

DOI: 10.53555/ks.v12i4.3080

Driving competitiveness through innovation & corporate social responsibility: Mediating Analysis

Dodo Khan Alias Khalid Malokani^{1*}, Dr. Tayyaba Rafique Makhdoom², Dr. Noreen Hassan³, Dr. Taskeen Zahra Buriro⁴, Dr. Seema N. Mumtaz⁵, Dr. Mansoor Ali Darazi⁶

^{1*}Assistant Professor, Department of Business Administration, Government College University, Hyderabad, Pakistan, alias.khalid@gcuh.edu.pk, ORCID: <https://orcid.org/0009-0009-3439-4822>.

²Assistant Professor, Department of Business Administration Sindh University Laar Campus Badin, Pakistan.

³Assistant Professor, Department of Business Administration, Federal Urdu University of Arts, Science and Technology, Gulshan Campus, Karachi.

⁴Assistant Professor, University of Sufism and Modern Sciences Bhitshah.

⁵Chair Dept. Of Community Medicine -Karachi Institute of Medical Sciences, National University of Medical Sciences, Malir Cantt. Karachi, Pakistan.

⁶Assistant Professor, Department of Education, Benazir Bhutto Shaheed University Lyari Karachi, Pakistan.

***Corresponding Author:** Dodo Khan Alias Khalid Malokani

*Assistant Professor, Department of Business Administration, Government College University, Hyderabad, Pakistan, alias.khalid@gcuh.edu.pk, ORCID: <https://orcid.org/0009-0009-3439-4822>.

Abstract

Corporate social responsibility as well as green innovation are engines that drive sustainable competitiveness. Over the course of the past few years, the significance of social responsibility and competition has been increasingly prominent. Fewer studies, have addressed intricate link that exists between competitiveness, sustainable innovation, and also their interaction with corporate social responsibilities. Most of the articles have described the connection that shows linkage of green innovation, corporate social responsibility and banking industry competitiveness, while also including the function of green innovation as mediator. An innovative conceptual model was developed by employing structural equation modeling approach as foundation. The findings reveal corporate social responsibility has positive associations on competitiveness. Additionally, the green innovation acts as mediator between both the variables such as corporate social responsibility and competitiveness. These findings were obtained by assessing and analyzing 315 genuine questionnaires in useful condition obtained from respondents of National bank branches situated in Sindh, Pakistan. Ultimately, the management of the organization would improve green innovation and attain competitiveness in the banking industry through the implementation of corporate social responsibility principles.

Keywords: Competitiveness, Green innovation, Corporate social responsibility, Banking sector, Sindh, Pakistan

Introduction

Corporate social responsibility became corporate activity where all the social actors collaborate with stakeholders to benefit society (Qian, Law, Wei, & Li, 2021). Corporate social responsibility entails a long-term commitment with the purpose of improving the values it provides, more broadly covering positive image and stakeholder's perception, also by including consumer loyalty. Enhancing company practices, improving brand image, reducing regulatory oversight, and increasing the income through sales. Additionally, corporate social responsibility may improve employee morale and productivity. Researchers from near past (Kraus, Rehman, & García, 2020; Lu & Zhu, 2021) suggested that employees who had believed their company is making a positive impact on society sought higher job satisfaction and motivation.

There are various ways that green innovation might help in the activities those responsible for preserving the environment. It may result in the development of renewable energy sources, which will reduce our reliance on fossil fuels and reduce carbon emissions as well. Green technologies can also enhance waste management systems, promote sustainable agriculture practices, and increase the use of environmentally friendly materials in manufacturing processes (Islam et al., 2021). Green innovation may face hurdles such as high upfront costs, a lack of knowledge and acceptance, and criticism from sectors that rely heavily on traditional methods of production. To overcome these challenges, governments, organizations, and individuals must work together to fund research and development activities, and also to provide incentives for the availability of environmental friendly technology on eminent basis, and raise awareness of importance of sustainable behaviors among employees and management of the organization (Li et al., 2020).

Furthermore, CSR actions significantly improve a company's overall competitiveness within an industry (Xu, Jing, and Lu, 2022). Implementing CSR activities will boost a company's favourable brand image, hence increasing its competitive advantage. As a result, corporate social responsibility (CSR) can be extremely beneficial to businesses, assisting them in achieving a variety of objectives such as regulatory compliance, developing a positive corporate image, and gaining market

share by attracting customers who are concerned about the environmental impacts of businesses (Shahzad, Qu, Javed, Zafar, & Rehman, 2020). Green innovation deployment and enhancement are positively associated with the overall environmental performance of all workers' CSR activities in the organization (Shahzad et al., 2020). Furthermore, CSR approaches that mainly focuses on improving social and environmental sustainability are gaining traction in the corporate world. These practices attempt to ensure that businesses operate ethically and responsibly, considering the influence of their actions on society and the environment. Companies can improve community well-being, conserve natural resources, and build the trust with stakeholders by implementing CSR practices. Businesses' ability to manage environmental and social implications beyond their supply chain is expected to play a key influencing role in their ability to compete. Although CSR activities had become extensively studied, there is currently a paucity of research on CSR that could enhance competitiveness through green innovation in the banking industry from an organizational performance with respect to latest point of viewpoint (Bárcena-Ruiz, Garzón, & Sagasta, 2023).

In the framework of the causal link between responsible businesses and competitiveness, our research looks green innovation as mediator. According to Zameer et al. (2022), corporate social responsibility-focused mainly on innovation is seen not only as a response to green challenges, but considers it as main driver in long-term growth. Research on the impact of CSR and GI (the green involvement) on competitiveness had been undertaken extensively in developing countries, including Western countries (Bahta et al., 2021) and to some extent selected Asian markets (Shahzad et al., 2020). However, there has been little investigation in other parts of the world. The article's key contribution is a set of manifest variables that define CSR, green innovation practices, and how these practices contribute to enhance the competitive advantage in Pakistan's banking sector cluster. First of all, this study is notably novel in that, it develops a conceptual framework that connects CSR and competitiveness using the different features of green innovation as a mediator. Second, it differs significantly from past studies of CSR in that respect as it considers both inventive contrast and competition level. To the best of our knowledge, no previous study has proposed a structure that connects CSR, competitiveness, and green innovation in the banking industry. This study attempts to bridge the research gap. Third, the majority of the studies used multiple regression to examine CSR and competitive analysis of various organisations functioning developing countries like Pakistan. In this study, a quantitative analysis was used to investigate the relationship among competitiveness, CSR, and green innovation using AMOS. Fourth, the report provides a detailed review of green innovation problems and potentials present in the banking sector. Fifth, the study investigates CSR, competitiveness, and green innovation in the perspective of Pakistani organizational setup in banks in Pakistani culture, as do most studies undertaken in western countries.

Literature review

Corporate social responsibility

Corporate social responsibility disclosure is a difficult topic that plays an important part in organizational success. According to Ali and Kaur (2021), CSR first appeared in the 1960s and 1970s. From 18th to middle of twentieth century during modern era—these societal challenges arose as a result of the Industrial Revolution, which made certain firms concerned about the well-being of its employees and families. These societal difficulties arose in the modern age, specifically between the 18th and mid-twentieth centuries, when the Industrial Revolution caused certain enterprises to be concerned about the wellbeing of their employees and families (Bonsu, Guo, & Zhu, 2023; Malokani et al., 2023). Modern organisations that meet people's needs have their roots in the welfare state, which arose in the twentieth century as a result of a compassionate and caring mindset.

In the 2000s, many scientific and official organisations provided explicit definitions of the term "corporate social responsibility". Concepts like ethics and social duty were clearly established here. Furthermore, they highlighted the stakeholder groups who had stood to benefit from CSR programmes (Adomako et al., 2023). Corporate social responsibility (CSR) is an organization's continual commitment to acting ethically, promoting economic growth, and improving the lives of its employees, their families, the community, and society as a whole. According to historical research (Bárcena-Ruiz et al., 2023; Bonsu et al., 2023; Chang, Wannamakok, & Lin, 2023; Chaudhary & Kumar, 2022; Chen, Chen, & Jebran, 2021; Chung, Tyan, & Lee, 2019; Dai, Siddik, & Tian, 2022), there are commonalities among the various definitions of social responsibility and corporate social responsibility. Corporate social responsibility (CSR) is a discretionary activity, as is mentioned by its characteristics. Consider social responsibility at all stages of a company's activities. Beyond economic and legal obligations, every company owes duties towards all of the stakeholders and the society from which it draws resources and whose lives are influenced by its operations.

Competitiveness

In the current global economy, competitiveness is a crucial factor that significantly influences the performance of businesses, according to Wang et al. (2021). Maintaining a competitive advantage over competitors is not only critical for businesses, but the administration and stakeholders must also consistently strive to improve the products, services, and operations to meet the phenomenon constantly changing with respect to the demands of the current market. Enterprises such that fail to possess competitiveness risk falling behind their rivals and losing their appeal to consumers in the present day market (Zhou et al., 2021). The primary objective of this latest research activity is to examine the diverse strategies that organisations can implement to enhance their competitive edge and attain long-term, sustainable growth in the organization. Initiatives such as resource management, research and development investment, and innovation encouragement, as well as resource investment as well as using financial inputs, all of these are among the topics that will be addressed during this research phenomenon. Organisations possess the capability to not only maintain their competitive advantage but also adjust to evolving market dynamics and emerging trends by effectively implementing these strategies. Ultimately, the goal is to establish a sustainable

competitive edge that ensures the ongoing prosperity and financial viability of the organization in the long run. Furthermore, enterprises may prioritize the development and education of their employees and the cultivation of positive relationships with their suppliers and consumers. According to the results of a study conducted by Li et al. in 2020, organizations can strengthen their market position and distinguish themselves from competitors by prioritizing customer satisfaction and loyalty levels. To further compound the already negative situation, organizations have the ability to reduce costs and streamline operations through ongoing process and operational as well as practical improvements; this ultimately leads to increased profitability and sustainability for the organization and society as well. Overall, organizations possess the capacity to solidify the exact market position for the foreseeable future and establish through the practical performance as frontrunners in their respective sectors through employing the strategic combination of these methods.

Green Innovation

According to the definition basically connected with the research of Bárcena-Ruiz et al. (2023), green innovation is the process of enhancing goods and processes via the use of physical and virtual hardware or software innovations (Mumtaz et al., 2023). Technologies that are connected to the conservation of energy, the avoidance of pollution, the recycling of trash, the designing of environmentally friendly products, the utilization of environmental issues addressed through businesses are included in this category. A conventional invention is distinguished from a green innovation with the help of the fact that latter is driven by requirement to comply with ecological regulations or to satisfy the ecological interests necessary for the society and eco-system (Malokani et al., 2024; Chaudhary and Kumar, 2022). This is the source of the information that has been supplied. According to German et al. (2023), research on green innovation is a relatively a new endeavor that primarily focuses on defining and explaining the related theory.

CSR and competitiveness

CSR is theoretically significant in the financial and competitive practices of a firm (Shahzad et al., 2020). Various CSR scholars emphasized and focused on the advantages for the company, including economic benefits through reducing the costs, social benefits through improved community relations, and environmental benefits by optimizing processes and managing resources efficiently to reduce emissions. Economic and social aims are argued to be intricately linked in the long run (Ali & Kaur, 2021). (Uyar, Karaman, & Kilic, 2020) noted that institutional and social investors have identified shared fundamental principles for long-term success of businesses, emphasizing the need of maintaining strong corporate, social, and administrative practices. Moreover, issues likely to reside in expecting short-term results when evaluating social value practices, leading to a misconception of wasteful spending, which should instead be examined in the long run. Long-term benefits such as sustainable competitiveness can be achieved (Hermundsdottir & Aspelund, 2021). Because of the significant impact that the social environment has on a company's operations and competitiveness, it is impossible for a company to function effectively if it isolates itself from the social environment (2023).

According to earlier research, CSR has a significant role in enhancing product and service quality by meeting stakeholders' expectations, which in turn impacts market performance (Xu et al., 2022). Furthermore, implementing equitable employee treatment procedures and efficiently managing resources may create a sense of reciprocity among the local community. This enhances consumers' impression and increases firm sales (Islam et al., 2021). Economic globalization and increasing access to information have led to a rise in socially conscious consumers who demand environmentally friendly products. Talented people managing intangible assets may enhance human capital productivity, leading to lasting competitive advantages (Afum et al., 2020). According to Xu et al. (2022) in their research, the introduction of measures linked to corporate social responsibility is believed to have a favorable influence on human talent, resulting in a reduction in expenditures associated with staff retention and absenteeism.

From the findings of empirical study, it can be concluded that CSR is an exogenous variable. In order to verify this theory, Guo and Lu (2021) conducted a study that looked at the relationship between corporate social responsibility & competitiveness. This association was first published in 1996, and since then, there has been a discernible increase in the amount of scientific work that has been done. Several studies show that responsible business practices increase corporate competitiveness (Bonsu et al., 2023; Guo & Lu, 2021). Therefore, we formulated our initial hypothesis:

H1: CSR practices having positive relationship to competitiveness among Pakistani banks.

Green innovation and, competitiveness

The creation of value is accomplished with the help of conventional innovation activities through the enhancement of efficiency level, frequency of production, or the better performance. According to German et al. (2023), green innovation is a value-adding strategy that makes use of products and processes to address environmental concerns that are present in the market, industry, company, or customers' mindsets. Hence, green process innovation and green product innovation are the two components that make up the atmosphere of innovative green practices. Green product innovation involves implementing creative concepts to develop, produce, and promote new products that surpass traditional corporate social responsibility products in terms of originality and ecological design. Green process innovation include energy conservation, pollution reduction, waste reuse, and non-toxic materials (Bonsu et al., 2023). (Chung et al., 2019) suggest that focusing on environmental effect might help differentiate products and enhance internationalized prospects in economies with environmentally conscious customers, and thereby boosting long-term market performance and business turnover (Chaudhary & Kumar, 2022). In this case, green innovation affects competitiveness (Le & Ikram, 2022).

Innovation therefore must generate value by increasing the productivity, resulting in higher margins, profits, market share, corporate image, ecological performance, or a combination of these factors, ultimately enhancing competitiveness (Shahzad et al., 2020).

Organizations are inclined to engage in green technologies to generate new market possibilities and gain a competitive edge by establishing themselves as environmentally as well as societally friendly firms (Ali & Kaur, 2021; Shahzad et al., 2020). Successful green innovation enhances a company's efficiency and eco-friendly reputation, leading to increased profitability (Shahzad et al., 2020). Corporations leading towards the path of innovation are expected to increase the pricing strategy for environmentally friendly goods, services and products enhancing their corporate image, promote the environmental technology or services more effectively, and ultimately create new markets to achieve a competitive edge. So, hypothesis such that be assumed:

H2: Competitiveness of banks is positively impacted by green innovation.

Mediating effect

According to Bahta et al. (2021), businesses that place a special emphasis on corporate social responsibility (CSR) have the potential to boost their capacity for innovation. The prospect of improving environmental management performance are still being adhering to environmental protection regulations is an advantage that may be found in green innovation, according to some people. According to Hermundsottir and Aspelund (2021), green innovation is seen as a means of addressing environmental concerns and fostering sustainable business success (Liu et al., 2023). It is important for businesses to investigate the potential advantages provided by environmentally friendly innovations before implementing them in the organizations. The concept of GI has investigated in number of studies, typically as exogenous variable and mediating variable (Chaudhary and Kumar, 2022; Dai et al. 2022). The theoretical components of green innovation are the topic of a number of research, such that try to conceptualize and develop the notion further towards overall phenomenon of the organization. Researchers (Abaimov and Martellini, 2020; Chaudhary and Kumar, 2022) are now in the process of defining and investigating the meaning and extent of their concept of green innovation. In accordance with the assumptions that are presented below, the purpose of our research is to analyze the manner in which green innovation acts as a mediator between Corporate Social Responsibility (CSR) and competitiveness.

H3. The connection between CSR and competitiveness is mediated by green innovation.

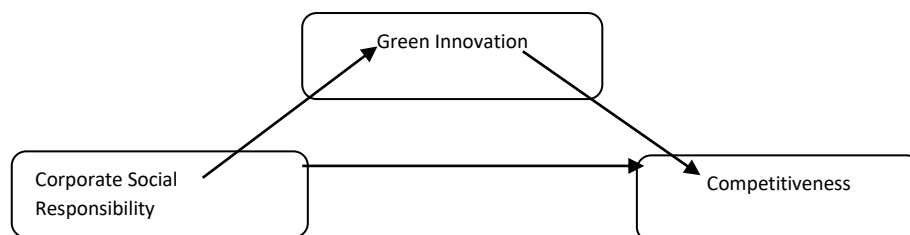


Figure 1 Conceptual framework

Methodology

The present study follows quantitative approach, utilizing logical reasoning and focusing on causality. Quantitative methodologies (315 questionnaires) were utilized to investigate relationship among CSR characteristics, GI, and competitiveness. During data collection in different branches of National bank throughout Sindh Pakistan, 400 questionnaires were created and sent to National Bank employees, 45 questionnaires were not responded, and 40 responses were excluded due to error term. In order to analyse green innovation, CSR trends, and the competitiveness dimension, all items were evaluated using five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), with demographic information being the only exception. Based on the previous studies, scale modified and adapted items for each dimension. To guarantee the reliability of the scale, a series of tests was administered, including pretest, pilot test, confirmatory factor analysis (CFA), and Cronbach's alpha.

Pilot study

To evaluate the questionnaire's translation into the Pakistani setting, original instruments were translated from English to Urdu, and then changed to meet the demands of this study. However, due to certain changes in translation, initial level preliminary test was undertaken to ensure scale's reliability and validity. To avoid prejudice, unfamiliar phrases were removed from questions to make them clear, precise, and succinct. To reduce uncertainty. In the preliminary test, 25 banking employees from the various branches of NBP situated in Sindh were asked to fill questionnaires. A finding of pilot test was satisfactory, which led to successful completion of initial step towards the application of structural equations.

Table I CR, AVE and Factor loading

		Factor-Loading	Cronbach	AVE	CR
Corporate social responsibility	CSR-1	0.86	0.084	0.86	.91
	CSR-2	0.87			
	CSR-3	0.88			
	CSR-4	0.76			
Competitiveness	IC-1	0.73	0.076	0.84	0.88
	IC-2	0.73			

	IC-4	0.76		
	IC-5	0.72		
	IC-6	0.78		
	GI-1	0.82		0.86
	GI -2	0.76		
Green Innovation	GI -3	0.82	0.082	0.87
	GI -4	0.88		
	GI -5	0.89		

Table: II Discriminant validity (Fornell-Larcker Criterion)

	Mean	S.D	1	2	3
Corporate social responsibility	3.12	1.08	(.91)		
Competitiveness	3.20	1.24	.44**	(.88)	
Green Innovation	3.18	1.12	.39**	.53**	(.87)

Table III. Measurement model fit indices

	$\chi^2 / \Delta\chi^2$	CFI	RMSEA	TLI	RMR
Corporate social responsibility	2.27*	.97	.074	.97	.02
Competitiveness	2.38*	.96	.075	.96	.05
Green innovation	2.32*	.98	.072	.98	.04
Final model	1.35*	.92	.067	.94	.06

Measurement Scale

CSR

CSR construct items were evaluated based on theories related to social, environmental, and economic CSR activities (Freeman & Velamuri, 2023). So, four CSR items were included in current research to measure CSR activities. More, sample items were as follows, such as my bank recognizes significance of supplier, customers, and partners relationship.

Green Innovation

GI constructs were evaluated by five items based on innovation model taken from (Tomlinson & Fai, 2013). These items measured the bank staff innovation practices. Sample items included, like my bank’s adaption to changes and newest markets.

Competitiveness

Competitiveness constructs were measured by six items from previous studies (Yang, Zhang, Jiang, & Sun, 2015) to discover bank competitiveness measure. Sample items included my bank is competitive because of enhance corporate culture strength.

Results:

The data analysis process was conducted in a dual-step manner. The initial stage of the procedure involved applying AMOS 25.0 to the questionnaire responses in order to conduct a confirmatory factorial analysis (CFA). For the purpose of assessing the model's construct validity, reliability, and fit, this action was taken. As the concluding step, SEM was employed to assess assumptions. In order to assess the reliability of the measures, a specific Cronbach's alpha and AVE were utilized. The development of a measurement model was intended to streamline the process of assessing model fit and obtaining standardised loadings across dimensions, the elements comprising those dimensions. Prior to calculating estimates utilizing SEM, critical to conduct a CFA on the measurement model to ascertain its acceptability. Table 1 presents the results of the measurement model fit for various construct components, including the estimated values of χ^2 , CFI, TLI, RMSEA, RMR, and chi-square difference. The satisfactory model fit for each individual construct and the aggregate model fit is displayed in Table 1. Cronbach alpha, AVE, and CR values for a particular construct are presented in Table 2. The Cronbach's alpha coefficients for green innovation, competitiveness, and CSR were 0.84, 0.76, and 0.82, respectively. AVE and CR values, however, also have a predetermined threshold. The statistical significance of the factor loadings for individual constructs was indicated by values ranging from 0.72 to 0.89 ($p < 0.001$). The discriminant validity of AVE was also assessed using measures of AVE as described in Table III (Fornell & Larcker, 1981). The latent variable AVE square root surpasses the dimension correlations, as shown in Table III. The present analyses therefore embrace the constructs' validity (convergent and discriminant) and dependability. The assessment of second-order model fit was conducted using measurement models (CFA) that represented second-order constructs. As shown in Table III, the results and model fit estimates (CFA) are therefore adequate. RMSEA = 0.067, $\chi^2/df = 1.35$, CFI = 0.92, and RMR = 0.06.

Structural Model

Utilizing the measurement models of second-order constructs, structural model (Appendix) subsequently assessed. Furthermore, this was substantiated by the identification of significance along with each of the predicted trajectories, thereby validating hypotheses formulated during inquiry. The findings indicate that CSR and green innovation both positively

influence competitiveness (H1) and H2, respectively, as supported by statistically significant standardised estimates of 0.61, 0.53 and 0.44 (significant). Hence, the study's results indicate that banking firms experienced enhanced market and tangible asset performance when they adopted formal corporate social responsibility (CSR) strategies, which included CSR initiatives related to the environment, workplace, and marketplace, in addition to green product and process innovation. A comprehensive assessment and examination of the overall consequences of the mediation was undertaken by Hayes and Preacher (2013). This analysis encompassed both the immediate and delayed indirect effects. The direct and indirect effects of corporate social responsibility (CSR) on competitiveness were both found to be significant at the 95% confidence level. The direct effect was 0.53, and the indirect effect was 0.24, which was adjusted for the variable green innovation. Given results, one could deduce that green innovation serves as a partial intermediary in the relationship between competitiveness and corporate social responsibility.

Table 4 Hypothesis Testing

Hypothesis	Path	Beta-value	Result	P-value
H1	CSR-IC	0.53	Supported	***
H2	IC-GI	0.545	Supported	***
H3	CSR-GI	0.437	Supported	***
H4	CSR-GI-IC	0.24	Partial mediation	***

Discussion

By presenting novel insights into the causal connections among corporate social responsibility (CSR), ecological innovation, and competitiveness within banking sector of Pakistan, this research endeavors has the potential to address numerous inquiries associated with CSR studies. Prior research (Hermundsdottir and Aspelund, 2021; Ali and Kaur, 2021) and the current study's findings regarding correlation between corporate social responsibility and competitiveness (H1) and the positive influence of CSR activities on organizational competitiveness through the gradual reduction of risks and cost structures are all consistent with the results of the present investigation. Human talent-focused CSR has a tendency to foster employee relationships, which increases employee engagement, productivity, and the rate of employee turnover. Implementing employee health and safety protection programmes into business operations enhances competitiveness attributes including reputation, productivity, creativity, and image. Furthermore, it exerts a favourable impact on the concept of "image." In relation to formal corporate social responsibility (CSR) strategies, Afum et al. (2020) observed that organizations pursue diverse certifications to distinguish themselves from rivals and attract a greater number of environmentally aware consumers for their products. Our findings provide support for this assertion.

Based on the results reported in the study (Agyabeng-Mensah & Tang, 2021), previous investigations have identified a positive and statistically significant correlation (H2) between environmentally sustainable innovation and competitiveness. As stated by Barcena-Ruiz et al. (2023), organisations contemplate allocating resources towards green innovation due to the perception that "going greener" empowers them to penetrate untapped markets, improve efficiency, and attain a competitive advantage. A partial mediation of friendly ecological innovation was discovered (H4). Firms may potentially be able to enhance their corporate social responsibility (CSR) initiatives by improving their competitiveness via innovation performance.

Scholarly sources indicate that in developing nations such as Pakistan, corporate social responsibility (CSR) and environmentally sustainable innovation are significant factors influencing industrial competitiveness. This observation suggests that our results are consistent with those reported in the literature. Particularly lacking in information regarding the relationship between corporate social responsibility (CSR), ecological innovation, and competitiveness is the banking industry, according to our review of the pertinent literature. It has been observed that customers place greater importance on green processes that underpin the products and services they purchase, surpassing even perceived quality and price. Consequently, green practices have been associated with enhanced financial performance and competitiveness in global markets.

Several investigations have reported findings that are strikingly similar (Shahzad et al., 2020; Ali and Kaur, 2021). This study possesses the capacity to augment the current body of knowledge by demonstrating that green innovation and CSR exert a substantial and favourable impact on the competitiveness of manufacturing in an emerging market context. Furthermore, our investigation illuminates the correlation between CSR and the development of an innovative culture. By enforcing sustainability, environmental, and social controls, CSR can potentially foster the emergence of novel business models, products, services, or processes that enhance the efficiency and its supply chain. Over time, these advantages percolate down to the local community that is providing space for the new enterprise.

Limitations

The results of the study cannot be extended to the other context or to developing nations as a whole because the survey's primary emphasis was on the banking industry in Pakistan primarily. On the other hand, this would present an opportunity to broaden the scope of this study or apply it to further markets. Given the same subject matter, it was necessary for our research to investigate green innovation in a direct capacity as a mediator, rather than employing a general innovation strategy to ascertain the impact of mediating. Even although it has been investigated in the past in economies that are already well-established, the expansion of the mediator role between corporate social responsibility and competitiveness to encompass a broader definition of innovation may provide a substantial possibility for further research in an environment that is characterized by developing markets. The kind of quantitative approach that we took was still another significant

constraint. To acquire a more profound comprehension of the patterns and dynamics that exist between constructs throughout the course of time, it is possible that in the future, analogous study will be carried out or augmented. Furthermore, additional qualities that may have an impact on competitiveness, such as green paradoxical leadership, changing inventive culture, and green performance across a variety of industries, might be taken into consideration in further research. The concept of green supply chain management is one of the ideas that could be included. This is a method that aims to maximize the transactional and cooperative interface between businesses and their suppliers and customers. This is because corporate social responsibility (CSR) and green innovation can be utilized throughout the entire supply chain to deliver impact and long-term competitiveness. The establishment of collaborative improvement initiatives and the selection of suppliers that have consistently high environmental performance are two of these processes.

References

1. Adomako, S., Abdelgawad, S. G., Ahsan, M., Amankwah-Amoah, J., & Liedong, T. A. (2023). Nonmarket strategy in emerging markets: The link between SMEs' corporate political activity, corporate social responsibility, and firm competitiveness. *Journal of Business Research*, 160, 113767.
2. Afum, E., Agyabeng-Mensah, Y., Sun, Z., Frimpong, B., Kusi, L. Y., & Acquah, I. S. K. (2020). Exploring the link between green manufacturing, operational competitiveness, firm reputation and sustainable performance dimensions: a mediated approach. *Journal of Manufacturing Technology Management*, 31(7), 1417-1438.
3. Ali, S. S., & Kaur, R. (2021). Effectiveness of corporate social responsibility (CSR) in implementation of social sustainability in warehousing of developing countries: A hybrid approach. *Journal of Cleaner Production*, 324, 129154.
4. Bárcena-Ruiz, J. C., Garzón, M. B., & Sagasta, A. (2023). Environmental corporate social responsibility, R&D and disclosure of "green" innovation knowledge. *Energy Economics*, 120, 106628.
5. Bonsu, M. O.-A., Guo, Y., & Zhu, X. (2023). Does green innovation mediate corporate social responsibility and environmental performance? Empirical evidence from emerging markets. *Journal of Applied Accounting Research*.
6. Chang, Y.-Y., Wannamakok, W., & Lin, Y.-H. (2023). Work conformity as a double-edged sword: Disentangling intra-firm social dynamics and employees' innovative performance in technology-intensive firms. *Asia Pacific Management Review*.
7. Chaudhary, R., & Kumar, C. (2022). Innovations and eco-sustainability: exploring the role of organizational environment. *Social Responsibility Journal*, 18(6), 1069-1088.
8. Chen, S., Chen, Y., & Jebran, K. (2021). Trust and corporate social responsibility: From expected utility and social normative perspective. *Journal of Business Research*, 134, 518-530.
9. Chung, N., Tyan, I., & Lee, S. J. (2019). Eco-innovative museums and visitors' perceptions of corporate social responsibility. *Sustainability*, 11(20), 5744.
10. Dai, X., Siddik, A. B., & Tian, H. (2022). Corporate social responsibility, green finance and environmental performance: Does green innovation matter? *Sustainability*, 14(20), 13607.
11. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
12. Freeman, R. E., & Velamuri, S. R. (2023). A new approach to CSR: Company stakeholder responsibility R. *Edward Freeman's Selected Works on Stakeholder Theory and Business Ethics* (pp. 251-264): Springer.
13. Guo, H., & Lu, W. (2021). The inverse U-shaped relationship between corporate social responsibility and competitiveness: Evidence from Chinese international construction companies. *Journal of Cleaner Production*, 295, 126374.
14. Hermundsdottir, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, 280, 124715.
15. Islam, T., Islam, R., Pitafi, A. H., Xiaobei, L., Rehmani, M., Irfan, M., & Mubarak, M. S. (2021). The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. *Sustainable Production and Consumption*, 25, 123-135.
16. Kraus, S., Rehman, S. U., & García, F. J. S. (2020). Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. *Technological forecasting and social change*, 160, 120262.
17. Le, T. T., & Ikram, M. (2022). Do sustainability innovation and firm competitiveness help improve firm performance? Evidence from the SME sector in vietnam. *Sustainable Production and Consumption*, 29, 588-599.
18. Li, J., Ren, L., Yao, S., Qiao, J., Mikalauskiene, A., & Streimikis, J. (2020). Exploring the relationship between corporate social responsibility and firm competitiveness. *Economic research-Ekonomska istraživanja*, 33(1), 1621-1646.
19. Lu, C., & Zhu, K. (2021). Do tax expenses crowd in or crowd out corporate social responsibility performance? Evidence from Chinese listed firms. *Journal of Cleaner Production*, 327, 129433.
20. Malokani, D. K. A. K., Tahal Kumar, D. T. R. M., Mumtaz, S. N., Chandio, S. P., & Lahbar, G. M. (2024). Does Organizational justice promote organizational commitment? Moderation-mediation model. *Remittances Review*, 9(1).
21. Malokani, D. K. A. K., Nawaz, M. A., & Shah, S. S. A. (2022). Corporate Social Responsibility and Employee Engagement: Evidence from Textile Industry. *Annals of Human and Social Sciences*, 3(2), 340-347.
22. Mumtaz, S. N., Qazi, N., Malokani, D. K. A. K., Gorchani, A. N., Chandio, S. P., & Lahbar, G. M. (2023). LEADERSHIP STYLES, CREATIVITY, AND INNOVATION WORK BEHAVIOR: TESTING A MEDIATION MODEL. *Russian Law Journal*, 11(9S), 753-762.
23. Qian, J., Law, R., Wei, J., & Li, X. (2021). Progress of hotel corporate social responsibility research in terms of theoretical, methodological, and thematic development. *Journal of Hospitality Marketing & Management*, 30(6), 717-737.
24. Shahzad, M., Qu, Y., Javed, S. A., Zafar, A. U., & Rehman, S. U. (2020). Relation of environment sustainability to CSR and green innovation: A case of Pakistani manufacturing industry. *Journal of Cleaner Production*, 253, 119938.

25. Tomlinson, P. R., & Fai, F. M. (2013). The nature of SME co-operation and innovation: A multi-scalar and multi-dimensional analysis. *International Journal of Production Economics*, 141(1), 316-326.
26. Uyar, A., Karaman, A. S., & Kilic, M. (2020). Is corporate social responsibility reporting a tool of signaling or greenwashing? Evidence from the worldwide logistics sector. *Journal of Cleaner Production*, 253, 119997.
27. Xu, X., Jing, R., & Lu, F. (2022). Environmental Regulation, Corporate Social Responsibility (CSR) Disclosure and Enterprise Green Innovation: Evidence from Listed Companies in China. *International Journal of Environmental Research and Public Health*, 19(22), 14771.
28. Yang, J., Zhang, F., Jiang, X., & Sun, W. (2015). Strategic flexibility, green management, and firm competitiveness in an emerging economy. *Technological forecasting and social change*, 101, 347-356.