501	11
16	I am always ready to pay extra for the design of my choice despite a lower budget	0.0501	12
17	My color choice is always influenced by the prevailing season I.e. soft colors for summers and dark colors for winters	0.0501	13
18	I buy clothes only during festivals and important occasions	0.0501	17
19	I always want to buy apparel from the shopping mall	0.05	5
20	I intentionally visit the shopping mall to buy apparel	0.0411	9

Table 8: Ridit Value and Rank of Generation Y

S.No	Statements	Ridit Value of Y	Ridit Rank
1	I Purchased apparel when I want to treat myself to something special	0.0512	2
2	I Purchased apparel to keep up with the trends	0.0512	14
3	I Purchased apparel for the sake of variety in my collection of clothes	0.0512	15
4	I got for apparel shopping only during sales	0.051	6
5	I enjoy looking for discounts when I purchase apparel	0.051	8
6	Cost is never a barrier when I purchase apparel	0.051	11
7	I Purchase apparel that seems similar to the ones worn by my favorite actor/actress in a movie	0.051	13
8	I purchased a particular brand because I get apparel of my fitting in one go without any need for alteration	0.051	18
9	Parents have a say in my purchase decision *If you are dependent on your parents then answer it.	0.0508	1
10	Spouse has a say in my purchase decision *If you have a spouse then answer it	0.0506	3
11	I am tempted to buy more clothes during the sales season	0.0506	5
12	I purchase clothes that are very loud in colors and design	0.0506	16
13	I prefer purchasing from mails because we have many brands to choose from.	0.0506	17
14	Once I like a. particular brand, I stick to it	0.0504	4
15	I buy only when I need clothes	0.0504	7
16	I am always ready to pay extra for the design of my choice despite a lower budget	0.0504	12
17	My color choice is always influenced by the prevailing season I.e. soft colors for summers and dark colors for winters	0.0504	19
18	I buy clothes only during festivals and important occasions	0.0504	20
19	I always want to buy apparel from the shopping mall	0.0382	9
20	I intentionally visit the shopping mall to buy apparel	0.0382	10

Table 9: Ridit Value and Rank of generation Z

S.No	Statements	Ridit value of Z	Rank Value
1	I Purchased apparel when I want to treat myself to something special	0.0507	1

2	I Purchased apparel to keep up with the trends	0.0507	2
3	I Purchased apparel for the sake of variety in my collection of clothes	0.0507	3
4	I got for apparel shopping only during sales	0.0507	4
5	I enjoy looking for discounts when I purchase apparel	0.0507	5
6	Cost is never a barrier when I purchase apparel	0.0507	6
7	I Purchase apparel that seems similar to the ones worn by my favorite actor/actress in a movie	0.0507	7
8	I purchased a particular brand because I get apparel of my fitting in one go without any need for alteration	0.0507	8
9	Parents have a say in my purchase decision *If you are dependent on your parents then answer it.	0.0507	11
10	Spouse has a say in my purchase decision *If you have a spouse then answer it	0.0507	12
11	I am tempted to buy more clothes during the sales season	0.0507	13
12	I purchase clothes that are very loud in colors and design	0.0507	14
13	I prefer purchasing from mails because we have many brands to choose from.	0.0507	15
14	Once I like a. particular brand, I stick to it	0.0507	16
15	I buy only when I need clothes	0.0507	17
16	I am always ready to pay extra for the design of my choice despite a lower budget	0.0507	18
17	My color choice is always influenced by the prevailing season I.e. soft colors for summers and dark colors for winters	0.0507	19
18	I buy clothes only during festivals and important occasions	0.0507	20
19	I always want to buy apparel from the shopping mall	0.0499	9
20	I intentionally visit the shopping mall to buy apparel	0.0311	10

Table 10: Ridit Comparative Ranking

Sr. No	Statements	RIDIT Value X	RIDIT Rank	RIDIT Value Y	RIDIT Rank	RIDIT Value Z	RIDIT Rank
1	I Purchased apparel when I want to treat myself to something special	0.0503	10	0.0512	2	0.0507	1
2	I Purchased apparel to keep up with the trends	0.0502	2	0.0512	14	0.0507	2
3	I Purchased apparel for the sake of variety in my collection of clothes	0.0502	7	0.0512	15	0.0507	3
4	I got for apparel shopping only during sales	0.0502	14	0.051	6	0.0507	4
5	I enjoy looking for discounts when I purchase apparel	0.0502	15	0.051	8	0.0507	5
6	Cost is never a barrier when I purchase apparel	0.0502	16	0.051	11	0.0507	6
7	I Purchase apparel that seems similar to the ones worn by my favorite actor/actress in a movie	0.0502	18	0.051	13	0.0507	7
8	I purchased a particular brand because I get apparel of my fitting in one go without any need for alteration	0.0502	19	0.051	18	0.0507	8
9	Parents have a say in my purchase decision *If you are dependent on your parents then answer it.	0.0502	20	0.0508	1	0.0507	11
10	Spouse has a say in my purchase decision *If you have a spouse then answer it	0.0501	1	0.0506	3	0.0507	12
11	I am tempted to buy more clothes during the sales season	0.0501	3	0.0506	5	0.0507	13

12	I purchase clothes that are very loud in colors and design	0.0501	4	0.0506	16	0.0507	14
13	I prefer purchasing from mails because we have many brands to choose from.	0.0501	6	0.0506	17	0.0507	15
14	Once I like a. particular brand, I stick to it	0.0501	8	0.0504	4	0.0507	16
15	I buy only when I need clothes	0.0501	11	0.0504	7	0.0507	17
16	I am always ready to pay extra for the design of my choice despite a lower budget	0.0501	12	0.0504	12	0.0507	18
17	My color choice is always influenced by the prevailing season I.e. soft colors for summers and dark colors for winters	0.0501	13	0.0504	19	0.0507	19
18	I buy clothes only during festivals and important occasions	0.0501	17	0.0504	20	0.0507	20
19	I always want to buy apparel from the shopping mall	0.05	5	0.0382	9	0.0499	9
20	I intentionally visit the shopping mall to buy apparel	0.0411	9	0.0382	10	0.0311	10

Discussion and Concluding Remarks

This chapter has answered all the research questions of the thesis with a detailed discussion in the conclusion. At the end of this chapter, limitations of the thesis have been the footprint of future study. From the analysis of empirical findings, this study has enabled the research to comparison of buying conduct of generations X, Y, and Z. This study discusses the buying performance of generation X, Y, and Z towards apparel regarding fashion apparel, in-store promotion, reference group and body cathexis that arbitrate the generation X, Y, and Z behavior. This research indicates that style is the most significant characteristic of clothing to generation Z when making buying decisions, with fashionable brands' existence the significant attribute. In-store promotion, reference group, and body cathexis also play significant roles to buy apparel. The priorities of generations X, Y, and Z are different from each other. It is quite difficult for businesses to address an audience of three different generations. To overcome this problem, we propose a study on the comparative buying behavior of generations X, Y, and Z. In this study, we analyze the attitudes of generation X, Y, and Z near clothing makes from the lookout of fashion apparel, in-store promotions, reference group, body cathexis, and purchasing choice criteria. The vision gained from this study might help the apparel producers to understand generational selection criteria when designing apparel so they can plan their product mix more professionally and plan store promotional posts and approaches better. Every study has a few findings and conclusions. Similarly, the studies additionally have a few obstacles as well. Apart from the contribution and significance of these studies, this look has a few obstacles, like nearly every study. This study is approximately the client's information, generation X, Y, and Z shopping for decision-making regarding fashion apparel. But it additionally has a few obstacles. The look at is restricted theoretically. In this look, the writer most superficial research at the client's manner of shopping for conduct. The author didn't do paintings with a sensible instance, i.e., a case look it. The different predicament of this look at isn't any empirical studies. The research outcomes include a comparative analysis of Generation X, Y, and Z, which will help the business and marketer prioritize which generation must be targeted according to their offered product. This study will help marketers to execute and design better marketing strategies. The study further purposes of getting to know customers by identifying their needs and the market segment in which they fall. It further determines how businesses can best meet those needs with their products or services. This examination presents marketing procedures that appeal to various generational partners and how retailers should manage structured client connections. The results gained from the study will be helpful to create a better understanding for apparel manufacturers to select the criteria for the targeted generation and plan the merchandise mix accordingly. Further, it will give businesses insight into planning the promotional messages for the stores by keeping their market in view and designing the strategies efficiently. This paper affords a few sizeable experiential results of cohorts and their purchasing conduct. Advertising has long depended on the usage of marketplace division. While beginning age has been a beneficial manner to create clusters, it defines segments; however, it now no longer assists in apprehending section motivations. However, environmental occasions skilled for the duration of one's coming of age create values that continue to be tremendously unchanged at some stage in one's life. Such values offer a not unusual place bond for the ones in that age organization or generational cohort. Segmenting by "coming of age" age affords a more affluent segmentation technique than beginning age. This observation compares sizeable cohorts: Generation X, Generation Y, and Generation Z regarding purchasing conduct and buying involvement for apparel. For the one forms of products, Generation X fee the retail enjoys and in-shop provider better than Generation Y and Z. For Generation X, the acquisition method being off evolved with a store the client trusts, who advises selecting the right product, whilst for Generation Y, the acquisition method begins off evolved with selecting a product. This observation affords implications for retail techniques attracted to one-of-a-kind generational cohorts and considers how outlets ought to cope with constructing consumer relationships. It should acknowledge that certain limitations in this research enabled the direction of future recommendations. This study has been conducted in the fashion apparels sector of Pakistan. So, the first and foremost direction for the future researcher is to conduct in different sectors and diverse cultural contexts within the country or other countries. Further, this research must be conduct in diverse dimensions to validate the framework for deepening researchers' understanding. This study contributes to the emerging concepts of different buying behavior of generations that have not been studied systematically despite its significance. So, it proposes that in the future the research would be needed to more attributes.

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What are Core Issues of Women Cotton Pluckers in Pakistan? How are They Woven?

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Abstract:

Aim of the study is to uncover the issues of women cotton pluckers. Further to explicate and structure the relationships among the issues using real time field data. The data has been collected from team leaders of cotton pluckers from district Mianwali. Overall design of research entails on thorough discourse of literature, field survey for data collection and analysis. Interpretive Structural Modeling (ISM) is used to uncover, explicate and structure the issue (Warfield, 1973). Matriced' Impacts Croise's Multiplication Appliquée a UN Classement (MICMAC) has been used for classification of the issues (Godet, 1986). Total fourteen core issues have been detected. ISM prioritizes and imposes structure on the elements i.e. important and critical factors are filtered out and descent to bottom of the model whereas, relatively least preferred factors occupy top of the model. Middle of the model is comprised on mediators. MICMAC investigates driving and dependence power of issues. It classifies the factors into Autonomous (i.e. issues having weak dependence and driving power are known as autonomous that can be eliminated from model, Dependent (i.e. the issues having strong dependence and weak driving power are known as dependent that are highly dependent on others), Linkage (i.e. the issues having strong dependence and strong driving power are known as linking that are unstable, small change in them affects others and have feedback effect on themselves as well) and Independent **i.e.** the issues having strong driving and weak dependence power are known as independent (Godet, 1986) that are critical for the system. The study will have theoretical implications since it will propose a framework for future research. It will have practical implications for cotton pluckers by way of clearer understanding of the issue in order to articulate their case to represent it to the concerned quarters. It will also have practical implications for farmers who want to understand issues on ground and for policy makers to mitigate the issues. The study will have contribution by way of ISM model, driving-dependence diagram and identification of key factor.

Being recognizant of the fact that half of the population of Pakistan consists of women. 70% of that too living in rural areas. Apart from being housewives it admitted fact that women work in agricultural fields, they work with men or for men by way of harvesting and sowing of different crops viz wheat, rice, sugarcane, cotton, pulses, fruits, and/or vegetables. They are bound by circumstances to work in the fields. There is multitude of issues incidental to their working in fields. They face these problems with countenance. Cotton plucking is one of the prime activities in Pakistani agriculture (Akhtar et al. 2022). Cotton plucking is a seasonal important activity which is performed mostly by the young females in form of teams. Knowing the background of Punjab where the land is divided into small chunks of ownership, this activity has inherited problem of continuous changing of employer. Being the field work it is only a daytime activity. There are number of problems faced by female cotton pluckers' incidental to their work. There is lot of research surpassed of agriculture activities in general but one can hardly find any study on the issues faced by female cotton pluckers. Cotton is the major crop of Pakistan particularly that of Punjab on the basis of which Pakistan has developed a huge textile sector but the issues of the major stake holders of cotton remain under research area. Therefore, objectives of this study are to identify the issues of female cotton pluckers, rank them in the order of priority to deal with and structure a model in order to understand the inter-woven relations among the factors and to classify them on the continuum of their deriving and dependence. In order to achieve this objective, the study has used classical ISM with MICMAC in order to address the issue. Remaining part of this article consists of studies on cotton plucking, methods, result and discussions and concluding remarks.

Contemporary Literature

Research in agriculture sciences is really fertile which covers wide variety of areas viz horticulture, floriculture, crop diseases, fertilizers, mechanization of farms, etc. but there is limited literature on social issues like working of women in fields. Since this study is concerned about the social issue of cotton pluckers. Therefore, the germane studies on cotton plucking in Pakistan accounted for herein after. Many afflicted women felt they were too weak to continue with this work schedule, and the findings' economic ramifications are examined. The results of Fisher's exact probability test indicated that between cotton picking sessions, the likelihood of infected women engaging in persona1 care activities was much lower. This finding raises the possibility that the women were overtired or had a lowered sense of their personal wellbeing. There is a discussion on how these findings may affect Gezira Province public health strategy (Sharma et al. 2012). According to research, female laborers' heart rates were higher when they were picking cotton using the pick-bag method. The pick bag method had the highest rated perceived exertion. The physiological and ergonomic strain of picking cotton was comparable to that of the conventional pick-bag and apron methods. It has been determined that wearing a cotton picking apron reduces the physiological cost of labor when picking cotton. According to the study's findings, cotton picking should be improved upon in order to reduce drudgery (Datta et al. 2018).

Agro-based industries such as agricultural and livestock production, horticulture, post-harvest operations, agro/social forestry, fisheries, and other related sectors heavily depend on rural women. It has been noted that women labor four hours a day on home chores and eight to nine hours a day on agriculture. In some agricultural enterprises, female workers are thought to be superior to male workers. The current review takes into account current trends on the many roles that women play in the agriculture industry (Rani, M., Metha, & Rani, K. 2019). Even concentrated attempts to address the challenges women encounter in carrying out one or more of their responsibilities, however, may fall short of anticipated outcomes if the problems that underlie each function and their connections are not properly understood. Thus, the study makes an effort to examine a number of facets of the connection between women and food security in South Asia, draw attention to pressing problems, and identify new concerns in the area (Ramachandran, 2006). Reducing family financial strain was cited as the primary motivation for cotton picking (30%), which was followed by improved child education (21%), increased access to resources and food (23%), and both. The majority of respondents (97.33%) stated that cash payments were made for picking cotton, and the majority of respondents (83.70%) stated that their earnings were received on schedule. Just 10% of respondents (8.70%) were aware that cotton picking poses a health risk owing to pesticides, and only 10% of women wore protective clothing. After harvesting cotton, the majority of respondents (76%) wash their garments, while nearly all of them wash their hands. The female cotton workers experienced health issues, mental disturbances (9.90%), fatigue (8.00%), and exhaustion (54.5%). Over 58% of women stated that they participate in household decision-making concerning groceries and food, and 30.6% of women reported being active in decisions involving children's education. It is recommended that female cotton pickers receive education regarding the significance of adopting safety precautions both during and after cotton picking, with regard to the treatment of diseases and long-term health expenses (Datta et al. 2018).

According to a research, an increasing number of families are selecting distinct and autonomous methods of financial distribution, even though sharing financial resources and responsibilities is still the most prevalent pattern. Because domestic labor and family care are not valued as part of the common provision, the rise in fragmented money management systems could result in new gender disparities (Waerness and Knudsen, 2009). According to the study's findings, 61% of cotton pickers from cotton households reported experiencing one or more pesticide-related health effects during picking season, compared to 66% of cotton pickers from non-Bt cotton households. Skin issues, headaches, coughs, fevers, eye irritation, and insomnia were among the health effects; however, the percentage of these health effects was significantly higher in households that did not use Bt cotton. For households with non-Bt cotton and Bt cotton, the health costs associated with pesticide exposure in cotton were US$ 5.74 and 2.91 per season, respectively. Preventive measures, education, and picking in Bt cotton fields were all strongly correlated with lower health care costs (Ngah, Yasmin, and Shar, 2013). The training raised health awareness among women who diligently observed signs and symptoms of mild to severe organophosphate and pyrethroid-related headache (28.6%), skin irritation (14.3%), excessive sweating (7.1%), hand irritation (42.85%), and exhaustion (14.3%) in relation to acute pesticide poisoning during exposure to sprayed fields. The perception of pesticides and their risks among rural women has shown signs of improvement as a result of WOS initiatives. The majority of women were persuaded that there was less need for pesticides in pest control, supported natural and cultural alternatives, and were prepared to influence their male family members when it came to making pest management decisions (Ngah, Yasmin, and Shar, 2013). A hybrid income distribution structure, wherein some money is shared and some is kept separate, was most frequently chosen, despite the fact that deeper relationship investments were linked to increased support for sharing all income. The primary earner was projected to keep possession of a larger portion of the household income when respondents indicated that they valued a certain level of financial autonomy. When women were shown as the principal earners as opposed to males, the preferred amount of withholding come from a significantly bigger magnitude (Sharma et al. 2012). In the current research, authors have suggested machine vision-based techniques for cotton boll plucking systems. In order to make a computer-controlled choice to power and electromechanical system, we have studied the maturity level of the cotton ball using both shape-based characteristics and fractal features. This will ultimately result in the provision of an expert system to determine the cotton boll's maturity. This choice will inform the design of an electromechanical system that will carry out the cotton ball picking operation (Bhattacharya, et al 2013). Education and some cotton picking experience were favorably connected with the application of protective measures. The use of personal protective measures was found to be positively correlated with advanced age and high picking experience, but negatively correlated with illiteracy, traditional treatment, and seeking medical attention in the event of illness, according to binary logit regression analysis. The results provide fresh insight into the issue of women cotton pickers in Pakistan feeling comfortable in their own skin. In order to lower the health risk and expense associated with pesticides for female workers, it is crucial to increase formal knowledge and create training programs for personal protective measures (Mishra et al. 2023). From the above representation of literature following issues 12 issues (Table 1) have been uncovered

Table 1: List of Issues Faced by Cotton Pluckers

Sr.	Issue	Legends
1	Transportation	γ_1
2	Seasonality	γ_2
3	Meager Remuneration	γ_3
4	Issue of Marketing	γ_4
5	Food and Water Supply at Work Place	γ_5
6	Non-availability Washrooms	γ_6
7	Negative Effect on House Keeping	γ_7
8	Remote Agri-fields	γ_8
9	Insecurity	γ_9
10	Only Day Time Job	γ_{10}
11	Outside Work	γ_{11}
12	Day to day Changing Employer	γ_{12}

Design and Method

Study follows qualitative research philosophy and inductive approach. Design of the study comprises of review of contemporary studies, survey for data collection and analyses of the data. Population consists of cotton pluckers of Pakistan. Sample design is purposive sampling by way of experts' opinion (supervisory level female team leaders in this case). Sample size is fourteen homogenous experts. Data has been collected from experts on a matrix type questionnaire commensurate to the ISM technique. Method of data collection was face-to-face interview. Three to four sessions were held with experts in view of piloting. In order to combat the sampling design of the study a panel of experts consisting of supervisory level female team leaders of cotton pluckers has been constituted. To whom the background of the study and questionnaire of the study was briefed local language, rapport was developed through local agriculturalists and the interview was conducted for eliciting the data. The panel was constituted from rural area of district Mianwali i.e. one of renowned area for cotton growing. During the interview the *i-j* part of the questionnaire was completed using classical symbols used for ISM methodology.

Applying ISM: ISM has been applied stepwise as devised by Attri et al. (2013); Thakkar et al. (2008); Warfield (1973); Shaukat et al. (2023); Niazi et al. (2023); Niazi, I. A. K et al, (2023); Basit et al. (2023) and Qazi et al, (2023).

Step 1: Identification issues
Step 2: Building Structural Self-Interaction Matrix (SSIM)
Step 3: Creating contextual relationships among elements
Step 4: Removing transitivity from contextual relations
Step 5: Partitioning
Step 6: Building model

Step 1: Identification issues: The issues have already been identified by way of review of contemporary literature Table 1.

Step 2: Building Structural Self-Interaction Matrix (SSIM): SSIM has been constructed using following rules:

Establishing the contextual relationship between factors

Rules for questionnaire/SSIM:	*V:* $i \rightarrow j$	*A:* $i \leftarrow j$	*X:* $i \leftrightarrow j$	*O:* $i \nleftrightarrow j$
Rules for reachability matrix:				
for *i-j* entry	1	0	1	0
for *j-i entry*	0	1	1	0

Table 2: Self-Interaction Matrix

Sr.	**Issue**	**Legends**	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}	γ_{12}
1	Transportation	γ_1		A	O	O	X	O	V	A	O	O	V	O
2	Seasonality	γ_2			V	V	X	X	V	X	O	X	V	V
3	Meager Remuneration	γ_3				O	X	O	O	A	A	A	A	A
4	Issue of Marketing	γ_4					O	O	O	V	O	V	X	X
5	Food and Water Supply at Work Place	γ_5						O	O	V	O	V	V	X
6	Non-availability Washrooms	γ_6							O	X	O	V	X	O
7	Negative Effect on House Keeping	γ_7								X	O	X	X	O
8	Remote Agri-fields	γ_8									X	X	O	V
9	Insecurity	γ_9										X	X	X
10	Only Day Time Job	γ_{10}											X	X
11	Outside Work	γ_{11}												X
12	Day to day Changing Employer	γ_{12}												

Step 3: Creating contextual relationships among elements: Initial reachability has been established using rules aforementioned.

Table 3: Initial Reachability

	γ_1	γ_2	γ_3	γ_4	γ_5	γ_6	γ_7	γ_8	γ_9	γ_{10}	γ_{11}	γ_{12}
γ_1	1	0	0	0	1	0	1	0	0	0	1	0
γ_2	1	1	1	1	1	1	1	1	0	1	1	1
γ_3	0	0	1	0	1	0	0	0	0	0	0	0
γ_4	0	0	0	1	0	0	0	1	0	1	1	1
γ_5	1	1	1	0	1	0	0	1	0	1	1	1
γ_6	0	1	0	0	0	1	0	1	0	1	1	0
γ_7	0	0	0	0	0	0	1	1	0	1	1	0
γ_8	1	1	1	0	0	1	1	1	1	1	0	1
γ_9	0	0	1	0	0	0	0	1	1	1	1	1
γ_{10}	0	1	1	0	0	0	1	1	1	1	1	1
γ_{11}	0	0	1	1	0	1	1	0	1	1	1	1
γ_{12}	0	0	1	1	1	0	0	0	1	1	1	1

Step 4: Removing transitivity from contextual relations: Transitivity has been removed from the contextual relations as established in initial reachability matrix using classical rules of removing transitivity. Transitive matrix (Final Reachability Matrix) is Table 4.

Table 4: Final Initial Reachability

	γ1	**γ2**	**γ3**	**γ4**	**γ5**	**γ6**	**γ7**	**γ8**	**γ9**	**γ10**	**γ11**	**γ12**	**Driving**
γ_1	1	1*	1*	1*	1	1*	1	1*	1*	1*	1	1*	12
γ_2	1	1	1	1	1	1	1	1	1*	1	1	1	12
γ_3	1*	1*	1	0	1	0	0	1*	0	1*	1*	1*	8
γ_4	1*	1*	1*	1	1*	1*	1*	1	1*	1	1	1	12
γ_5	1	1	1	1*	1	1*	1*	1	1*	1	1	1	12
γ_6	1*	1	1*	1*	1*	1	1*	1	1*	1	1	1*	12
γ_7	1*	1*	1*	1*	0	1*	1	1	1*	1	1	1*	11
γ_8	1	1	1	1*	1*	1	1	1	1	1	1*	1	12
γ_9	1*	1*	1	1*	1*	1*	1*	1	1	1	1	1	12
γ_{10}	1*	1	1	1*	1*	1*	1	1	1	1	1	1	12
γ_{11}	1*	1*	1	1	1*	1	1	1*	1	1	1	1	12
γ_{12}	1*	1*	1	1	1	1*	1*	1*	1	1	1	1	12
Dependence	12	12	12	11	11	11	11	12	11	12	12	12	139

Step 5: Partitioning: Final reachability matrix has been partitioned using iteration method (i.e. applying elementary concepts of set theory to develop hierarchies from binary matrices). Summary results of iteration given as Table 5.

Table 5: Summary Results of Iterations

Issue	Reachability Set	Antecedent Set	Intersection Set	Level
1	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	*I*
2	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	*I*
3	1,2,3,5,8,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,5,8,10,11,12	*I*
4	1,2,3,4,5,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	*II*
5	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,8,9,10,11,12	1,2,3,4,5,6,8,9,10,11,12	*III*
6	1,2,3,4,5,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	*II*
7	1,2,3,4,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	1,2,4,6,7,8,9,10,11,12	*II*
8	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	*I*
9	1,2,3,4,5,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	1,2,4,5,6,7,8,9,10,11,12	*II*
10	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	*I*
11	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	*I*
12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	1,2,3,4,5,6,7,8,9,10,11,12	*I*

Step 6: Building model: ISM model is developed as a result of iterations. If reachability matrix is arranged in conical form model appears on diagonals of matrix. That model has been presented into directed graph as Figure 1.

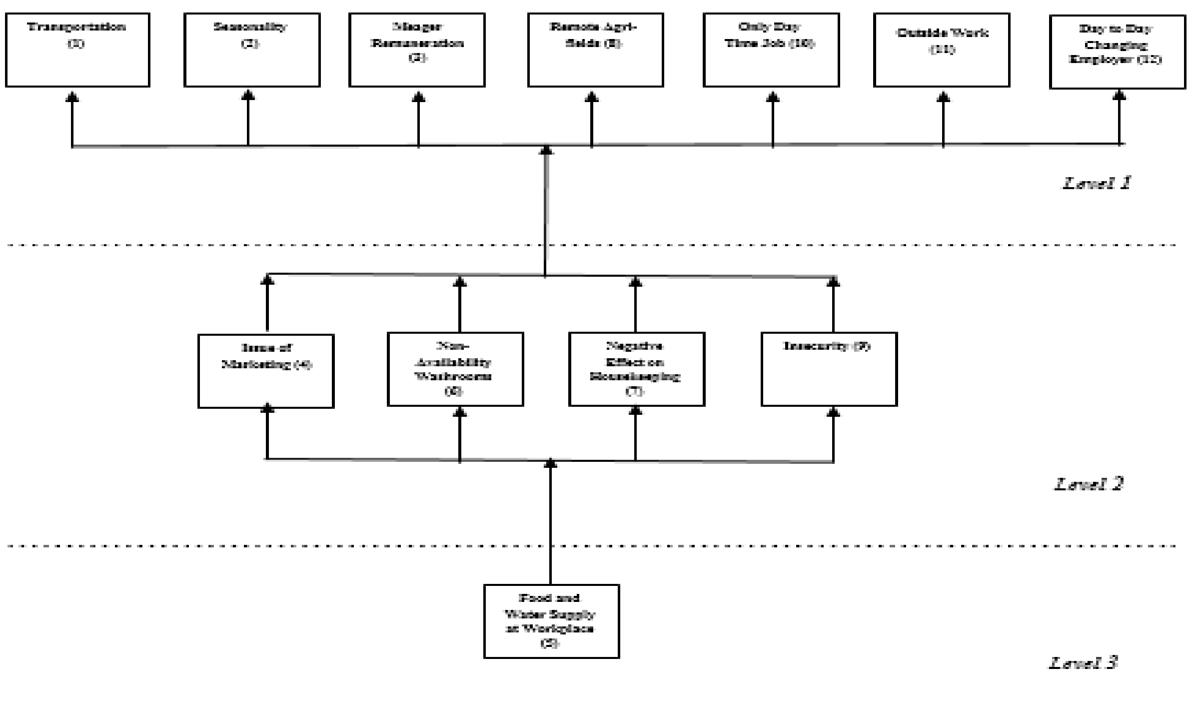


Figure 2: ISM Model

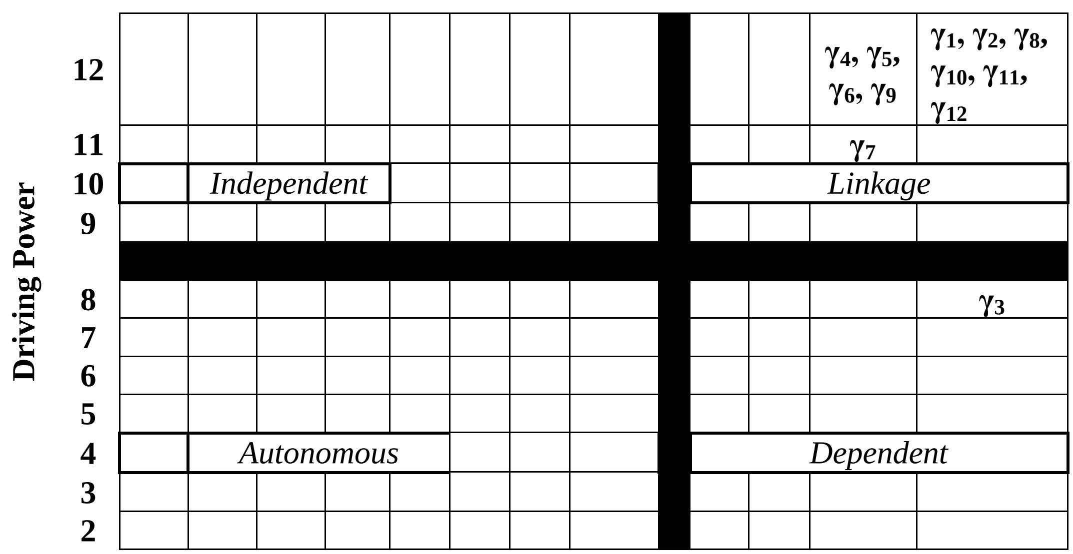
ISM model has three levels, bottom of model (Level III) is occupied by *"Food and Water Supply at Work Place"* (i.e. γ_5) and it is the most critical issue at workplace of cotton pluckers. There are four factors at Level II whereas remaining 7 factors fall on top level of the model hence are

Applying MICMAC: Purpose of MICMAC is to analyze driving and dependence power of factors and to classify the factors into four clusters and point out key factors. Summary of driving and dependence power of factors is given as Table

Table 6: Driving & Dependence Power

Sr.	Issue	Legend	Driving	Dependence
1	Transportation	γ_1	12	12
2	Seasonality	γ_2	12	12
3	Meager Remuneration	γ_3	8	12
4	Issue of Marketing	γ_4	12	11
5	Food and Water Supply at Work Place	γ_5	12	11
6	Non-availability Washrooms	γ_6	12	11
7	Negative Effect on House Keeping	γ_7	11	11
8	Remote Agri-fields	γ_8	12	12
9	Insecurity	γ_9	12	11
10	Only Day Time Job	γ_{10}	12	12
11	Outside Work	γ_{11}	12	12
12	Day to day Changing Employer	γ_{12}	12	12

The factors have been plotted in form of MICMAC diagram (Figure 2) using elementary concepts of Boolean algebra as suggested in (Godet, 1986). The Scale centric sub-dividing line has been drawn in order to make the clusters.



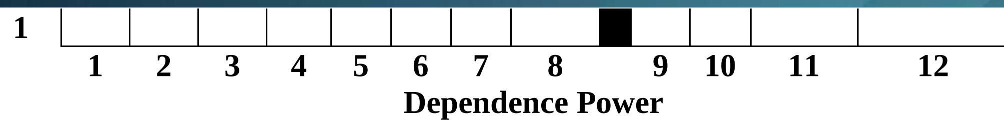


Figure 2: MICMAC Diagram

Independent Cluster: The issues having high driving power but weak dependence power fall in this cluster. In present study no factor categorically fall in this cluster. However, all issues have high driving power but at the same time high dependence as well. The issues having driving power need immediate and extra care.

Dependent Cluster: The issues having weak driving and strong dependence power are dependent factors. These factors highly depend on others. In present study only $\boldsymbol{\gamma_3}$ **(**i.e. Meager Remuneration) fall in this cluster.

Linkage Cluster: The issues having high driving and high dependence power fall in this clusters all except $\boldsymbol{\gamma_3}$ **(**i.e. Meager Remuneration) fall in this cluster. The issues that fall in this cluster are vibrant, agile and unbalanced. Any action on them affects other factors as well. That action also has feedback effect on themselves. The system that have more of its variables in this cluster is in its infancy and the regulators are struggling to make some sense. Therefore, this is also a case of struggling to make some sense.

Autonomous Cluster: It consists of the factors that have weak driving and weak dependence power. These factors are separated from the system, they have fewer but stronger links with other factors and they don't have much impact on system. Absence of these factors is construed that all factors are important and participate in the system to make some sense. In present study there is no such autonomous factor.

Results and Discussion

Purpose of the study is to account for the issues related rural women cotton pluckers. It is an important topic because majority of the women population work in agricultural fields and cotton fields are one of the major crops growing fields. Women working in these fields contribute a lot towards economy in directly but direct on the cost of their health, safety and that too for meager remuneration against long working hours. The issues have been sorted out from review of contemporary literature, regarding data have been collected from the supervisors of female cotton puckers from field. ISM and MICMAC has been applied structure the issue. Results of literature show that there are total 12 critical issues faced by women cotton pluckers, result of ISM show that "*Food and Water Supply at Work Place"* (i.e. γ_5) is the critical issue whereas results of MICMAC show that *"Meager Remuneration" (i.e.* γ_3) is the key issue. Summary of detailed results is presented in Table 7.

Table 7: Summary of Results

Result of Literature Review Ratified by Experts		Results of MICMAC Analysis				ISM Results	Comments
Legend	**Barrier**	**Driving**	**Dependence**	**Effectiveness**	**Cluster**	**Level**	
γ_1	Transportation	12	12	***0***	***Linkage***	***I***	
γ_2	Seasonality	12	12	0	Linkage	I	
γ_3	Meager Remuneration	8	12	-4	Dependent	I	Key factor
γ_4	Issue of Marketing	12	11	1	***Linkage***	II	
γ_5	Food and Water Supply at Work Place	12	11	1	***Linkage***	III	Key Factor
γ_6	Non-availability Washrooms	12	11	1	***Linkage***	II	
γ_7	Negative Effect on House Keeping	11	11	0	***Linkage***	II	
γ_8	Remote Agri-fields	12	12	0	***Linkage***	I	
γ_9	Insecurity	12	11	1	***Linkage***	II	
γ_{10}	Only Day Time Job	12	12	0	***Linkage***	I	
γ_{11}	Outside Work	12	12	0	***Linkage***	I	
γ_{12}	Day to day Changing Employer	12	12	0	***Linkage***	I	

This study is different from its rivals on many counts viz respondents, methodology, scope, results and contributions. It has unique set of respondents, classical and fit mathematical modeling methodology that provides valuable insights to stakeholders, the results of the methodology that has been supplemented by another structural technique. The results are different more logical than rival studies. The findings are also generalizable because women cotton pluckers face almost similar type of problems in general.

Concluding Remarks

Purpose of is to uncover the issues of women cotton pluckers and to explicate and structure relationships among issues using real time field data. Data is collected from team leaders of cotton pluckers from district Mianwali. Design of research involves discourse of literature, field survey and analyses. ISM is used to uncover, expound and structure the issue. MICMAC has been used for classification of the issues. Results of literature show that there are total 12 critical issues faced by women cotton pluckers, result of ISM show that "*Food and Water Supply at Work Place"* (i.e. γ_5) is the critical issue whereas results of MICMAC show that *"Meager Remuneration" (i.e.* γ_3) is the key issue. No factor categorically fall in independent cluster, only $\boldsymbol{\gamma_3}$ **(**i.e. Meager Remuneration) fall in dependent cluster, all except $\boldsymbol{\gamma_3}$ fall in linkage cluster and there is no such factor in autonomous cluster. The study has contributed ISM model, power-dependence digram, insights on inter-relationships of factors and framework for statistical research towards body of knowledge. It have practical implications for cotton pluckers by way of clearer understanding the issues in order to articulate their case to represent it to the concerned quarters. It also have practical implications for farmers who want to understand issues on ground and for policy makers to mitigate the issues. There are some limitations of study as well. Firstly, it is qualitative study

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Role of Credit Documentation in Performance of Banks: A Theoretical Research Study

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Abstract:

Lending (credits) is the main business and recovery is the core issue of banks. The documentation of credit transaction is very important to effect credit processing of loan and its timely recovery. This is a theoretical research study based on a critical review of relevant literature to establish the role of documentation of credits in performance of banks. The research design of the study uses elementary concepts of graph theory and comprises of mapping of issue. Issue has formally been identified, described and visualized through digraph. Findings of the study revealed that the documentation of credit transactions plays pivotal role in financial performance of banks. This a valuable study that gives insights of the issue to bankers and regulators. The research could not be envisaged quantitatively hence its findings have limited scope. It is recommended that theoretical findings should be statistically tested in future studies.

Background

Performance of banks is normally measured by conventional financial ratios (i.e. profitability, liquidity, efficiency, solvency ratios and other related ones). Performance may also be measured by duration gap and dollar gap between interest sensitive asset and interest sensitive liability (Rose 2005, Gup and Kolari 2005). All the transactions of the banks are necessarily sufficiently documented. Purpose of the documentation is to create evidence of every action in transaction (Niazi, et al., 2023; Abbass et al., 2021). Concept of documentation is taken from Islam (Al-Quran). Documentation of the credit transaction should be such that in case of need it should be enforceable at law. In fact, bank deals in documents. Gauge of checking the bank performance is the value of Owner's Equity. Performance of the bank is function of interest sensitive assets and interest sensitive liabilities of the bank (Rose 2005, Gup and Kolari 2005). There are following three kinds of the banks:

1- Conventional Commercial Banks
2- Islamic Commercial Banks
3- Investment Banks.

In this study, we focus the commercial banks (the term commercial bank includes the Islamic banks). The commercial banks lend money in shape of short, medium and long term loans on interest, whereas, Islamic bank invest their money in shape of Ijara, Musharaka, Morabaha, Equity Finance, Salam, etc. But the fact remains that these transactions emanate credit (Niazi, et al., 2023; Abbass et al., 2021). If as we probe the resources of the banks, we find that the bank has only three means to finance assets and these means are deposits, owner's equity and reinvestment of profits. The equity as a proportion of the assets and deposits is only a fraction thereof. The deposits are main source of funding in banks. The deposits with no special instructions give the bank immense power to banks play with the funds. It is also established that major source of income of the banks is loans (Niazi, et al., 2023; Abbass et al., 2021). As the banks work on margins (i.e. difference between interest revenue and interest expense). Hence recovery of every rupee of a loan is of utmost importance. One struck up loan can eat up profits of many loans. The credits which are:

- poorly documented, and/or
- not properly documented, and/or
- non-documented, and/or
- insufficiently documented, and/or
- fraudulently documented, and/or
- fictitiously documented

not only put the banks into problem but also give tough time to the economy of the country. Out of the transactions of the bank, transactions of the credit affect the performance of the bank at the most. As the credits, in proportion, are the major assets and resultantly the major source of income, hence, major contributory towards performance thereof (Niazi, et al., 2023; Abbass et al., 2021). The transaction of credit is translated into the figures to speak for the bank. Now we can realize that the transactions of credit, if not, properly documented what they will speak.

Literature Review

Borrowers are *"ultimate head"* of bank (Santikian 2009; Hitchins, et al. 2002). It has been identified that although almost every year's loans and advances of selected commercial banks have been increased from previous years, the growth rate of loan and advances is not satisfactory (Tanbir & Kashfia 2009). Measurement of the relationship aspect in the banking sector is essential due to the sensitivity assets and liabilities (Afzal, Aslam & Imran 2009). In general, it is rejected that Sharia offers inferior investment performance compare to unsecured portfolios (Husein 2009). Application of Sharia advises better documentation (Husein 2009). There is nominal research on the relationship of credit documentation with performance of banks (Niazi, et al., 2023; Abbass et al., 2021). Active research is available on different aspects of banks but this aspect is unfortunately not sufficiently explored. And because of its importance we are take initiative to study this particular aspect (Condosta, 2012).

Types of Documents: In banks there are three types of documents (House, & Street, 2002; Barry, Baker, & Sanint, 1981; Bhattacharya, 2013)

- general banking documents,
- credit related documents, and
- foreign exchange related documents.

Our focus is only on role of credit documents in performance of banks. There are categories of documents in credit as well (Dolan, 2007). Following are four categories of credit related documents (Liem, et al., 2022):

- customer identity documents (Dias, 2016),
- credit approval documents (Berger, et al. 2011),
- credit transaction documents (Dutta, & Dhar, 2021), and
- collaterals security documents (Tagne, et al. 2023)

All the four are important (Oberle, 2023; Qazi, et al., 2020; Niazi, et al., 2019; Basit, et al. 2020). When a bank evaluates a customer, its evaluation is of two aspects of the customer, one is capacity of the customer viz-a-viz amount of the loan and the other is willingness of the customer to repay the loan ((Demirel, et al. 2013; Qazi, et al., 2020; Niazi, et al., 2019; Basit, et al. 2020). The first is quantities so judged in figures and the second is qualitative so is judged subjectively. Before entering into any transaction with any person bank is supposed to be very clear about following:

1. Entity (i.e. what is the entity of client individual, company, partnership or anything else?).
2. Assets (i.e. what is/are the asset(s) to be financed?).
3. Security (i.e. what are the securities in exact offered by the client to secure the loans?).
4. Business (i.e. what are the means of the client to repay the loan and survive in business?).

First category of documentation pertains to the identity of the customer and necessarily means to verify actual existence of customer through valid documents (Niazi, et al., 2023; Abbass et al., 2021). Second is approval related and include formal application of credit by the client, letter of tentative offer and acceptance, memorandum of approval of the credit by competent authority, and letter of sanction etc. the internal documentation of banks (Qazi, et al., 2020; Niazi, et al., 2019; Basit, et al. 2020). Third includes transaction documents (i.e. financing agreement, demand promissory note\trust receipt and/or personal guarantees etc.). Transaction documents are the documents which actually bind the customer and record facts and figures in contractual form. These documents can be invoked in the court of law to force the customer to behave. The lacunas in these documents simply mean temptation for the customer to default. If the transaction documentation is proper then bank is safe as for as its establishment of claim is concerned. Forth is the collateral security documents (Qazi, et al., 2020; Niazi, et al., 2019; Basit, et al. 2020). Collateral security can also be of many types. Common types of securities are mortgage of property, pledge of stocks, charge on assets, hypothecation of stocks, lien on deposits, and/or guarantees etc. These documents provide the bank right to recover the dues even through courts of law. In court of law or on any other forum the documents establish the right of the bank ((Moro, et al. 2020; Niazi, et al., 2023; Abbass et al., 2021). We hereby give a graphical model for identifying the role of the credit documentation in the banks. This model may also ensure the recovery of the banks if implemented in true latter and spirit.

Methodology

This is a qualitative research study using interpretivism as research philosophy and induction as research approach. Overall design of research is review of literature, graphical modeling using free hand drawing for presenting the arguments and statements. There is wide range methodologies for modeling e.g. used by Niazi, Qazi, Butt, Niazi, I. A. K., & Basit 2023 and Qazi, et al., 2023. ISM and MICMC are very common modeling methodologies viz: Niazi, Saleem, Basit, Iqbal & Khan 2023; Niazi, Qazi, Aziz, Basit, & Niazi, I. A. K. 2023. But this study used elementary concepts of geometry and direct graphs from discrete mathematics. Direct graphs from discrete mathematics are in fact basis for structural modeling methodologies (Niazi, Qazi, Sarwar, Niazi, I. A. K., & Basit, 2023). The conceptual model is drawn using open source Corel Draw software. The arguments are built in form of arrows, lines, shapes and the arrangements on environment of conceptual model instead of notation based mathematical equations. This form of modelling is more understandable by the audience i.e. an array stakeholders at large.

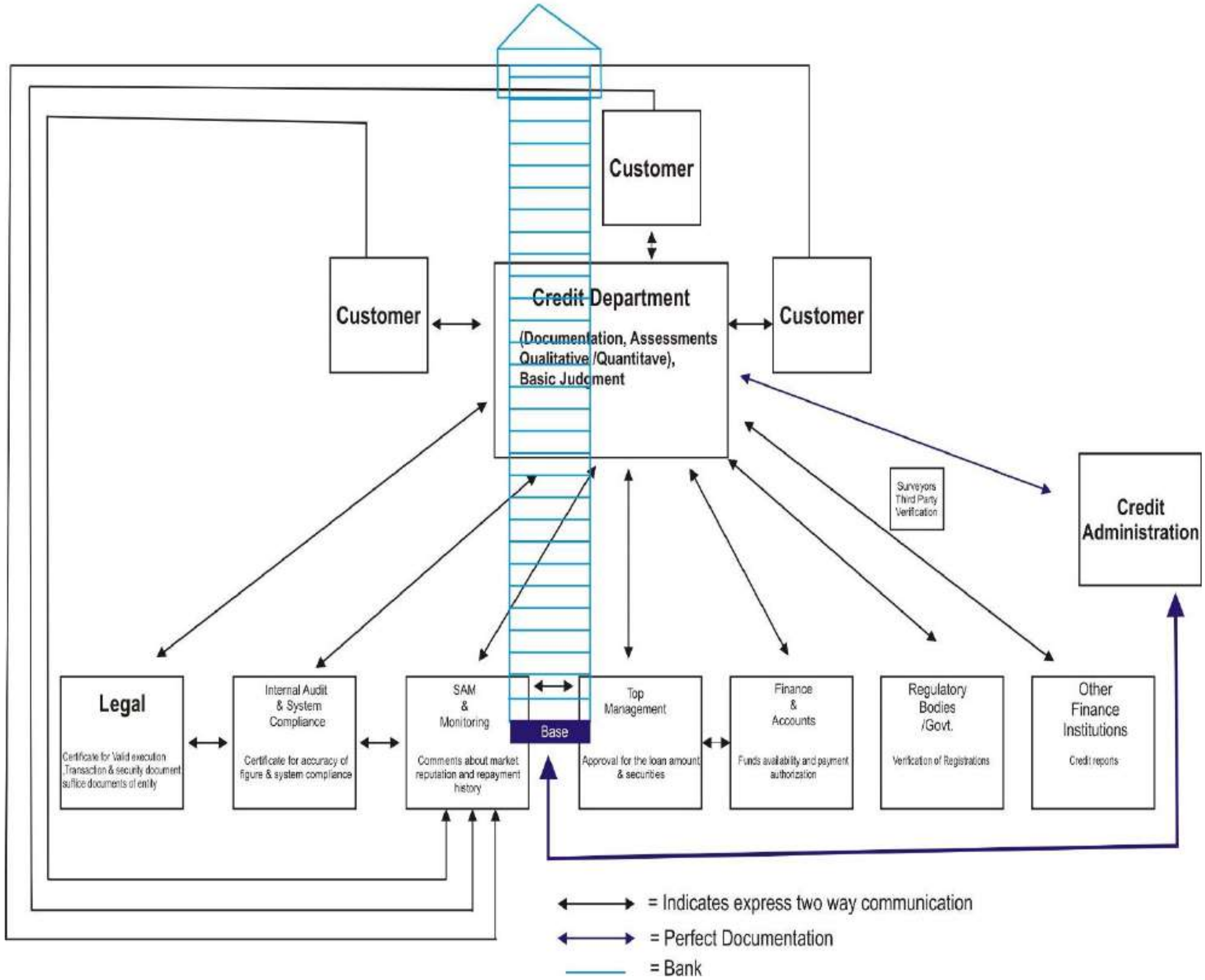

Figure 1: Model indicating the role of Credit Documentation

If we look at the model in the light of the literature review, we find a natural flow of transactions department wise. The transactions initiate from marketing by credit department and applications for credit are also registered in credit department. It effects the approval and gets the transactions documented in collaboration with legal, internal audit, SAM & monitoring, finance & accounts departments and the top management inter alia others. After perfect and sufficient valid documentation, credit department consigns the same to credit administration for safe custody and record. It is necessary to get the documentation in consultation of all concerned departments. All necessary verifications and valuations must be made before hand. Management approvals must be in place before disbursements. Properly documented transactions are secure and create evidence at every step. There is wide range of methodological choices viz used by Tariq, et al., 2023; Niazi, et al., 2023; Basit, et al., 2023 and Shaukat, et al., 2023. In above given model black arrows indicate express two way communication, dark blue shows proper documentation and its role, whereas, sky blue lines portray the bank. It is clear from the model that base of the bank is on credit documentation. In fact better the documentation stronger the bank will be. Strong bank means strong in terms of performance. Future studies are expected to use modern and novel model building methods as used in Qazi, et al., 2022; Javaid, et al., 2022; Ali, et al., 2021 and Naeem, et al., 2021.

Concluding Remarks

In this study it is established that the documentation of credit plays key role in performance of the banks. On top of it the model advanced by us in this study is a practicable model for effective documentation of credit in the banks. This model will help the banks to bind the customers for repayment of loans properly hence will ensure capital plus revenue recoveries. Resultantly whole performance of the banks (both financial and non financial) will be improved. It will serve as a tool for performance management in banks.

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Optimizing the Beneficiations of Credit Information for Banks

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Abstract:

This paper evaluates the operations of credit information in the context of banking system of Pakistan. The asymmetries of information, regarding potential borrowers, are enormous problem for banks. There are formal and informal information systems adopted by banks in different countries. Apart from informal credit information systems, e-CIB (a formal system) is prevalent in Pakistan since 1991. We have analyzed the operating systems of e-CIB & developed data nets to optimize the benefications of credit information for Pakistani banks. The study indicates problems of e-CIB operations at the stage of initiation and benefications. Primary solution suggested is linking e-CIB with financial reporting of banks (i.e. linking with books of accounts) and alternate solution is to introduce sustainable reforms that should increase costs and reduce the benefits that banks and employees derive from ignoring e-CIB.

Background of the Study and Contemporary Literature

Financial systems of the countries, majorly, consists of banking and it plays the role of a catalyst in the economic development (Qazi, et al., 2020; Berger & Udell, 1994). Banking is generically split into two halves. First half is asset side of a bank and second half is liability side. The asset side consists of credits (loans), whereas, liability side consists of deposits. Banks work on small premiums (i.e. difference between interest paid on deposits and revenue earned on credits) (Tran, et al. 2022). Therefore, it is considered a leveraged business. It is important to avert the risk of likelihood (Faruqi 2005; Niazi, et al., 2023; Hamada, 2018). There are many factors to be considered at the time of credit sanction. The risks primarily pertain to willingness and capacity the borrower to repay (Elshahat, Parhizgari, & Hong, 2012; Liem, et al., 2022). The banks while sanctioning of a credit, necessitate different type of information to determine the repayment behavior, repayment capacity, entity, and purpose of loan, nature of business, the assets to be financed, cash flows profitability, liquidity, efficiency and leverage of potential borrowers (Ali, 2022; Tran, et al. 2022). The information may be self-reporting (i.e information submitted by the client) or may be independent verification by banks (Büyükkarabacak & Valev, 2012; Hahm, & Lee, 2011). Credit information from other financial institution or from central database is considered to be the most dependable information, whereas, the self-reported information is considered to be the most percept percept biased. Central database of credit information is reliable source of independent verification about potential borrowers (Niazi, et al., 2019; Ferretti, 2007). Central credit information system is also prevailing in Pakistan since 1991 under the supervision of State Bank of Pakistan. The system is known as e-CIB systems. Out study is concerned with the operations of CIB. CIB is abbreviation of Credit Information Bureau, State Bank of Pakistan whereas e stands for electronic submission therefore (Zhao, Sai, & Ren, 2023; Kusi, & Opoku-Mensah, 2018; Scannella, 2015). The role of Credit Information Bureau is integral to credit risk management and promotion of sound credit culture in financial system. The existence of well-functioning Credit Information Bureau promotes prudence and professionalism among financial institution. It promotes the adoption of best business practices and making informed and responsible landing decision (SBP 2005; Ali, 2022; Abbass et al., 2021; Fosu, et al., 2020; Elshahat, Parhizgari, & Hong, 2012). In the best interest of the banks, SBP collects the data of all the borrowers and disseminate the information to member financial institutions as and when needed by them. SBP has developed a national data base in which all lending institutions are required to electronically upload the permanent and variable data of all their borrowers periodically (i.e. on last day of every month). They are connected with SBP, central data base and upload the soft copy of their borrowers' information in SBP's system (Basit, et al. 2020; Zhao, Sai, & Ren, 2023; Berger & Udell, 1994). It is mandatory operation for all financial institutions. SBP issues a unique code to every borrower and consolidate the data submitted by different institutions and prepares a consolidated position of each borrower on every month end (Ferretti, 2006; Büyükkarabacak & Valev, 2012; Ferretti, 2006). Borrower wise consolidated report is available to member institutions on a click. Like submission of information, retrieval of CIB and consideration of CIB information during credit decision making is also mandatory for financial institutions. There are predefined fields for submission and retrieval of information to be compatible to the central data base. Banks submit collective information of their respective borrowers periodically as permanent data (known as CIB-I), and variable data (known as CIB – II), whereas, retrieve individual borrowers' information as and when required. Information is submitted format and retrieved on a standardized format. We, for the purpose of this study, consider the CIB submission, CIB, consolidation and CIB retrieval as one particular credit operation of a financial system. Generically operation under study is given in Figure -1

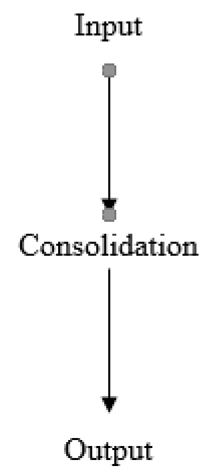

Figure 1: Generic Flow of CIB Operations

In Figure 1, Input means submission of CIB-1 and CIB –II by member institutions, consolidation means consolidation of borrowers information collected, and Output means retrieval of individuals' CIB report by any of member financial institutions as and when needed. In order to fully comprehend details of CIB, we developed a diagram as Figure 2. It is also appropriate to develop a legend to internalize the Figure 2, therefore, the legend is presented as Table 1 as an epilogue to Figure 2 for convenience readers.

Methodology and Approach

The study follows interpretivism as research philosophy and induction as research approach. It is a qualitative study that uses elementary concepts of discrete mathematics in general and network diagrams in combination with directed graph theory in particular. Although this issues can be approached inn many different ways viz that of Tariq, et al., 2023; Niazi, et al., 2023; Basit, et al., 2023; Shaukat, et al., 2023; Niazi, Saleem, Basit, Iqbal & Khan 2023; Niazi, Qazi, Aziz, Basit, & Niazi, I. A. K. 2023; Niazi, Qazi, Butt, Niazi, I. A. K., & Basit 2023; Qazi, et al.,2023; Niazi, Qazi, Sarwar, Niazi, I. A. K., & Basit, 2023; (Qazi, et al., 2022; Javaid, et al., 2022; Ali, et al., 2021; Naeem, et al., 2021) but the authors opted this unique method keeping view the nature of study. It is very rarely studied topic but very important in nature. Very type of the problem invites special type of a research design that addresses the core issue appropriately. Approach of the study follows the methodology known as "breaking the complex whole into parts to have a closer view".

Table 1: Legend for CIB

Legend: Input Bank (IB), Consolidation Bank (CB), Beneficiary Bank (BB)

Description	Symbols
Data Set I	
Permanent Data at IB	X
Name of Bank	X1
Bank of Code	X2
Address of Bank	X3
Borrower code	X4
Cutoff Date	X5
Borrower Name	X6
Borrower Address	X7
Forms of Business	**X8**
Individual	X8.1,
Partnership	X8.2
Partner NIC	X8.2.2
Partner Address	X8.2.3
Partner Share	X8.2.4
Company	**X8.3**
Director's Name	X8.3.1
Director's NIC	X8.3.2
Director's Address	X 8.3.3
Director's Other liabilities	X8.3.4
Director's Shareholding	X8.3.5
Loan Period	X9
Loan Date	X10
Rate of Interest	X11
Sector of Business	X12

Data Set II	
Variable Data at IB	Y
Amount Sanctioned	Y1
Amount of loan	Y2
Installment	Y3
Frequency of Installments	Y4
Installments Due	Y5
Installment not yet due total	**Y6**
Principle yet not due	Y6.1
Interest	Y6.2
Other	Y6.3
Installment Overdue	**Y7**
Principle	Y7.1,
Interest	Y7.2
Other	Y7.3
Over dues	**Y8,**
7 Days	**Y8.1**
Principle	Y8.1.1
Interest	Y8.1.2
Other	Y8.1.1
15 Days	**Y8.2**
Principle	Y8.2.1
Interest	Y8.2.2
Other	Y8.2.3
30 Days	**Y8.3**
Principle	Y8.3.1
Interest	Y8.3.2
Other	Y8.3.3
3 Month	**Y8.4**
Principle	Y8.4.1
Interest	Y8.4.2
Others	Y8.4.3
6 Months	**Y8.5**
Principle	Y8.5.1
Interest	Y8.5.2
Others	Y8.5.3
1 Year	**Y8.6**
Principle	Y8.6.1
Interest	Y8.6.2
Others	Y8.6.3
2 Years	**Y8.7**
Principle	Y8.7.1
Interest	Y8.7.2
Others	Y8.7.3
3Years and above	**Y8.8**
Principle	Y8.8.1
Interest	Y8.8.2
Other	Y8.8.3
Write off=Y9	Y9

There are two different symbols used for CIB-I (permanent data) and CIB II, (variable data). Symbol X represents CIB-I and Y represent CIB-II. There are three different intuitions involved in CIB operations. First institution in Input Bank (IB), second Consolidation Bank (CB) and third is Beneficiary Bank (BB). The data at input level is represented by X and Y, whereas, there is transference of X and Y from input to consolidation and from consolidation to output. The fields of the CIB-I and CIB-II have been represented by placing numerals with the basic symbols (XY) as given in legend above. The level has been differenced by putting point in numerals like 1.1, 1.1.1 etc. Figure 2 below represents the flow of date in the CIB operation.

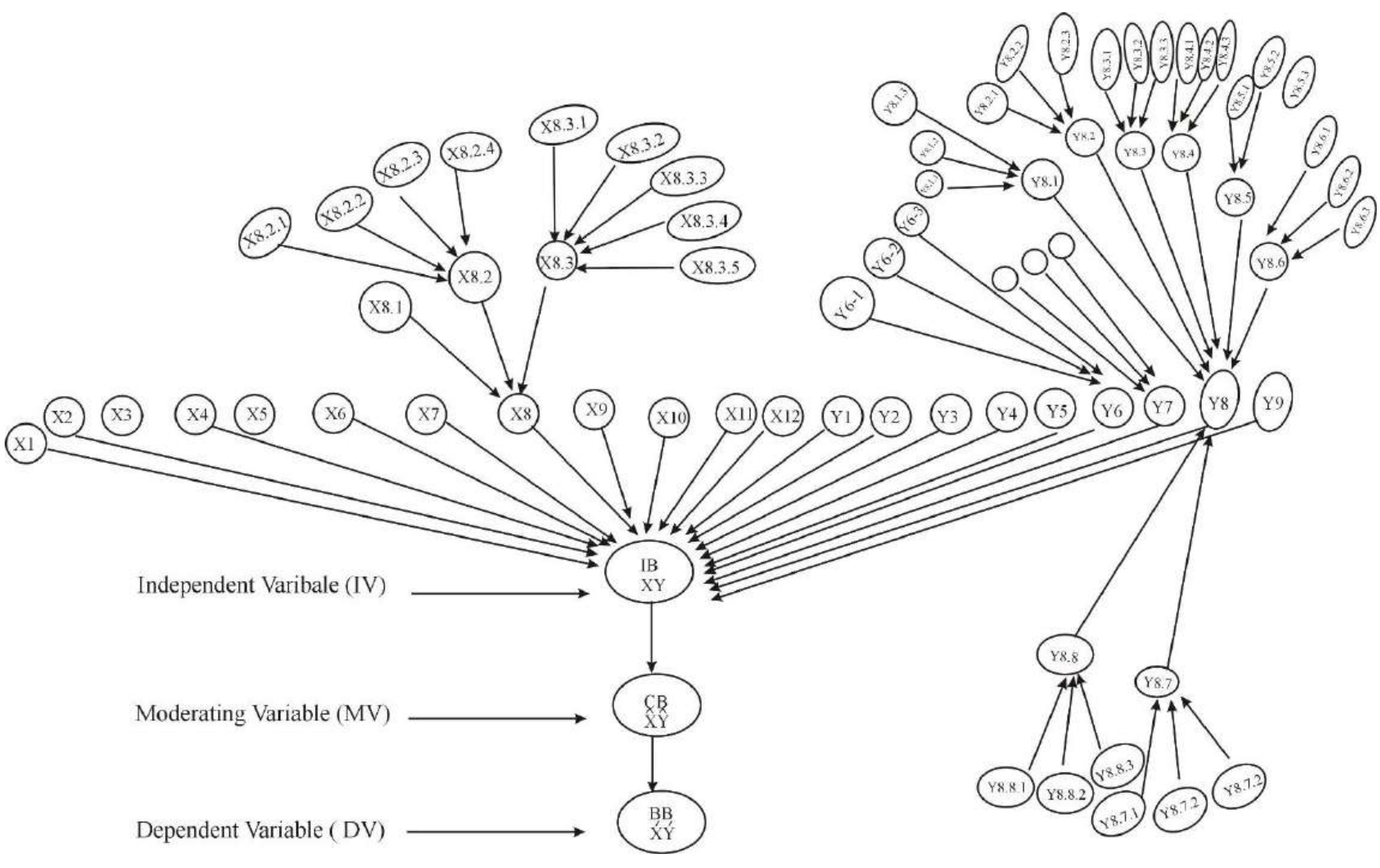

Figure 2 Flow of Date in CIB Operation

The generic flow of data in operation of CIB is presented in Figure 2. There are four levels and sub levels of operation. IB (XY) are first level in operations representing Independent Variable

(IV) CB (X hat & Y hat) is second level that represent Moderating Variable (MV) and BB (X prime & Y prime) represent Department Variable (DV). X varies from X1 to X12 and various from Y1 to Y9. The X and Y from I B to CB and CB to BB change only the behavior and the variable remain as same.

Positional hierarchy of variables: Positional hierarchy of variables is summarized as below in. Table 2. The Table is self-explanatory. The patron of categorization has adopted from Emory (1980).

Table 2. Positional Hierarchy of Variables

Sr.	Symbols	Banks	Function	Position of variables
1	IC	Input Bank	Input	Independent Variable (IV)
2	CB	Consolidating Bank	Consolidation	Moderating Variable (MV)
3	BB	Beneficiary Bank	Retrieval	Development Variable (DV)

The Table 2 is a self explanatory table regarding the hierarchy of variables. All the avvrivation used in Table 2 has already been introduced. Relationship between the variables has been presented in following data nets as given in Figure 3.

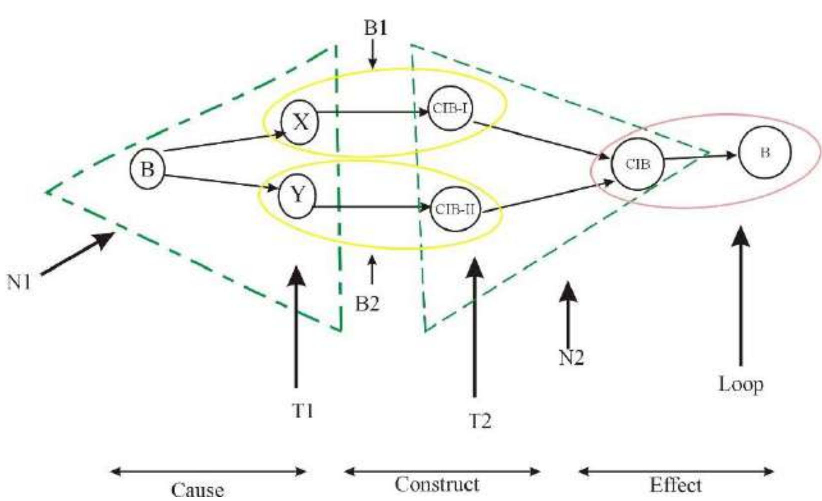

Figure 3: Data net of CIB Operations

The data net presented in Figure 3 consists of B (Bank), X (permanent data of borrowers), Y (variable data of borrowers), CIB-I (transformed X) CIB–II (transformed Y), CIB (consolidated XY), B prime (loop), B1 is bridge number one, B2 is bridge number 2, N1 is network number one, N2 , is network number two, T1 is transference one (simple transference), T2 is transference two (true transference). The data nets depict the cause, construct and effect relationship. We can prepare triangular layers of the components of data nets. Figure 4 present the triangle.

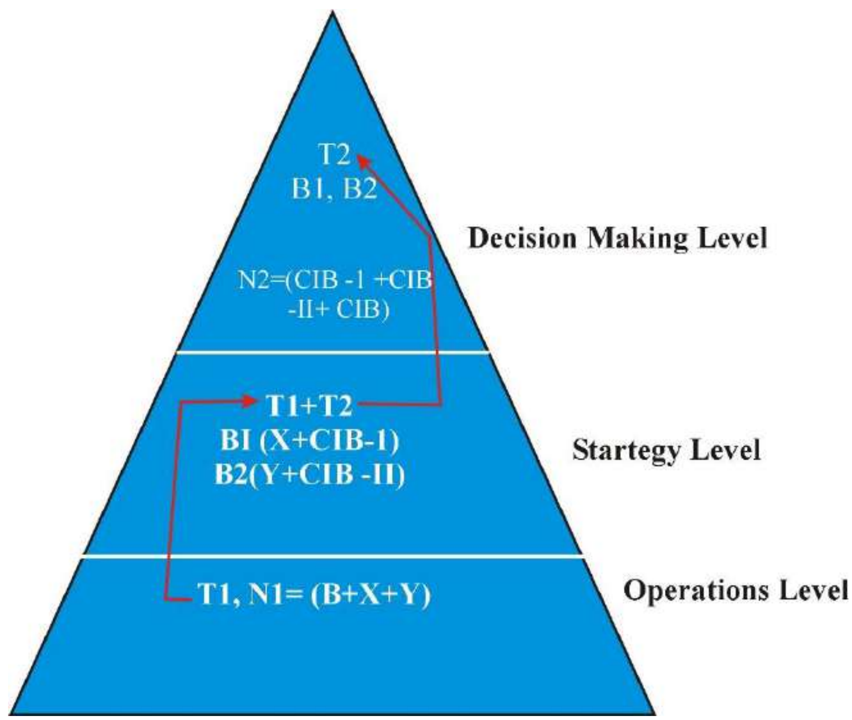

Figure 3.Triangular Presentation of Data Nets of CIB Operations

There are three levels indicated in triangle (i.e. Decision Making Level, Strategy Level, and Operation Level). All the variables of data nets (Figure 3) have been placed at relevant levels to developed better conceptual understanding. The arrows in Figure indicate the presence of tempuras. These tempuras have vertical linkages that give true subjectivity. The analysis of variables of the operation reveals that following problems are inherently prevalent in the operation.

Data submission:

- Incorrect Data
- Insufficient Data
- Out Dated Data
- Inappropriate Data

Data Consolidation

- Time Lag

Data Retrieval

- Not taking credit report
- Post factor credit report
- Misinterpretation of credit report
- Inherited Anomalies of data

As solution of these problems we suggest primarily to change the data flow as given in data nets in Figure 4 below.

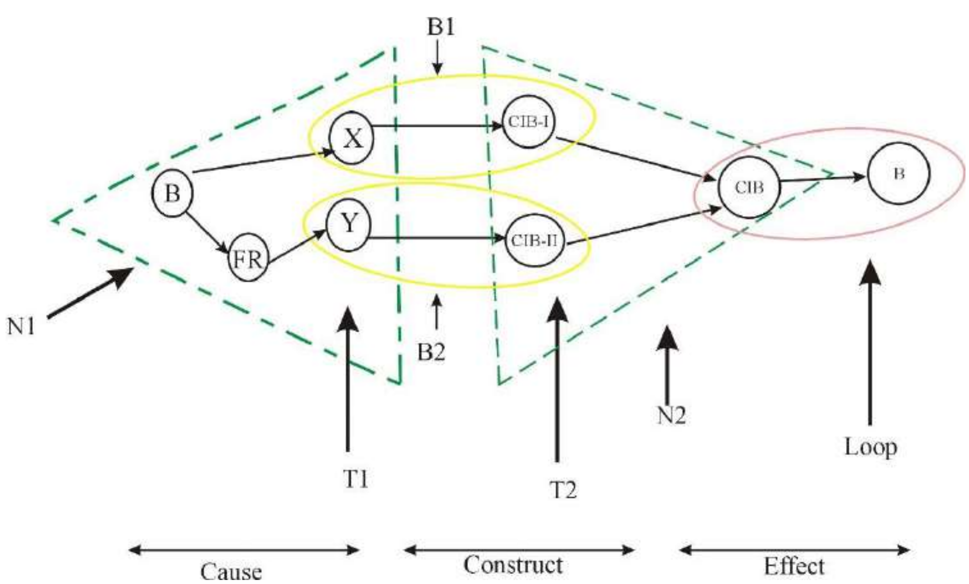

Figure 4: Data net of CIB Operations

The flow of data presented in Figure 2 of data nets is good picture CIB but cannot address the problems stated above due to precept precept bias of institutions at input and retrieval level. It also does not address the time lag of consolidation therefore we suggested a change to link the variable data through Financial Reporting (FR) of Banks (i.e. with books of accounts) (Hamada, 2018; Kusi, & Opoku-Mensah, 2018; Ferretti, 2007; Fosu, et al., 2020; Hahm, & Lee, 2011). This change can overcome all the above said problems (Scannella, 2015; Liem, et al., 2022).

Conclusion:

Credit information is a sin qua non for credit decision making. CIB fulfils the needs of credit information for credit decision making but there are certain problems prevailing in contemporary system that vitiate the benefications of CIB. We find a room for improvement in CIB operations as suggested in Figure 4. The problems can be solved primarily by linking CIB to Financial Reporting (FR) of a bank. Alternatively the problems can be solved through sustainable reforms that should increase the cost and reduce the benefit that banks and individual can derive from anomalies of CIB.

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Examining The Impact of Workplace Ostracism On Turnover Intentions

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Abstract:

The purpose of this study is to examine the relationship of workplace ostracism and turnover intention in public and private banking sectors, National Bank and Allied Bank limited, of Pakistan. The study finds out the mediation of organizational cynicism between workplace ostracism and turnover intention. This study finds out the moderation of social capital bonding between workplace ostracism and organizational cynicism. Maximum 382 questionnaires were distributed to public and private banking sectors and out of which 350 sample sizes were effective and run for analysis. To determine the sampling size of 382 questionnaires, item response theory of (Krejcie & Morgan, 1970) was used. Cross sectional study is used to assess this study. Also this study uses conservation of resource theory to find out the relationship between workplace ostracism and turnover intention. Positive and significant relationship was found between workplace ostracism and turnover intention. Partial Mediation of organizational cynicism was also found to be significant and positive between workplace ostracism and turnover intention. Social capital bonding also moderates the relationship of workplace ostracism and organizational cynicism such that if social capital bonding is low, the relationship between workplace ostracism and organizational cynicism would be strengthened and if social capital bonding is high. The relationship between workplace ostracism and organizational cynicism would be weakened.

INTRODUCTION

There were numerous companies with unpleasant and exclusive work environments. This atmosphere has been designated as ostracism since its birth as a concept alongside the invention of instruments (Ferris et al., 2008). In the last ten years, a lot of research has been done on it, and it has gotten more attention because it has caused some very serious problems. Workplace Ostracism grasped all the attention when Ferris and his colleagues introduced this concept. Workplace ostracism is the exclusion, rejection, or ignoring of an individual (or group) by another individual (or group) that restricts one's ability to establish or maintain positive interpersonal relationships, work-related success, or a positive reputation at work (Robinson, O'Reilly, & Wang, 2013). When a person contributes his time, energy, and emotions to an organization, he expects some sense of belonging, acceptance, and gratitude in return. In the event that employees are ignored, excluded, or rejected, however, they begin to mistrust their company and their faith in the organization decreases significantly. This rage and irritability result in organizational cynicism (Durrah, Chaudhary, & Gharib, 2019). This study hypothesizes that employees will develop cynicism as a result of the ostracizing actions of others in the workplace. Turnover intention is how a person acts when he wants to leave his job. It is actually the first step toward leaving the organization for good (Aydogdu & Asikgil, 2011). In particular, this study is about building social capital with co-workers, which means making connections with people you work with. Andresen, Goldmann, & Volodina (2018) said that bonding social capital can be a resource that gives people access to other resources, like people they can learn from, while also meeting their need to feel like they belong. The Conservation of Resource Theory explains why people need to get and keep both new and old resources that they need to live. Hobfoll et al., (2018) Say that people need social bonds because they are social animals. In this study, the conservation of resources theory is used because when an employee feels like he is being picked on at work, he gets stressed out and uses up more of his psychological resources. Literature exists on workplace ostracism and its negative outcomes, such as job dissatisfaction, deviant behavior, job performance, and job stress. A lot of researches on various aspects of ostracism have recently been done. The relationship between workplace ostracism and organizational cynicism in order to understand how perceived organizational politics (POPs) are related to counterproductive work behaviors (CWBs) have been tested by (Ugwu et al., 2023). How emotional labor mediates the relationship between job burnout and workplace ostracism among current nursing personnel in healthcare facilities during the COVID-19 epidemic has been examined by (Yang & Tan, 2023). However, there has been little research exploring the relationship between workplace ostracism and turnover intention. There is no available mechanism or indicator that demonstrates how an employee feels ostracized in an organization due to a lack of social bonding and then develops negative behavioral outcomes such as cynicism or counterproductive work behavior that led to a desire to leave. The topic of how an individual may cope with their feelings when they have been ostracized by others and still continue to connect with those coworkers remains unanswered. There has been very few research published on various personality traits, particularly cynicism, while employees face unfavorable occurrences such as workplace ostracism. There have been numerous studies undertaken on the challenges and concerns associated with the job environment. However, there is very little research on workplace exclusion. The current research helps in finding out organizational issues associated with workplace ostracism. In addition to this issue, the focus is on identifying any problems associated with organizational cynicism caused by social capital bonding. In the current study, organizational cynicism serves as a mediator for a relationship that has not previously been examined. The current study's moderator is social capital bonding, and its application to the relationship between workplace ostracism and organizational cynicism allow us to see if it affects the relationship in addition to other worries and difficulties that may cause variation for employees in organizations

LITERATURE REVIEW

Around 500 B.C., various clans used the concept of ostracism for the first time; at that time, it was known as (ostrakismos). This occurrence was employed when the tribe decided to exclude someone for ten years, usually a former officer of the government. Fundamentally, ostracism can be defined as being shunned or neglected by the many tribes of the world, contemporary developed nations, governing, religious, military, and educational bodies, loosely-knit communities, close friendships, in-person gatherings of children and adults, and in schoolyards. (Gruter & Masters, 1986). In 2008, Ferris and his colleagues devised a scale for evaluating ostracism as part of a study that presented ostracism as a distinct concept. Ostracism is a widespread phenomenon that transcends gender, age, and other demographics. Fundamentally, the concept of ostracism is supported by the need for acceptance and belonging, which is vital for emotional and psychological health. Ostracism has an adverse impact on the resources a worker needs for his or her level of involvement and productivity at work (Kwan, Zhang, Liu, & Lee, 2018). Ostracism is comparable to the social death of an employee within the business. In ostracism, the employee's value is at danger, hence diminishing his organizational affiliation (Wu, Liu, Kwan, & Lee, 2016). Multiple researches have presented evidence that ostracized individuals exhibit a sad mood. However, prior studies have shown that being ignored may be a very unpleasant experience; the social misery brought on by being shunned has been linked to pain in the body (Eisenberger, 2012); (Riva, Wirth, & Williams, 2011). The word cynicism is derived from the word cynic derived from ancient Greek philosophy from around 500 B.C. Both terms refer to a style of thinking and living (Metzger, 2004). Ancient cynics fought a system (society) they could not defeat and had little prospect of doing so Andersson (1996); current cynics share this trait. Modern cynics are cynical as a result of how the system (their company) has handled them and have little prospect for improvement. Both types of cynics criticize their respective systems with humor. In the 1940s, the University of Minnesota did the first modern research on organizational cynicism as part of their study of personality traits. The Minnesota Multiphasic Personality Inventory (MMPI), which was made there, was the basis for the first cynicism scales, such as the Cook and Medley cynical hostility scale (Walter & Donald, 1954). At first, these scales looked at aggression and hostility as personality traits (Turner & Valentine, 2001). Later, research on organizational cynicism Johnson & O'Leary- Kelly (2003) paid more attention to cynicism as an attitude. The difference is clear in how long it lasts and how stable it is. According to Abraham (2000), there are numerous varieties of cynicism, including societal cynicism, employee cynicism, work cynicism, servant cynicism, and last but not least, organizational cynicism. Organizational cynicism (OC) is having negative feelings about the employer or organization. Organizational cynicism is a personality trait and a psychological theory. A stage of cynicism is when an employee loses trust in the organization due to firsthand encounters and over-socialization. It is possible to see cynicism as a psychological defense against annoyance, furry and disappointment. Being cynical is thought to stem from having high expectations of other people. Rather than being something an employee chooses to do, organizational cynicism is viewed as a response or reaction that a person learns from their experiences at work.

When considering the high cost of new hires, turnover has been used as a useful measure of human resource management (Khatib & Nour, 2021). A clear indicator of turnover is turnover intention which is defined as an employee will change their job within a given time (Sousa - Poza & Henneberger, 2002). The turnover intention is one of the most important factors to look at because leaving causes less productivity due to a loss of skilled workers, experienced workers, and organizational investment (Shaw, Gupta, & Delery, 2005). It has been said that a person's intention to leave an organization comes from its roots and is hard to find (ARYANI, Widodo, & Chandrawaty, 2021). Keeping employees has become just as important as getting new ones as technology has changed. There is a lot of competition between companies to hire people who are smart and creative, because these people are seen as an asset to the company. There are many things that affect whether or not someone wants to leave their job, but organizational commitment is the most important. There are two kinds of employee turnover: voluntary and involuntary. When an employee wants to leave the company on their own, this is called voluntary turnover. A person may also ask to leave the organization for a variety of reasons, such as being fired, having bad job performance, or likely to accept a job that is better for their physical or mental health than other jobs.

Social capital generally refers to the resources collected through interpersonal interactions (Coleman, 1988). Social capital is a vague term that has different meanings in different fields (Adler & Kwon, 2002). When social capital goes down, there is more social disorder, less participation in community activities, and possibly more distrust between people in the community. One of the many benefits of having more social capital is that it makes people more committed to their communities and makes it easier to get people to work together. Social capital can be used for bad things, but in general, it is seen as a good thing that comes from people in a social network interacting with each other (helliwell & Putnam, 2004). Connecting social capital and social bonding has been differentiated by (Putnam 2000). The former is linked to what network experts refer to as weak ties, which are spontaneous connections between people who occasionally offer emotional support but occasionally exchange useful information or novel ideas (Granovetter, 1982). In contrast, bonding social capital is established between persons in emotionally close, close-knit connections, such as those with family and close friends. The current research focuses on how to increase social capital among coworkers. Creating social capital ties with coworkers appeals to the networks and bonds created by contacts with coworkers and social capital. Social capital has been found to be negatively impacted by organizational change and workload, but positively impacted by job stability and moral leadership. Social ties with coworkers are especially important for organizations because they help people work together and share information. Employees who are shunned can find it hard to get to work-related resources and information that is often stored in social ties. This can also make it hard for someone to feel like they belong (Al - Atwi, 2017). Belongingness theory (Baumeister & Leary, 1995) says that everyone has an instinctual need to feel like they belong and are accepted and valued by others. So, according to the premises of COR and belongingness theory, when employees feel like outsiders, they are likely to have less social capital.

Conservation of Resource Theory:

The Conservation of Resource Theory (COR) was presented by Hobfoll (1989) as an integrated stress theory that represents both external and internal processes in roughly equal quantities. Individuals try to get, retain, maintain, and develop the things they value, according to the COR theory (Stevan, 2001). This shows that people employ important resources to organize, act, and fit into the larger framework of organizations and culture. The Conservation of Resource Hypothesis is a motivational theory that explains why humans must acquire and conserve new and current resources for their survival. Humans are social animals; hence, they have a need for social bonds (Hobfoll et al., 2018). This study employs the conservation of resources theory because when a person feels ostracized at work, he becomes anxious and, as a result, deteriorates his psychological resources. These are the personal resources that employees utilize under difficult circumstances.

Hypotheses Development:

Workplace ostracism and turnover intention

When a worker at a company is being ignored, he wants to find a new setting with positive social networking and social acceptance so that he can rebuild his mental resources. The reason for wanting to quit is that he doesn't want to keep being picked on and hurting his mental and physical health, which is what is happening at his current job. COR theory says that employees are aware of protecting the resources they already have and are motivated to get more resources. When their resources are at risk because of how other employees act, they worry that their mental health will get worse. This fear makes people want to leave their jobs (Turkoglu & Dalgic, 2019). In the light of foregoing debate, this study postulates that:

H1: Workplace Ostracism positively impact Turnover Intention

Mediating role of organizational cynicism

Employees are overly sensitive about their working conditions, and after experiencing "social death" within the company, they are more inclined to be pessimistic. People who work for a company and are cynical are more likely to think about leaving (Brown, Kraimer, & Bratton, 2020). Organizational cynicism serves as a mediator in the relationship between workplace ostracism and turnover intention. When employees act badly at work, they are more likely to want to leave the company. Cynicism is a bridge between being left out and wanting to change. On basis of above discussion, this study hypothesizes that:

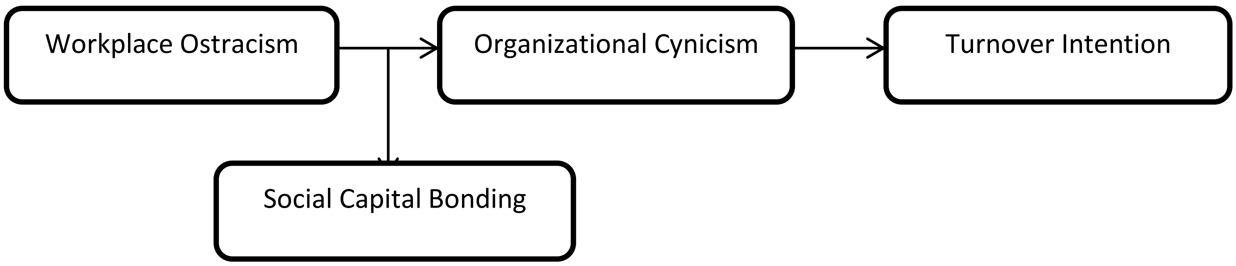
H2: Organizational cynicism positively mediates the relationship between workplace ostracism and turnover intention

2.1.3 Moderating role of social capital bonding

As social beings, people want to be accepted and feel like they belong in a group. COR says that ostracism can hurt social connections because people won't make or keep these connections and which lead to cynical behavior. Social ties can be very important, especially in situations that require working as a group (Clopton, 2011). Employees who are ostracized can find it hard to get to work-related resources and information that is often stored in social ties. This can also make it hard for someone to feel like they belong. So, according to the premises of COR and belongingness theory, when employees feel like outsiders, they are likely to have less social capital, which leads to them having cynical behaviors. In the light of foregoing debate, this study postulates that:

H3: Social capital bonding moderates the relationship between workplace ostracism and organizational cynicism such that the relationship is strengthened when social capital bonding is low and it is weakened when social capital bonding is high.

Theoretical Framework:



This study will examine the influence of workplace ostracism on turnover intention, with organizational cynicism acting as a mediator and social capital bonding as a moderating factor.

RESEARCH METHODOLOGY

The purpose of the current study is to determine how workplace ostracism affects employees' turnover intention rate in both public and private banking sector i.e. National Bank of Pakistan and Allied Bank. It also examines the potential for an organizational cynicism mechanism after being ostracized and then indulges in harmful behavior to hurt an organization. The study also examines how social capital bonding affects the relationship between organizational cynicism and workplace ostracism. Quantitative type of research has been used in this study. Structured questionnaires were used to collect data from staff members of both public and private banking sectors. The banks which were chosen for data collection are National bank of Pakistan and Allied Bank limited. Employees from Lahore who work in the public (National Bank of Pakistan) and private (Allied Bank Limited) banking sectors are the focus of this study.

DATA ANALYSIS AND RESULTS

3.2.1 Descriptive Statistics

Table given below shows that the maximum value for Gender is 2, value 1 coded for male and 2 coded for female. The variables applied in a present research were scored on a 5-point Likert scale, ranging from 1 to 5.

Variable	*Sample Size*	*Mean*	*Std. Deviation*
Gender	350	-	-
Age	350	-	-
Education	350	-	-
Job Level	350	-	-
Workplace Ostracism	350	3.35	1.15
Turnover Intention	350	3.76	1.13
Organizational Cynicism	350	3.91	0.96
Social Capital Bonding	350	3.11	0.86

3.2.2 Reliability Analysis

Construct reliability of this study was measured using CronBach's Alpha value. A construct of any study is reliable if value is greater than 0.70 (Hair, Ringle, & Sarstedt, 2013). All the mentioned data has been given below in tabulated form:

Table 3.2

Variable	*No of Items*	*Reliability*
Workplace Ostracism	10	0.87
Turnover Intention	5	0.79
Organizational Cynicism	6	0.82
Social Capital Bonding	8	0.86

3.2.3 Correlation Analysis

Table given below shows the correlation between the variables of the current research:

	OST	T. Over	OC	SCB
OST	1			
T. Over	.800**	1		
OC	.789**	.751**	1	
SCB	-.389**	-.417**	-.382**	1

**. Correlation is significant at the 0.01 level (2-tailed)

3.2.4 Regression Analysis Results

Table 3.4 Mediation Analysis of Organizational Cynicism between Workplace Ostracism and Turnover Intention

Direct Effect of X on Y

B Value	T	p	LLCI	ULCI
.5393	5.5426	.0000	.4499	.6286

Indirect Effect of X on Y

B Value	BootSE	BootLLCI	BootULCI
.2457	.0508	.1550	.3535

The above table 3.4 shows the direct effect and indirect effect of workplace ostracism on turnover intention in presence of mediator which is organizational cynicism. Upper and lower limits cynicism effects are 0.1550 and 0.3535 and zero is not present in the 95% confidence interval which indicates that hypothesis 2 of the study has been accepted.

Table 3.5 Moderation analysis

Effect of X on Y

B Value	T value	p value	LLCI	ULCI
.5393	5.5426	.0000	.4499	.6286

As can be seen from table 3.5 of moderation analysis, workplace ostracism and social capital bonding has upper and lower limits of 0.6286 and 0.4499, and zero is not present in the confidence interval 95%. Based on these findings, we can say that social capital bonding does act as a moderator between workplace ostracism and turnover intention.

CONCLUSION

The present study was investigated to find the relationship between workplace ostracism and turnover intention. Mediating role of organizational cynicism between workplace ostracism and turnover intention was also investigated. Also the social capital bonding was first time used as a moderator to find the relationship between workplace ostracism and organizational cynicism. The present study was researched to investigate the ostracized employees of public and private banking sectors of Pakistan such as National Bank of Pakistan and Allied Bank limited with a positive significant relationship of workplace ostracism and turnover intention. The study found that when an employee feels ostracized, it leads to cynical behaviors which further lead to leaving an organization, referred to as a turnover intention. So it is concluded that working in an ostracized environment may lead to higher cynical behavior and intention of leaving an organization. Also the moderation relationship of social capital bonding that has been found in this study between workplace ostracism and organizational cynicism states that if social capital bonding is low, the relationship between workplace ostracism and organizational cynicism strengthened such that the impact of both of these will be more and if social capital bonding is high, there would be a less chances of workplace ostracism and so does the cynical behavior in employees would be low.

Limitations & Future Directions

The study contains a variety of limitations. First, cross-sectional data provide the study's foundation. Secondly, the main focus was employees of the banking sector of Pakistan, so it is recommended to conduct future researches on other organizational sectors of Pakistan such as hospitals, educational institutes etc because in every organization there are different working conditions so there must be the different responses of employees related to concept of ostracism. The employees in this study are part of a collectivist culture in Pakistan, where they are unaware that they are being ostracized and begin to act cynically as a result of their lack of knowledge with these ideas. Longitudinal research should be done in future studies. The study can also be expanded by adding different variables as a mediator or moderator such as organizational justice or counterproductive work behaviors.

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Strategic Management of Banks' Loan Portfolio: An Applications Resource Based View

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Abstract:

This is a theoretical research paper aimed to develop a model of strategic management for banks' loan portfolio management and sustainable competitive advantage. Overall design of the study consists of review of literature and conceptual modeling based on real time bank loaning processes using elementary concepts of discrete mathematics (i.e. geometry, drawing and directed graphs). The model has been constructed on the basis of descriptive research (i.e. intensive review of literature). It has been presented in taking into consideration the theory of resource based view. As a result the study advanced a graphical strategic bank loan portfolio management model. The model has valuable practical as well as theoretical implications for commercial banks. It also provides framework for future research. It is equally beneficial for all other stakeholders (i.e. regulators, government, customers, depositors, analysts, society at large etc.) because it provides deeper understanding of the phenomena. However, the research findings should be used with caution since the study being theoretical and conceptual does not advances any statistical proof and is subject the all limitations applied the theoretical studies.

Introduction:

It is established in research that banking is a business of loans (Haas 2010; Niazi, et al., 2023). Loan portfolio management and recovery of loans in the core issue of banking sector. The non-performing-loans adversely affect the performance of banks hence their impact is conspicuous in financial figures. Basic loan cycle consists of application, approval, disbursement, recovery of loans and ultimately the profitability. Knowledge is the counter product of the banking processes. Visually we can look at the loaning process as follows (Figure 1):

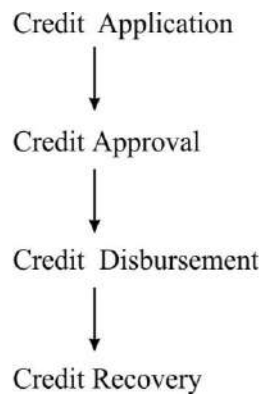

Figure 1: Loaning Process

The process is connected with the performance of the bank as giving in below diagram that is simple linear relationship between loan recovery and performance as visualized (Figure 2).

Figure 2: Relationship between Loan Recovery and Performance

The bank, that is able to exploit its knowledge or intangible assets, has competitive edge on other banks. In order to exploit the intangible assets, the banks evolve the process of strategic management. For the purpose of the study in hand, we can define the strategic management as "the analysis, decisions, and actions an organization undertakes in order to create and sustain competitive advantage (Dess et al. 2005). In strategic management literature, different concepts have been evolved from other disciplines like economics, sociology, organizational behavior and human resource management (Niazi, et al., 2023). There are three popular theories and one remarkable framework adopted by the strategic management researchers from other domains. Institutional theory, social network theory, organizational learning theory and resource based view (a framework) are concepts adopted from other domains (Abbass et al., 2021). New topics also emerged in the domain of strategic management like e-commerce, international strategic management, and international entrepreneurship (Buton et al. 2011). In literature, we also find Potter's model which enlightens upon new factors of production, inter alia, the traditional ones. According to Porter, traditional factors are land, labor and capital, whereas, new factors include technology, infrastructure and knowledge (Qazi, et al., 2020). New factors of production are more important and relevant in case of banks. The banks, that in fact, are the sets of networks, technology, infrastructure and knowledge, necessitate a different view from other forms of business say manufacturing. The framework of Resource Based View (RBV) is particularly relevant to the new factors of production, hence highly relevant in case of banks (Niazi, et al., 2019).

Literature Review:

There surpassed a lot of research in the domain of banking and it is virtually impossible to comprehend the literature but still we are confident to at least have reviewed the studies critical to the issue in hand. The banking is considered as social relation and has conceptual roots in the idea of the house banking or relationship banking that establishes behavior pattern consistent with idea of long term relations (Elsas et al. 1998; Niazi, et al., 2019). But the bank customer relations are always expressed and written in black and white. In order to sustain success in business the companies need to keep a balance between the extremes (Probst et al. 2005). These relational strategies have distinguished peculiarities. The credit strategies must be quite clear (Chovancova 2006) and according to the environment. The strategies of banks complement the business environment of a country. Smooth functioning of the legal system, in fact, requires all the institutions to complement (Lu et al. 2008). The argument of Santikian (2009) that the borrowers are ultimate head of a bank can only be weighed if the ties of the banks and the borrowers are strategically strong. Although every year the bank loans increase as compared to previous year but still the growth rates are not satisfactory (Tanbir et al. 2009; Qazi, et al., 2020). Measurement of the relationship aspect in the banking sector is essential due to the sensitivity of assets and liabilities (Afzal et al. 2009; Abbass et al., 2021) particularly, the degree of the strength of the strategic tie between loannee and the bank. There are arguments for and against the weak and strong strategic processes and in this context. Yao (2009) argue that weak strategic and legal systems and under developed financial markets sometimes augment the economic development.

The globalization, the dispersal and the anonymity of the shareholding of listed banking and financial institution facilitate the contagion of default (Jehlen, 2010). There exists systemic risk or the threat of contagion (Simpson 2010). In the well functioning environment, banks lend to SMEs (i.e. at grass roots level) but, on the other hand, to large enterprises and government (Haselmann 2010; Niazi, et al., 2023). While granting the credits, the particularities of the activity and the sectors are taken into account (Sbarcea 2010). Strategy of creditor protection, bank ownership and bank size are important determinants of the composition of very portfolio of credits (Haas 2010; Niazi, et al., 2023).

Corruption is also associated with bad loans. Loan defaults are low in faster growing economies (Goel et al. 2011) because they have well functioning recovery strategies and well documented economies. The fragile system of banking drags the economy towards financial crisis. Financial crisis and decline in output occur in a sequence and complement each other (Serwa 2011). Global integration of financial sector contributes to the propagation of financial shocks from one economy to another through the banking channels (Chava et al. 2011), in other words, the weak system for banking of one country has implications for other countries as well. Some of the banks have already shown seriousness towards the issue and have started appointing strategic cells reportable directly to the board rather than CEO and impact is conspicuous in returns (Aeb et al. 2011; Basit, et al. 2020). Banking organizations now have evolved a strategy to estimate credit risk through internal rating approaches (Bastos 2010) and record the processes in black and white. The businessmen become uncontrollable greedy and willfully default and government have to announce bailout packages in USA (Paul 2009) where there is reportedly world's best banking system. It is the question of strategy of a bank that abstains default if it is taken care of in letter and spirit. Currently the laws do not cover all emerging issues particularly relating to knowledge management and information technology (Azmi 2010). Future research must be done for understanding interconnections between profitability, risk, liquidity, capital, competition, knowledge and strategic management (Wilson et al. 2010).

Resource Based View (RBV) in Banks: Traditional banking processes less emphasize on the intangible assets that majorly consists of knowledge. Knowledge, dimensions of knowledge (i.e. tacit and explicit knowledge) and explication of tacit knowledge are less explored areas of banks (Salim, et al., 2017). The two sets of new resources are continuously gaining importance i.e. network ties and knowledge (Delis, et al., 2015). Network ties consist of cooperation, coordination, relationships and organizational capabilities. Knowledge consists of tacit knowledge (based in minds of people) and explicit knowledge (in documents and express processes), therefore, it can be visualized that banks have sources of sustainable competitive advantage (Dias, 2016). Exploiting the intangible assets' network and knowledge and enhancing intangible assets are real source of competitive advantage. In the case of banking particularly the tacit knowledge can prove to be a source that can mitigate risk of likelihood of default and the risk of severity of loss. These resources help in taking correct credit and recovery decisions (Deyoung, Torna, & Winton, 2015). They can also facilitate the recovery and ensure the quality of recovery decisions (Hopkins, & Hopkins, 1997). The credit decision environment consists of interactive communication, common sense, awareness, compatibility with technological agility, control and safe custody (Ding, et al., 2023). The recovery decision of environment consists of atmosphere in general and account-wise assessment process portfolio (i.e. regular or default). The default may be "voluntary default" or "involuntary default" (Ioannidou, & Ongena, 2010). Loan portfolio management is majorly concerned with control of default irrespective of its being voluntary or involuntary (von Blomberg, & Reijers, 2023). Control of default means pertinence to severity of loss (Stanley, Roger, & McManis, 1993). This study, in particular, pertains to mitigation of risk severity of default (Tian, Wang, & Wu, 2023). Issue of severity of loss can be addressed properly after carefully analyzing the internal and external environment of recovery (Segura, & Suarez, 2023). Internal analysis of recovery environment includes following:

- Contractual analysis,
- Nature of loan (long, medium or short),
- Nature asset financed,
- Security type,
- Quality of contractual documents,
- History of client,
- Motivation level of top management,
- Motivation level of staff and
- Level of cooperation of other departments.

The analysis of external environment for recovery of bank loans include following:

- Economic conditions of the country,
- Legal environment ,
- Inflation,
- Competition,
- Trade associations,
- Creditors,
- Customers,
- Government,
- Markets and
- Communication

Having analyzed the environment, the allocation of resources (i.e. budget, equipment, vehicles and personnel) is the next step. Personnel may be analyzed as intellectual capital, social and informational capital. Recovery decisions include assessment, consultation, approval and actions (Yuan, Zhong, & Lu, 2022). Recovery decisions mean deciding about normal, special, litigation (self or outsourcing) etc. The actions based on these decisions may be reminders, visits, notices, suits, legal notices, fines prosecution and so on (Adão, et al., 2022). Corporate level strategy must be stepwise quick, knowledge base, perpetual and effective. We have developed following model Figure 1 based on generic process of loaning.

Methodology

This is a theoretical research study that follows post-positivism as research philosophy and induction as research approach. The design of the study is unique in nature and consists of literature survey and uses the primary concepts of discrete mathematics. Methodology of research envisages on use of elementary concepts of geometry, free hand drawing and directed graphs from discrete mathematics for modelling the phenomena. The model is constructed in the environment of resource based view. The authors considered an array of multi-criteria-decision-making methods viz used by Tariq, et al., 2023; Niazi, et al., 2023; Basit, et al., 2023; Shaukat, et al., 2023; Niazi, Saleem, Basit, Iqbal & Khan 2023; Niazi, Qazi, Aziz, Basit, & Niazi, I. A. K. 2023; Niazi, Qazi, Butt, Niazi, I. A. K., & Basit 2023; Qazi, et al.,2023; Niazi, Qazi, Sarwar, Niazi, I. A. K., & Basit, 2023; Qazi, et al., 2022; Javaid, et al., 2022; Ali, et al., 2021; Naeem, et al., 2021 but since the topic under study is relatively less researched area and need preliminary propositions therefore the authors decided to use discrete mathematics as research methodology. This methodology gives liberty to the authors to present their findings in form of lines, colors, symbols, shapes and background that carries meaning and conveys message like algebraic or mathematical terms.

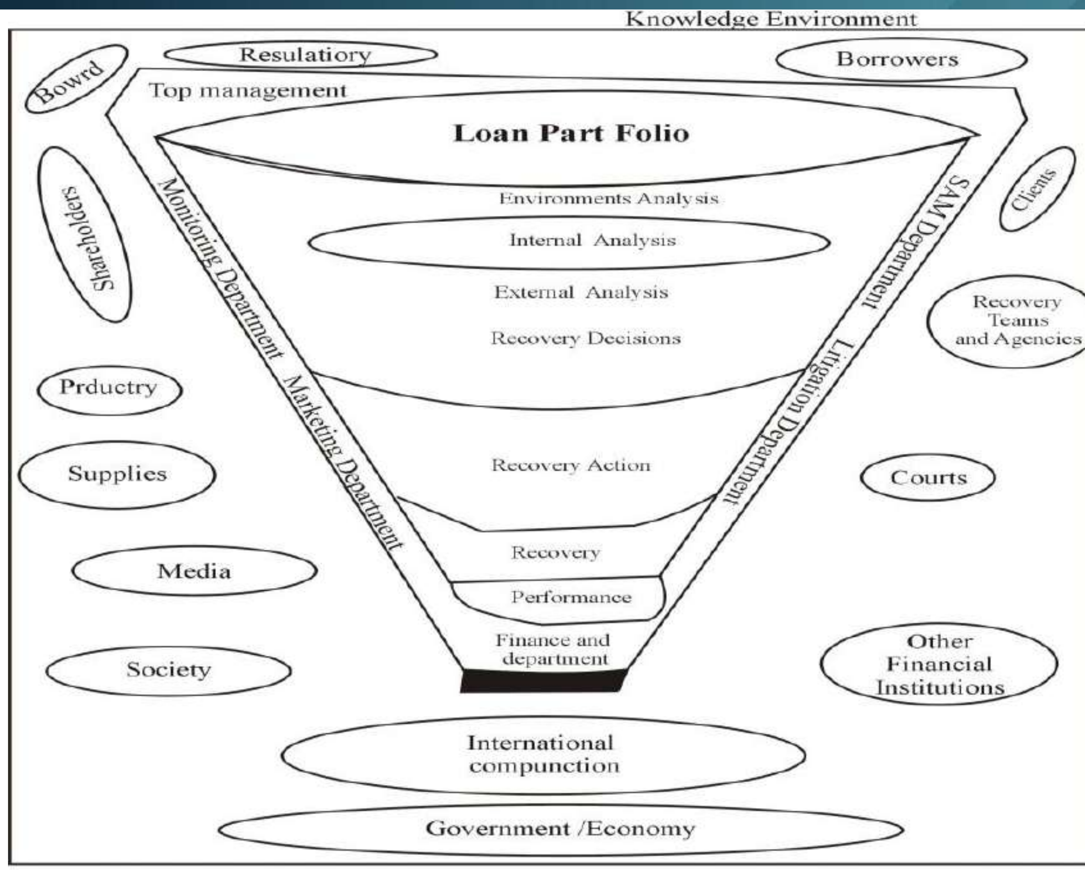

Figure 3: Strategic Management Model for Loan Portfolio—a Resource Based View

Loan portfolio is placed in a funnel of environmental and other analysis within the internal departmental net and external social nets. The social nets include borrowers, regulatory authorities, shareholders, industry, suppliers, media, society, government, other financial institutions, courts, clients internal and others. The knowledge and ties of internal and external as shown in the model help to mitigate the risk of severity of loss and funnel the loans into performance.

Conclusion:

Implications of the model consist of the ability to mitigate the risk of severity of loss. This is a theoretical research paper aimed to develop a model of strategic management for banks' loan portfolio management and sustainable competitive advantage for banks. Overall design of the study consists of review of literature and conceptual modeling based on real time bank loaning processes using elementary concepts of discrete mathematics (i.e. geometry, drawing and directed graphs. The model has been constructed on the basis of descriptive research (i.e. intensive review of literature). It has been presented in taking into consideration the theory of resource based view. As a result the study advanced a graphical strategic bank loan portfolio management model. The model has valuable practical as well as theoretical implications for commercial banks. The banks must give importance to the intangible assets. The model developed on the basis of descriptive study demonstrates the vitality of knowledge in development of a strategy for managing the loan portfolio. The model also provides framework for future research. It is equally beneficial for all other stakeholders (i.e. regulators, government, customers, depositors, analysts, society at large etc.) because it provides deeper understanding of the phenomena. However, the research findings should be used with caution since the study being theoretical and conceptual does not advances any statistical proof and is subject the all limitations applied the theoretical studies.

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