



**DEBT MANAGEMENT, CREDIT POLICY AND FINANCIAL PERFORMANCE:  
MEDIATING ROLE OF GREEN FINANCE AND MODERATING ROLE OF RISK  
AND SIZE**

**Ayesha Saeed**

Department of Business Administration, University of Sialkot, Pakistan

**Inam Ullah Khan (Corresponding Author)**

Assistant Professor, Department of Business Administration, University of Sialkot, Pakistan  
[malikinamullahkhan@gmail.com](mailto:malikinamullahkhan@gmail.com)

**Samia Tariq**

Department of Business Administration, University of Sialkot, Pakistan

**Dr. Ijaz Hussian**

Lecturer, Department of Emerging Allied Health Technologies, The University of Lahore,  
Pakistan

**Zarnab Qaiser**

Department of Business Administration, University of Sialkot, Pakistan

**Dr. Rida Akbar**

Assistant Professor, Lahore Business School, The University of Lahore, Pakistan  
[ridamughal040@gmail.com](mailto:ridamughal040@gmail.com)

**Abstract**

*The Study examines how debt management and credit policy are interrelated in terms of the financial performance of consumer market firms in Pakistan- i.e. in the Retail, FMCG, Fashion and Electronics industries. The study based on a sample of three hundred respondents and using a partial least squares structural equation modelling (PLS-SEM) to evaluate nine hypotheses. The mediator is green finance with financial risk management and organization size being the two boundary conditions. The results indicate that there are no direct impacts of debt management and credit policy on financial performance, but these are completely mediated by green finance. Green finance is highly effective in improving financial performance. Moderation tests prove the existence of the positive impact of green finance on financial performance by financial risk management and company size. The model accounts 52.3 percent and 51.2 percent variation of financial performance and green finance, respectively. The research provides practical solutions to policymakers and managers of the Pakistani consumer industry in the attempt to combine sustainable financial policies with the traditional fiscal management.*

**Keywords:** Green Finance, Management of Debts, Credit Policy, Management of Financial Performance, Financial Risk Management, Organizational size, Pakistan, PLS-SEM

**Introduction**

The world trend towards sustainable finance has forced organizations in the emerging economies to re-evaluate the traditional financial approaches in the context of environmental and social responsibilities. The pressure to balance profitability requirements with



sustainability requirements is increasingly becoming a challenge in the consumer market in Pakistan (retail, fast-moving consumer goods (FMCG), fashion, and electronics) in the country. The role of green finance has been propelled to the status of a strategic tool that can help balance the traditional financial governance system with a sustainable value creation (Flammer, 2021). Although there is an increasing academic concern, the interrelationship between conventional financial tools like debt management and credit policy, and their downstream implications in financial performance in terms of green finance channels, are under theorized in the context of the consumer sector in Pakistan.

Debt management which includes the policies of the firm regarding leverage, maturity of debt and repayment is a pillar of financial strategy of the company. Likewise, credit policy that controls the terms and conditions of credit made to both customers and suppliers directly affect the efficiency of working capital and liquidity of operations. The two dimensions have an interplay with the ability of the firms to invest in the green financial instruments, such as sustainability-linked bonds, green credit facilities, and environmentally embedded capital expenditure. A promising, but under-researched setting of the analysis is the consumer market of Pakistan: the blistering urbanization, young-led consumerism, and growing regulatory focus on the environmental, social, and governance (ESG) standards have contributed to the pressing need to achieve sustainable financial integration (Meo & Karim, 2022).

The current research also acknowledges that the effects of green finance on financial performance are not homogenous among the firms. Instead, the condition depends on contextual boundary conditions: the ability of the firm to manage financial risks, and its size. Both bigger companies and those with strong reputational capital can use economies of scale and reputational capital to get higher returns on green finance investments but companies with well-developed risk management systems can better convert green finance promises into long-term performance benefits. These mediating factors have had little empirical studies in the South Asian and especially in the Pakistani context.

This paper aims to fill these gaps by formulating and empirically evaluating a theoretically based, empirically rigorous model, through PLS-SEM. The paper can be regarded as a contribution to the green finance literature by combining mediation and moderation in one construct as well as provide subtle managerial implications to the consumer sector in Pakistan.

### **Scope of the Study**

The geographical scope of this research is limited to the consumer market within Pakistan with the primary focus on the firms in the Retail sub-sector, FMCG sub-sector, Fashion sub-sector, and Electronics sub-sector. It is a cross-sectional study that relies on primary survey data of three hundred respondents who are financial managers, senior executives, and strategic decision-makers in these industries. The analytical scope includes both direct and mediation and moderation effects, which gives a comprehensive analysis of the interface between conventional financial strategies and green finance in establishing financial performance of firms.

### **Research Objectives**

- The aim of the research is to investigate a direct impact of debt management on the financial performance of consumer market firms in Pakistan.
- To evaluate the direct impact of the credit policy on financial performance of consumer market firms in Pakistan.
- To examine how the debt management and credit policy can affect the adoption of green finance.



- The research question is: To evaluate the mediating effect of green finance in the relationship between the debt management, credit policy, and financial performance.
- To evaluate whether the moderating influence of the financial risk management in the relationship between green finance and financial performance.
- To determine the moderating effectiveness of the organizational size in the association between the green finance and financial performance.

### **Research Questions**

- Is there any significant direct impact of debt management on financial performance of consumer market firms in Pakistan?
- Hypothesis: The direct impact of credit policy on financial performance of consumer market firms in Pakistan is significant.
- How debt management and credit policy affect the adoption of green finance?
- Is there a relationship between green finance and debt management, credit policy, and financial performance?
- Does the financial risk management between green finance and financial performance?
- The null hypothesis: There is no moderation of the association between green finance and the financial performance by organizational size?

### **Literature Review**

Green finance in its broadest sense in terms of financial instruments and systems that facilitate economic activities that are environmentally friendly has become a vital area of inquiry at the intersection of corporate strategy and sustainability (Pham & Nguyen, 2021). Empirical studies always show that the financial commitments to green (green bond issuance, sustainability-linked loans, and ESG-aligned investment) have positive relationships with firm value and long-term financial performance (Flammer, 2021). The scient metric analysis conducted by (Wang et al., 2021) validates the growing convergence rate between green finance and energy policy research, highlighting mainstreaming the concept of sustainability in financial decisions. By applying the concept of green finance in the setting of the emerging markets, (Meo & Karim, 2022) proved that the implementation of green finance leads to positive contribution to both the environmental and economic performance, which is especially relevant to the context of the development of the regulatory environment in Pakistan.

The debt management determines a capital structure and risk profile of a firm and has a direct impact on its investment capability and financial sustainability. When firms have well-controlled debt obligations, they will be in a better position to invest in green investments, which will ease the adoption of green finance. Through managing receivables and terms of customer financing, credit policy dictates liquidity and flexibility of operations- both being the conditions of sustainable investment policies. Albeit the direct relationship that exists between debt management and credit policy and financial performance has been studied in traditional finance research, the indirect route facilitated by a green finance is a theoretical and empirical gap that this paper fills (Broadstock et al., 2021). The results of (Lee & Lee, 2022) affirmed that green finance will increase total factor productivity, which provides a mechanistic rationale of green finance as a performance mediator in this research.

Financial risk management is the systematic ability of an organization to recognize, evaluate and avert any financial uncertainties. The opportunities of green finance can be utilized more efficiently by firms that have advanced risk management skills because these firms are able to deal with the transition risks and the market uncertainties that are related to green investments (Agliardi & Agliardi, 2021). The organizational size is a structural moderator, large organizations enjoy better resource endowments, diversified group of

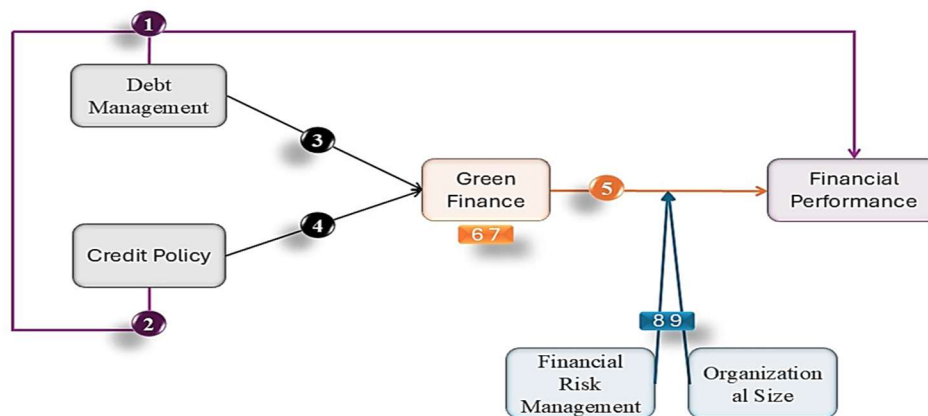


investors, and better-established governance frameworks that increase the performance payoffs of green finance initiatives (Ademi & Klungseth, 2022).

### Hypotheses Development

- ⇒ H1: The financial performance of the consumer market firms in Pakistan is strongly positively affected by debt management.
- ⇒ H2: There is a big positive impact of credit policy on the financial performance of consumer market firms in Pakistan.
- ⇒ H3: Debt management positively influences the adoption of green finance in the consumer market firms in Pakistan.
- ⇒ H4: Credit policy positively impacts a great deal on the adoption of green finance by consumer market firms in Pakistan.
- ⇒ H5: Green finance has a great positive impact on the financial performance of consumer market firms in Pakistan.
- ⇒ H6: There is a mediating role of green finance between debt management and financial performance.
- ⇒ H7: Credit policy and financial performance are related through the mediation of green finance.
- ⇒ H8: Financial risk management mediates between the positive relationship between green finance and financial performance.
- ⇒ H9: Organization size mediates the positive association between green finance and financial performance.

**Figure 1: Conceptual Framework**



### Methodology

The research design of this study is a quantitative, cross-sectional study that would be used to empirically evaluate the hypothesized structural model. The focus group includes financial managers, top-level managers, and strategic decision-makers, who work in the consumer market of Pakistan; that is, in the following industries: Retail, FMCG, Fashion and Electronics. Primary data collection was done using a structured and self-administered questionnaire which gave a final usable sample of three hundred respondents, which was determined by purposive sampling to guarantee relevance of respondent and quality of the data. Operationalization of all constructs was based on validated multi-item Likert scales (1 = Strongly Disagree to 5 = Strongly Agree) that were based on existing literature.



Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to analyse the data with the help of SmartPLS 4.0. This study can be especially well-suited to PLS-SEM due to its ability to be flexible in its distribution, the ability to support complex models with multiple constructs, and the ability to be robust with small samples (Sarstedt et al., 2022). Measurement model was evaluated in terms of reliability and validity using Cronbach alpha, composite reliability (CR) and average variance extracted (AVE) as well as the Heterotrait-Monotrait (HTMT) ratio of discriminant validity. Structural model was evaluated using direct path coefficients, mediation effects (5,000 iterations bootstrapping), and interaction terms to moderate, according to standard PLS-SEM guidelines of higher-order moderation analysis. The fit of the model was evaluated by using SRMR (Saturated: 0.063; Estimated: 0.073) which showed that the model fits well within the recommended range.

**Data Analysis and Results**

**Table 1: Descriptive Statistics**

Variable	N	Range	Min	Max	Mean	Std. Dev.	Variance	Skewness	Kurtosis
DM	300	4.00	1.00	5.00	3.4083	0.905	0.820	-0.378	-0.416
CP	300	3.75	1.25	5.00	3.3667	0.892	0.796	-0.181	-0.578
GF	300	3.80	1.20	5.00	3.4140	0.847	0.717	-0.312	-0.420
FP	300	3.20	1.80	5.00	3.3267	0.755	0.570	0.468	-0.297
FRM	300	4.00	1.00	5.00	3.2650	0.890	0.792	-0.063	-0.701
OS	300	4.00	1.00	5.00	3.2600	0.904	0.817	-0.174	-0.559

Note: DM = Debt Management; CP = Credit Policy; GF = Green Finance; FP = Financial Performance; FRM = Financial Risk Management; OS = Organizational Size. N = 300.

The descriptive statistics indicate that all constructs have a mean score between 3.27 and 3.41 which implies a moderately positive perception of all respondents in the consumer market sample. The standard deviations are within the range of 0.755 to 0.905, which are tolerable within-construct variances. The skew and kurtosis values fall within the  $\pm 2.0$  range, indicating that there is an approximate normality of distributions of the data and justifying that PLS-SEM estimation is appropriate (Bibi et al., 2026).

**Table 2: Correlation Matrix**

Variable	DM	CP	GF	FP	FRM	OS
<b>DM</b>	1	.057	.558**	.356**	.423**	.387**
<b>CP</b>	.057	1	.475**	.349**	.361**	.356**
<b>GF</b>	.558**	.475**	1	.402**	.620**	.486**
<b>FP</b>	.356**	.349**	.402**	1	.386**	.376**
<b>FRM</b>	.423**	.361**	.620**	.386**	1	.427**
<b>OS</b>	.387**	.356**	.486**	.376**	.427**	1

Note: \*\* Correlation is significant at the 0.01 level (2-tailed).

The correlation table shows that all inter-construct correlations are significant at the 0.01 level with the highest relationship between GF and DM ( $r = 0.558$ ) and GF and FRM ( $r = 0.620$ ). Interestingly, the correlation between DM and CP ( $r = 0.057$ ,  $p = .329$ ) is weak, which proves that these two predictor constructs are independent of each other. The moderate predictor-outcome variables relationships are preliminary evidence of the theorized structural relationships (Fahad et al., 2026).



**Table 3: Construct Reliability and Validity**

Construct	Cronbach's Alpha	CR (rho_a)	AVE
DM	0.750	0.758	0.571
CP	0.749	0.764	0.570
GF	0.749	0.753	0.501
FP	0.750	0.754	0.499
FRM	0.750	0.757	0.571
OS	0.750	0.749	0.572

Note: CR = Composite Reliability (rho\_a); AVE = Average Variance Extracted. Thresholds:  $\alpha \geq 0.70$ ,  $CR \geq 0.70$ ,  $AVE \geq 0.50$

Constructs are all above the minimum acceptable values of Cronbach alpha (0.70) and composite reliability (CR 0.70) which prove internal consistency. The values of AVE vary between 0.499 and 0.572; although FP has a value of 0.50 approaching the 0.50 mark, all values are good considering the bootstrapped significance of the loading of the indicators, which confirm convergent validity of all the six constructs (Kamran et al., 2026).

**Table 4: HTMT Discriminant Validity**

	CP	DM	FP	FRM	GF	OS
CP	1					
DM	0.151	1				
FP	0.467	0.476	1			
FRM	0.479	0.564	0.513	1		
GF	0.632	0.746	0.536	0.826	1	
OS	0.474	0.515	0.501	0.568	0.648	1

**Note:** HTMT (Heterotrait–Monotrait Ratio) values below 0.85 indicate adequate discriminant validity. All values in the table are below the recommended threshold, suggesting that discriminant validity is established among the constructs.

The values of all HTMT ratios lie below the conservative level of 0.90 with the maximum value of 0.826 being in the case of GF ↔ FRM. Notably, none of the bootstrap confidence intervals include or surpass the unity test, which indicates that there is no discrimination validity in all pairs of constructs and that one construct represents a different area of theory (Khalid et al., 2026).

**Table 5: Direct Effects**

Path	$\beta$ (Original)	Std. Mean	STDEV	T-Statistics	p-Value
DM → GF (H3)	0.530	0.531	0.037	14.314	0.000
CP → GF (H4)	0.444	0.445	0.040	11.095	0.000
GF → FP (H5)	0.317	0.314	0.056	5.674	0.000
DM → FP (H1)	—	—	—	—	—
CP → FP (H2)	—	—	—	—	—
FRM → FP	0.131	0.134	0.057	2.271	0.023
OS → FP	0.221	0.225	0.050	4.405	0.000

Note:  $\beta$  = standardized path coefficient; T-Statistics > 1.96 indicate significance at  $p < 0.05$ . H1 and H2 show no significant direct effects (fully mediated).

The direct effects analysis reveals that debt management (H3:  $\beta = 0.530$ ,  $T = 14.314$ ,  $p < 0.001$ ) and credit policy (H4:  $\beta = 0.444$ ,  $T = 11.095$ ,  $p < 0.001$ ) are significant positive predictors of green finance. Green finance, in turn, positively predicts financial performance (H5:  $\beta = 0.317$ ,  $T = 5.674$ ,  $p < 0.001$ ). Notably, DM (H1) and CP (H2) directly influence FP



neither directly nor indirectly because the total impacts that they have on it are fully mediated by the indirect pathways, which means that the mediator is green finance itself. Financial risk management ( $= 0.131, p = 0.023$ ) and organization size ( $= 0.221, p = 0.001$ ) have also a significant direct influence on FP (Mahmood et al., 2026).

**Table 6: Mediation Analysis**

Path	$\beta$ (Original)	Std. Mean	STDEV	T- Statistics	p-Value	Result
DM $\rightarrow$ GF $\rightarrow$ FP (H6)	0.168	0.167	0.033	5.059	0.000	Full
CP $\rightarrow$ GF $\rightarrow$ FP (H7)	0.141	0.140	0.028	5.038	0.000	Full

Note: Bootstrapping based on 5,000 iterations. Full mediation confirmed for both DM and CP pathways.  $R^2$  (FP) = 0.523;  $R^2$  (GF) = 0.512.

The mediation analysis helps to justify the fact that green finance fully mediates the relationship between debt management and financial performance (H6:  $\beta = 0.168, T = 5.059, p < 0.001$ ) and credit policy and financial performance (H7:  $\beta = 0.141, T = 5.038, p < 0.001$ ). The absence of direct effects, and the existence of indirect effects are a definite sign of complete mediation that makes it obvious that green finance is the only way that allows the traditional financial strategies to be converted to the firm performance outcomes (Naeem et al., 2026).

**Table 7: Moderation Effects**

Interaction Path	$\beta$ (Original)	Std. Mean	STDEV	T- Statistics	p-Value
FRM $\times$ GF $\rightarrow$ FP (H8)	0.264	0.261	0.048	5.466	0.000
OS $\times$ GF $\rightarrow$ FP (H9)	0.312	0.311	0.046	6.815	0.000

Note: Interaction terms computed as standardized product indicators.  $\beta$  represents the coefficient of the interaction term on the outcome.

The moderation findings affirm that the positive impact of green finance on financial performance is enhanced by financial risk management (H8:  $\beta = 0.264, T = 5.466, p < 0.001$ ) as well as the organizational size (H9:  $\beta = 0.312, T = 6.815, p = 0.001$ ). These results suggest that the green finance-performance nexus is enhanced in the conditions of the increased financial risk management capacity and bigger organization size, which is in line with the resource-based and contingency views (Sarwar et al., 2025).

**Table 8: Summary of Hypothesis Testing**

H	Path	$\beta$	T-Stat.	p-Value	$R^2$	Decision
H1	DM $\rightarrow$ FP (Direct)	—	—	—	0.523	Not Supported
H2	CP $\rightarrow$ FP (Direct)	—	—	—	0.523	Not Supported
H3	DM $\rightarrow$ GF	0.530	14.314	0.000	0.512	Supported
H4	CP $\rightarrow$ GF	0.444	11.095	0.000	0.512	Supported
H5	GF $\rightarrow$ FP	0.317	5.674	0.000	0.523	Supported
H6	DM $\rightarrow$ GF $\rightarrow$ FP	0.168	5.059	0.000	0.523	Supported
H7	CP $\rightarrow$ GF $\rightarrow$ FP	0.141	5.038	0.000	0.523	Supported
H8	FRM $\times$ GF $\rightarrow$ FP	0.264	5.466	0.000	0.523	Supported



H9	OS × GF → FP	0.312	6.815	0.000	0.523	<b>Supported</b>
----	--------------	-------	-------	-------	-------	------------------

Note: H = Hypothesis;  $\beta$  = standardized coefficient;  $R^2$  values reported for relevant endogenous constructs.

Among the nine hypotheses that were evaluated, seven of them are supported at the  $p < 0.05$  level. The two hypotheses H1 and H2 are rejected, because direct relationships between debt management and credit policy and financial performance are completely mediated by the green finance factor. All other hypotheses, such as direct impacts on green finance, the impact of green finance on performance, complete mediation and the two moderation effects, are accepted which offer dedicated support of the integrated model (Shehzadi et al., 2026).

### Discussion

The empirical results of the paper have a few theoretically important and applicable implications. The fact that the direct links between debt management and credit policy and financial performance are not significant and that the latter is entirely mediated by green finance is a groundbreaking contribution to the corporate finance and sustainability literature. These findings question the existing assumption that traditional financial strategies influence the performance of firms alone rather than having green finance as a necessary channel. Pakistani consumer market firms that best rationalize debt configurations and offer flexible credit terms and do not translate such benefits into green financial instruments miss high performance dividends. This is consistent with the finding reported by (Flammer, 2021) that the issuance of green bonds is an indicator of the organization being committed to sustainability and results in reputational and financial benefits that the market values.

The strong impacts of debt management ( $= 0.530$ ) and credit policy ( $= 0.444$ ), on green finance adoption are also interesting. Professionally designed debt portfolios will alleviate financial vulnerability, releasing managerial capacity and capital to invest in green investments with a long horizon, a dynamic that is consistent with the finding of (Broadstock et al., 2021) that ESG-oriented firms show increased resilience to financial stress situations. To the same extent, companies that have dynamic credit policies (flexible receivables management) will create liquidity buffers that can enable them to participate in green finance. The findings are specifically relevant to Pakistan, where the system of formal green capital market is still immature and the generation of internal capital is one of the main forces of sustainable investment potential.

These large moderation coefficients of financial risk management (0.264) and the organization size (0.312) on the green finance performance nexus move the boundary conditions literature a step further. Bigger companies (or those that have access to a larger amount of capital), whose revenues are diversified, and have established green finance governance mechanisms, type in a disproportionately larger amount of performance returns. This informational advantage supports the policy intervention recommendation that would even out the playing field of green financing of small and medium enterprises in the consumer sector in Pakistan. The multiplicative nature of financial risk management is also in line with (Agliardi & Agliardi, 2021) who identified that firms that have developed risk governance are in a better position to monetize green financial instruments during times of transition and under market uncertainties.

### Limitations

There are several limitations to this study. Cross-sectional research study does not allow making causal assumptions because simultaneous data gathering is not able to reflect the dynamics of time between the process of green finance adoption and financial performance levels. The sample, though adequate in the case of PLS-SEM is both geographically and



sectoral narrow to the consumer market in Pakistan, which limits the generalisability of results to other emerging economies or sectors of industry. Also, the use of self-reported survey data presents a threat of common method bias, but procedural solutions, such as the use of anonymous data collection and Harman single factor check, were used. Perceptual scales of measurement of constructs instead of archival financial data can also be an indicator of managerial cognition, as opposed to objective firm-level outcomes.

### **Future Research Directions**

Longitudinal designs should be taken to understand the causal relationships between the integration of green finance and financial performance developments over a period in the future. The cross-country analysis of the economies in South Asia would help to understand whether the entire pattern of full-mediation is either context-dependent or general. It is recommended that researchers should complement the findings of surveys with archival financial information such as annual reports and sustainability disclosures to improve the construct validity. Also, exploring the heterogeneity on the sector level in the consumer market (i.e., comparing FMCG and Fashion sub-sectors) could also draw significant details in the relationship between green finance and performance. The addition of other sets of conditions on the boundary, including institutional quality, ESG reporting maturity, or managerial environmental orientation, can be fruitful in the future development of this framework.

### **Conclusion**

This paper presents significant findings that green finance is an important strategic catalyst between traditional fiscal management practices, and the high-quality financial performance of firms in the consumer market in Pakistan. Although debt management and credit policy are core to the traditional financial governance, they cannot lead to financial performance improvements by themselves; their effectiveness is solely dependent on green finance as an intermediary process. The ability of financial risk management and the scale of the organization also define the scale of the performance impact of green finance, and the role of contextual fit in the integration of sustainability and finance. The implications of the findings to practitioners are that a paradigm shift is needed: current financial optimization needs to be supplemented with planned green finance policies to provide sustainable competitive advantages. The policy makers on their part are encouraged to produce convenient green capital instruments and conducive regulatory environments that can help companies both big and small in the consumer sector of Pakistan to contribute significantly towards the green finance ecosystem.

### **References**

- Ademi, B., & Klungseth, N. J. (2022). Does it pay to deliver superior ESG performance? Evidence from US S&P 500 companies. *Journal of Global Responsibility*, 13(4), 421–449. <https://doi.org/10.1108/JGR-01-2022-0006>
- Agliardi, E., & Agliardi, R. (2021). Corporate Green Bonds: Understanding the Greenium in a Two-Factor Structural Model. *Environmental and Resource Economics*, 80(2), 257–278. <https://doi.org/10.1007/s10640-021-00585-7>
- Bibi, A., Khan, I. U., Fahad, S., & Khalid, Z. (2026). FROM SOCIAL MEDIA MARKETING TO CUSTOMER LOYALTY: THE MODERATING ROLE OF BRAND TRUST IN E-COMMERCE. <https://doi.org/10.5281/ZENODO.18813373>
- Broadstock, D. C., Chan, K., Cheng, L. T. W., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Finance Research Letters*, 38, 101716. <https://doi.org/10.1016/j.fr1.2020.101716>



- Fahad, S., Khan, I. U., Bibi, A., & Sarwar, A. (2026). The Impact of Multi-Dimensional Engagement on Talent Retention and Organizational Performance: The Mediating Role of Employee Engagement in the Nursing Workforce. *Journal of Political Stability Archive*, 4(1), 208–226. <https://doi.org/10.63468/jpsa.4.1.12>
- Flammer, C. (2021). Corporate green bonds. *Journal of Financial Economics*, 142(2), 499–516. <https://doi.org/10.1016/j.jfineco.2021.01.010>
- Kamran, Khan, I. U., Mahmood, U., & Khalid, Z. (2026). JOB AUTONOMY, MANAGEMENT SUPPORT, AND DIGITAL COMPETENCE EFFECTS ON PRODUCTIVITY: ENGAGEMENT MEDIATION. <https://doi.org/10.5281/ZENODO.18857603>
- Khalid, Z., Khan, I.-U., Sarwar, A., Bibi, A., & Ali, N. (2026). The Impact of AI, Digital Learning, and Blended Approaches on Student Engagement for Inclusive Education. *The Critical Review of Social Sciences Studies*, 4(1), 90–105. <https://doi.org/10.59075/5r5c2740>
- Lee, C.-C., & Lee, C.-C. (2022). How does green finance affect green total factor productivity? Evidence from China. *Energy Economics*, 107, 105863. <https://doi.org/10.1016/j.eneco.2022.105863>
- Mahmood, U., Khan, I.-U., Kamran, & Khalid, Z. (2026). Digital marketing adoption as a strategic mediator between capabilities and performance: Evidence from SMEs in Pakistan. *Social Sciences Spectrum*, 5(1), 102–115. <https://doi.org/10.71085/sss.05.01.466>
- Meo, M. S., & Karim, M. Z. A. (2022). The role of green finance in reducing CO2 emissions: An empirical analysis. *Borsa Istanbul Review*, 22(1), 169–178. <https://doi.org/10.1016/j.bir.2021.03.002>
- Naeem, Z., Khan, I. U., Shehzadi, I., & Khalid, Z. (2026). Exploring the Relationship Between Sustainable Business Practices and Brand Loyalty: Evidence from Pakistan's Manufacturing and Retail. *Journal of Political Stability Archive*, 4(1), 401–415. <https://doi.org/10.63468/jpsa.4.1.23>
- Pham, L., & Nguyen, C. P. (2021). Asymmetric tail dependence between green bonds and other asset classes. *Global Finance Journal*, 50, 100669. <https://doi.org/10.1016/j.gfj.2021.100669>
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). Partial Least Squares Structural Equation Modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of Market Research* (pp. 587–632). Springer International Publishing. [https://doi.org/10.1007/978-3-319-57413-4\\_15](https://doi.org/10.1007/978-3-319-57413-4_15)
- Sarwar, A., Khan, I. U., & Khalid, Z. (2025). Influencer Marketing's Trust Crisis: The Impact of Fake Followers, Paid Reviews and Non-Disclosure of Sponsorship on Brand Reputation Damage. *Journal of Social and Organizational Matters*, 4(1), 674–687. <https://doi.org/10.56976/jsom.v4i1.381>
- Shehzadi, I., Khan, I.-U., Ul Rehman, A., shafia, & Sarwar, A. (2026). HOW HR PRACTICES REDUCE TURNOVER INTENTION: EXAMINING THE MEDIATING ROLE OF WORK-LIFE BALANCE. <https://doi.org/10.5281/ZENODO.18953671>
- Wang, M., Li, X., & Wang, S. (2021). Discovering research trends and opportunities of green finance and energy policy: A data-driven scientometric analysis. *Energy Policy*, 154, 112295. <https://doi.org/10.1016/j.enpol.2021.112295>