



## Research article

# Implications of corporate social responsibility on the financial and non-financial performance of the banking sector: A moderated and mediated mechanism

Muzammal Ilyas Sindhu<sup>a,b,\*</sup>, Windijarto<sup>a</sup>, Wing-Keung Wong<sup>c,d</sup>, Laila Maswadi<sup>e</sup>

<sup>a</sup> Faculty of Economics and Business, Universitas Airlangga, Surabaya, 60115, East Java Province, Indonesia

<sup>b</sup> Department of Management Studies, Bahria University Islamabad, Pakistan

<sup>c</sup> Department of Finance, Fintech & Blockchain Research Center, and Big Data Research Center, Asia University, Taiwan

<sup>d</sup> Department of Medical Research, China Medical University Hospital, Department of Economics and Finance, The Hang Seng University of Hong Kong, Hong Kong

<sup>e</sup> Accounting and Finance Department, Jazan University, Kingdom of Saudi Arabia

## ARTICLE INFO

## Keywords:

Corporate social responsibility  
Innovation  
Stakeholder pressure  
Corporate reputation  
Financial performance  
Non-financial performance  
Structural equation modelling

## ABSTRACT

This study aims to investigate the influence of corporate social responsibility (CSR) on both financial and non-financial performance in the Pakistani banking sector by applying a quantitative research approach to the primary data from 405 branch managers in the Pakistani banking sector. Both financial and non-financial performance indicators are analyzed in relation to CSR practices. The CB-SEM findings of this study reveal a significant and positive correlation between CSR and both financial and non-financial performance. Our results demonstrate that CSR initiatives contribute to improved financial performance, reputation, and innovation within the sector. These findings confirm the importance of prioritizing social responsibility initiatives to enhance overall performance in the banking industry. This study provides valuable insights into the impact of CSR on performance in the context of the Pakistani banking sector. The research contributes to the existing literature by highlighting the positive relationship between CSR and financial/non-financial performance. The findings underscore the relevance of CSR practices for banks in Pakistan and emphasize the potential benefits of incorporating social responsibility initiatives into their operations. This study serves as a foundation for future research, encouraging further exploration of CSR's role in the banking industry and its implications for sustainable business practices.

## 1. Introduction

The classical finance theories focus on organizations maximizing shareholder wealth and improving their financial performance, which is a primary concern in a capitalistic economy. Financial institutions are especially concerned about their performance as they must consider stakeholders' financial well-being and non-financial interests. However, recent years have seen increased stakeholder activism and emphasis on long-term sustainability. Therefore, the study investigates how corporate social responsibility affects

\* Corresponding author. Faculty of Economics and Business, Universitas Airlangga, Surabaya, Indonesia.

E-mail addresses: [muzammal496@gmail.com](mailto:muzammal496@gmail.com) (M.I. Sindhu), [windijarto@feb.unair.ac.id](mailto:windijarto@feb.unair.ac.id) (Windijarto), [wong@asia.edu.tw](mailto:wong@asia.edu.tw) (W.-K. Wong), [Lmaswadi@jazanu.edu.sa](mailto:Lmaswadi@jazanu.edu.sa) (L. Maswadi).

<https://doi.org/10.1016/j.heliyon.2024.e30557>

Received 10 October 2023; Received in revised form 13 April 2024; Accepted 29 April 2024

Available online 1 May 2024

2405-8440/© 2024 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC license (<http://creativecommons.org/licenses/by-nc/4.0/>).

financial and non-financial performance [1,2]. Banks measure their financial performance through various means such as asset evaluation, efficient risk management, and offering innovative financial products in the modern era [3–5]. However, empirical evidence has shown that non-financial performance plays a critical role in stakeholder perceptions in today's highly competitive environment. Organizations are starting to focus on non-economic aspects of business that have long-term significance [6]. These aspects include the number of employees, customer satisfaction, customer service, workplace relations, new product development, cost reduction programs, research and development, personal development, and employee health and safety [7–10].

As the economic environment changes rapidly, financial performance remains a crucial aspect of planning and development for the financial sector. Governments, regulators, managers, and investors are increasingly concerned about the performance of banks [11, 12], particularly since the spillover effect of financial instability in the banking sector can impact other sectors of society and affect stakeholder behavior [13–15]. Financial innovation plays a vital role in economic development [16] as innovative companies gain a competitive edge in this rapidly changing market environment. Therefore, innovation is a pivotal determinant of organizational performance and reputation. Additionally, stakeholder demands for long-term sustainability and environmental preservation have surged in recent years [17], reflecting the importance of non-financial factors in organizational success. Studies have shown that a good reputation is linked to innovation, making it a potential determinant of an entity's reputation in today's dynamic market environment [18]. Stakeholders demand that organizations meet long-term sustainability goals and environmental preservation amidst a social and environmental activism surge. The importance of corporate social responsibility (CSR) as a determinant of corporate reputation is well established in the literature, supported by multiple theories such as stakeholder theory, social identity theory, legitimacy theory, and consumer inference-making theory [19]. In contrast, classical finance theories emphasize shareholder theory, which posits that the main objective of an organization is to maximize shareholder wealth. In our study we have operationalized the term non-financial performance as: nonfinancial information [20] refers to data and metrics that provide insights into various aspects of an organization's performance and operations beyond financial measures. This information typically includes qualitative and quantitative data related to areas such as environmental sustainability, social responsibility, employee satisfaction, customer relations, innovation efforts, corporate governance practices, and risk management strategies.

The banking sector is an integral part of Pakistan's economy, and its weakness can lead to financial crises [21], making it essential for the sector to prioritize CSR practices. Financial institutions have a social responsibility to mobilize financial resources, and CSR can result in a competitive advantage and superior financial performance [22]. The literature review suggests that the issue of divergent governance intra-structure needs to be addressed for a better understanding of the impact of CSR on financial performance in developing economies like Pakistan [23]. Further research is required to use more rigorous research methods and understand stakeholder pressure's moderating effect on the relationship between CSR and financial performance. Additionally, research is needed to understand the sequential mediation effect of innovation and corporate reputation on the relationship between CSR and financial performance. The current study aims to validate the theoretical assumptions of stakeholder theory. It can benefit academicians, businessmen, managerial personnel, investors, regulators, and international organizations in establishing socially responsible policies while considering stakeholders' expectations. In addition to the recognized gap in research concerning the influence of Corporate Social Responsibility (CSR) on financial performance in developing economies such as Pakistan, our study aims to bridge various other gaps prevalent in the existing literature. Firstly, the dearth of empirical evidence within the banking sector of Pakistan, characterized by its unique regulatory environment and economic significance, necessitates further investigation into the relationship between CSR and financial performance. Secondly, existing studies tend to focus solely on either financial or non-financial performance indicators, neglecting the interconnected nature of these dimensions. Our study aims to rectify this by examining both financial and non-financial performance indicators concurrently, thereby offering a more comprehensive understanding of the effects of CSR on organizational outcomes.

Thirdly, while several theoretical frameworks like stakeholder theory, social identity theory, and signaling theory have been proposed to elucidate the CSR-performance relationship, empirical validation of these frameworks, especially in developing economies like Pakistan, remains limited. Thus, our study seeks to contribute to the empirical validation of these theories by assessing their applicability within the banking sector of Pakistan. Lastly, while previous research has predominantly focused on the direct relationship between CSR and firm performance, there is a lack of exploration into the mediating mechanisms through which CSR impacts performance outcomes. Our study addresses this gap by investigating the sequential mediating role of innovation and corporate reputation in the CSR-performance relationship, thereby enhancing our understanding of the underlying mechanisms driving organizational performance. Overall, through addressing these methodological, theoretical, and contextual gaps, our study aims to significantly enrich the existing literature on CSR and organizational performance, particularly within the banking sector of developing economies like Pakistan.

The significance of this study lies in its contribution to the existing knowledge on corporate social responsibility (CSR) and its impact on financial and non-financial performance, particularly within the framework of stakeholder theory. Stakeholder theory posits that organizations should consider the interests and expectations of all stakeholders, not just shareholders, in their decision-making processes. By explicitly integrating stakeholder theories, including the social identity theory, consumer inference-making theory, and signaling theory, this study aims to validate the theoretical assumptions of stakeholder theory in the context of the banking sector in Pakistan.

The significance of this study lies in its contribution to the existing knowledge on CSR and its impact on financial performance, which can benefit academicians in the field of CSR research. It can also benefit businessmen, managers, and investors who are interested in understanding the relationship between CSR and financial performance [24,25]. The findings can support regulators and bankers in establishing socially responsible policies that meet stakeholders' expectations [26–28]. Moreover, the research can be valuable to local and international organizations investing in developing consumer markets, such as those resulting from initiatives

like the China-Pakistan Economic Corridor (CPEC) [29].

## 2. Literature review

Over the years, numerous studies have investigated the concept of CSR and have defined it in various ways. Carroll [30] proposed a four-part model of CSR that includes economic, legal, ethical, and philanthropic responsibilities. A structured approach to social and moral responsibilities is considered a best practice for businesses worldwide. The pyramid model delineates the four levels of overall CSR, beginning with financial performance [31]. Businesses are expected to comply with laws as each nation codifies adequate and unsatisfactory activities and practices. Ethical and moral aspects are also important aspects of CSR, as businesses need to make the correct choices to reduce stakeholder losses. Lastly, businesses must adopt policies for acceptable social and philanthropic activities to ensure corporate citizenship [30,32].

With time, business strategies toward CSR have evolved from simply demonstrating social responsibilities to considering stakeholders' internal and external organizational environments [33]. The impact of stakeholder-based CSR on financial and non-financial performance has been a topic of interest for researchers, which can be understood with the help of various theories, such as social identity theory, consumer inference-making theory (CIM), and signaling theory. Social identity theory emphasizes that consumers identify themselves with a particular group, and the perceived CSR activities of a company influence their purchase intentions and loyalty towards that company [34]. Consumer inference-making theory suggests that consumers make inferences about the quality of the company's products or services based on its CSR activities. Signaling theory argues that CSR activities signal the quality and commitment of a company to its stakeholders [35]. Therefore, understanding the impact of CSR on financial and non-financial performance requires considering various factors associated with stakeholders, such as their identity, perception, and expectations towards the company's CSR activities. By adopting a stakeholder-based approach towards CSR, companies can improve their relationship with stakeholders, enhance their reputation, and achieve better financial and non-financial performance.

Researchers have criticized that most research has only examined the direct relationship between CSR and firm performance [36]. On the other hand, some researchers have argued that more than just examining the direct relationship between CSR and firm performance is needed to fully capture the potential indirect effects of CSR on firms. Companies should aim to understand the expectations of their stakeholders and design their CSR strategies accordingly to achieve a higher level of CSR and increase consumer loyalty.

Financial innovation encompasses various aspects of an organization crucial for its long-term survival. These include technological advancements and innovations [37]. To contribute to sustainable development, companies need to adopt innovative practices [38]. Integrating products, processes, and vertical structures is regarded as integrating social perspectives based on sustainability. This highlights the need to manage financial, social, and environmental aspects to incorporate new structures, processes, and measures into the plan [39].

Researchers conducted a study to examine the relationship between CSR and the financial performance of small and medium enterprises (SMEs) in Rajasthan [40]. The study's findings revealed a significant and positive relationship between CSR and the financial performance of SMEs. The study also indicated that SMEs in Rajasthan are involved in socially responsible activities. Similarly, study conducted a study to investigate the relationship between CSR and financial performance in publicly listed companies on the Malaysian stock exchange [41]. The study provided implications that adapting to corporate socially responsible activities leads to improved economic development in Malaysian organizations. Moreover, the interconnection between CSR and the financial performance of multiple organizations listed in the IBEX-35 stock exchange of Spain was investigated. Similarly, researchers investigated the connection between banking CSR and financial performance in the United States of America. Results indicated that there was a significant and positive connection between corporate social activities and financial performance for the initial two years. However, there was no connection between CSR and performance for the year 2012.

In the context of Korea, scholars conducted a study investigating the relationship between CSR and financial performance [42]. The findings of the study provide evidence that CSR performance is partially positively correlated with both profitability and firm value. Researchers utilized a Panel Smooth Transition Regression model to explore the nonlinear relationship between environmental CSR and financial performance [43]. The study focused on listed firms in France, Germany, Italy, and Spain from 2005 to 2017. The findings revealed a diverse range of relationships, including nonlinear positive, nonlinear negative, and inverted U-shaped associations between environmental CSR and financial performance. This novel framework of regime-switching analysis provides valuable insights into the complex dynamics between environmental CSR and financial outcomes.

In the context of Chinese firms, study discovered that CSR has a positive influence on corporate financial performance [44]. Interestingly, the study also revealed that this positive relationship is further enhanced during periods of turnover among city-level officials. In a recent comprehensive review conducted [45] which examined articles published between 1984 and 2021, it was established that CSR has a direct influence on a company's financial performance.

Even though the literature is significant for the relationship between CSR and financial performance, it is limited to the non-financial firms and the evidence of the relationship in the banking sector is still inconclusive. For instance, the recent work According to the findings reported [46], there is a positive relationship between corporate financial performance and CSR expenditure. In other words, better financial performance tends to result in increased CSR expenditure. However, it should be noted that the reverse relationship, where CSR expenditure influences financial performance, is not consistently observed. Therefore, the following hypotheses are developed based on the above discussion.

**H1.** There is a significant impact of corporate social responsibility on financial performance.

**H2.** There is a significant impact of corporate social responsibility on non-financial performance.

Researchers emphasized the importance of development in promoting sustainable development for organizations. This involves updating the organization with advanced social components and encouraging employees to seek better arrangements through innovation and communication systems. Scholar further examined the relationship between corporate social performance (CSP) and development, particularly the role of family businesses in this relationship [47]. Based on board estimation procedures, the study found that family businesses have a significant impact on the relationship between progress with high social benefits and CSP. The findings suggest that family businesses play a directive role in promoting CSP and sustainable development.

**H3.** Innovation mediates the relationship between corporate social responsibility and financial performance.

**H4.** Innovation mediates the relationship between corporate social responsibility and non-financial performance.

CSR is widely studied as a significant factor affecting the overall performance of a company. Researchers have shown that companies that engage in socially responsible activities have better financial performance [40,41]. However, the mechanism of CSR affecting performance still needs to be fully understood. This literature review aims to explore the sequential mediating role of innovation and corporate reputation in CSR and performance. Innovation is considered an essential factor mediating the relationship between CSR and performance. Scholars have found that innovation positively affects CSR. It has been suggested that firms that engage in CSR activities are more likely to develop innovative products and processes, which, in turn, positively affects their performance [48]. Another study revealed that innovation can mediate between CSR and financial performance, where adopting CSR practices leads to increased innovation, which results in improved financial performance [49]. Corporate reputation is also considered an essential mediator between CSR and performance. A positive corporate reputation can enhance a company's performance, and CSR activities can significantly contribute to a company's reputation [50,51], which in turn contributes toward enhancing the firm performance [52]. Several studies have shown that CSR activities lead to a positive corporate reputation, which, in turn, positively affects a company's financial performance [50,53].

Recent studies have suggested that innovation and corporate reputation can sequentially mediate the relationship between CSR and performance. For instance, researcher found that CSR positively affects innovation [54,55], which, in turn, positively affects corporate reputation, leading to better financial performance [56]. Similarly, few studies found that CSR positively affects innovation, which, in turn, positively affects corporate reputation, leading to better financial performance. Literature suggests that innovation and corporate reputation are sequentially mediating the relationship between CSR and performance. Companies that engage in CSR activities are more likely to develop innovative products and processes, which positively affects their performance. Additionally, CSR activities lead to a positive corporate reputation, which, in turn, positively affects a company's financial performance. Therefore, companies should focus on socially responsible activities to enhance their innovation and corporate reputation, which can lead to improved performance.

**H5.** Corporate reputation mediates the relationship between corporate social responsibility and financial performance.

**H6.** Corporate reputation mediates the relationship between corporate social responsibility and non-financial performance.

**H7.** Innovation and corporate reputation mediate the relationship between corporate social responsibility and financial performance.

**H8.** Innovation and corporate reputation mediate the relationship between corporate social responsibility and non-financial performance.

The survival and success of a company depend on the efficient management of its interconnected stakeholders [57]. Organizations must consider stakeholders such as employees, owners, managers, customers, suppliers, and the natural environment as essential contributors to their success. If any of these stakeholders fail to contribute to the organization's support, it could adversely affect its performance [57]. Therefore, organizations need to establish relationships with their primary stakeholders, which can enhance their competitive advantage and improve their performance [58,59].

Research study being conducted in the Chinese industry where researchers examined the effect of external pressures from institutional factors such as the market, government, and competition on adopting green practices [60]. The study identified three main moderating factors: institutional, regulatory, and competitive market pressures. The findings suggested that the increase in external pressures has affected the adoption of green practices in the Chinese context. Moreover, the increase in market, competitive, and regulatory pressures has also affected companies' economic and operational performance. However, the study found that institutional pressure did not significantly contribute to performance.

**H9.** Stakeholder pressure moderates the relationship between corporate social responsibility and financial performance.

**H10.** Stakeholder pressure moderates the relationship between corporate social responsibility and non-financial performance.

The stakeholder theory emphasizes that organizations should be accountable to all stakeholders, not just shareholders. According to this theory, companies that engage in CSR activities are more likely to improve their financial performance as they can establish positive relationships with all stakeholders. The social identity theory posits that consumers often prefer to associate themselves with socially responsible brands [61]. This theory suggests that CSR activities can help improve customer loyalty and positively impact a company's financial performance.

The consumer inference-making theory suggests that consumers infer a company's values and attributes based on its CSR activities [62]. Companies that engage in socially responsible activities are perceived as more trustworthy and are more likely to be chosen by consumers, leading to better financial performance. The signaling theory posits that CSR activities can signal to stakeholders that a

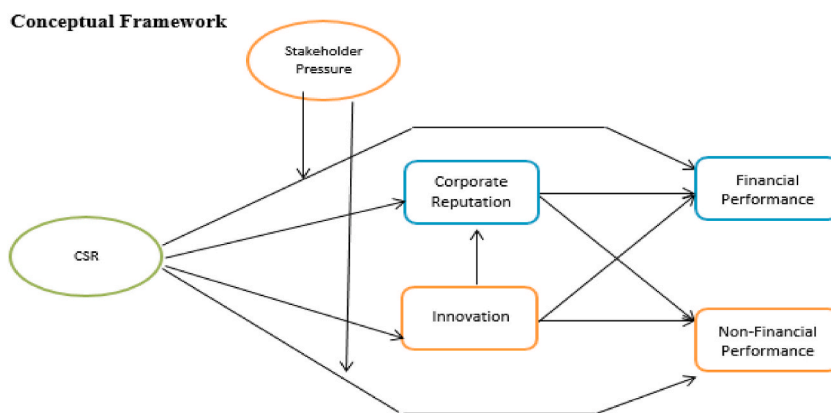
company is committed to ethical and responsible behavior [63]. This signaling can improve a company's reputation, leading to better financial performance. In the context of the banking sector in Pakistan, it is essential to examine the effect of CSR on financial performance through the lens of stakeholder theory. Additionally, the role of corporate reputation and innovation as mediators should be examined to understand their impact on the relationship between CSR and financial performance. Based on the theoretical framework, Fig. 1 presents a conceptual framework.

The literature review contain number of studies underscoring the positive nexus between CSR initiatives and financial performance across various organizational settings. However, a discerning appraisal of these findings unveils intricacies inherent in this relationship. While certain research endeavors suggest that engagement in CSR activities may yield immediate financial dividends, there remains uncertainty regarding the sustainability of such gains over the long term. Contrary viewpoints posit that an overemphasis on CSR expenditure could potentially siphon resources away from core business operations, thereby exerting a detrimental influence on financial performance in the enduring perspective. These divergent perspectives underscore the complex interplay between CSR endeavors and financial outcomes, necessitating a comprehensive examination to discern the underlying mechanisms and contextual nuances. Consequently, this study aims to contribute to the scholarly discourse by not only synthesizing existing literature but also critically evaluating the methodological approaches, theoretical underpinnings, and contextual factors that shape the CSR-performance relationship within the banking sector of developing economies like Pakistan. Through a nuanced exploration of these dynamics, this research endeavors to advance our understanding of the multifaceted interrelationship between CSR activities and financial performance, thereby informing strategic decision-making processes and policy formulations aimed at fostering sustainable organizational outcomes in the banking sector and beyond.

### 3. Data and methodology

This investigation aims to scrutinize the implications of CSR on the financial and non-financial performance of banks operating in Pakistan. Additionally, the study considered the role of stakeholder pressure as a moderating factor and the involvement of innovation and corporate reputation as mediating elements within the relationship between CSR and performance. The study's research design incorporates the onion metaphor, which delineates the study's philosophies, research methodologies, timeline, selection of samples, procedure, and techniques [64]. Adopting the positivism philosophy and utilizing quantitative methodologies, this research aims to investigate the proposed model by collecting data from respondents. The quantitative approach is suitable for examining the cause-and-effect link between dependent and independent variables. Given that the current study utilizes cross-sectional data, survey methods were employed to collect data through the distribution of questionnaires. The survey method is more appropriate and sufficient in comprehending the respondents' attitudes. The rationale behind the selection of the banking sector as the targeted population is the significant contributing role in the Pakistani economy. There is a total of 34 scheduled banks with 9054 branches working in different regions. The unit of analysis is the focal person from the branch knowing social responsibility preferably the branch manager and informed consent was obtained before initiating the questionnaire distribution process. Branch managers were chosen as the focal persons in this study due to their pivotal role within banking institutions. As key decision-makers responsible for implementing organizational policies, including those related to social responsibility, at the operational level, branch managers possess firsthand insights into the practical implementation and impact of social responsibility practices within their branches. Their direct involvement in overseeing branch activities, managing stakeholder relationships, and ensuring adherence to CSR initiatives positions them as valuable sources of information regarding the integration of CSR into day-to-day operations within the banking sector. By focusing on branch managers, this study aims to gain a nuanced understanding of how CSR is perceived, managed, and integrated into branch operations, thereby contributing to a comprehensive analysis of CSR practices in the Pakistani banking industry.

Fig. 1, elaborated the conceptual framework where all independent, dependent, mediating and moderating factors are included. The scales of corporate social responsibility, corporate reputation, and innovation were adopted from the studies of different



**Figure-1.** Conceptual framework.

Source: Own Elaboration



researchers respectively [65–67]. The stakeholder pressure, financial performance and non-financial performance scales were adopted from following studies respectively [68,69,69]. This analysis involves cross-sectional data collected from multiple respondents who hold various managerial positions in commercial banks across different regions. For data analysis, we employed SPSS, AMOS, and MedThree Macro to conduct various econometric techniques, including normality tests, descriptive statistics, correlation analysis, and structural equation modeling (SEM). SEM, in particular, allowed us to simultaneously test multiple relationships between CSR, financial and non-financial performance, and other relevant factors. This analytical approach was chosen to ensure a comprehensive examination of the relationship between CSR and performance in the banking sector, while also ensuring the reliability and validity of our findings (Preacher & Hayes, 2004).

#### 4. Empirical results

The study conducted a first-order confirmatory factor analysis to assess the measurement model's best fit. The results presented in Table 1 show that all the items loaded on the specified construct were statistically significant in determining other factors. Standardized estimates of CSR, innovation, corporate reputation, stakeholder pressure, and financial and non-financial performance were within the threshold level of one and had significant positive variances. The goodness and fitness of the measurement model achieved the threshold level, as shown in the assessment table.

The fitness of a measurement model is a crucial aspect of any study's validity, and several statistical values are used to evaluate this fitness. In the current study, the chi-square, normed chi-square, and RMR were found to be low, indicating that the final model had good fitness [70]. In corporate social responsibility, the number of items is generally high, which may affect the CFI and NFI values; however, in this study, all the other values met the threshold level standards, further emphasizing the model's fitness [71]. Additionally, the RMSEA value was less than the threshold level, further supporting the model's goodness and fitness. Therefore, overall, the data did not have any issues that could impact the measurement model's goodness and fitness.

This study collected data from 405 managerial employees working in the banking sector in Pakistan to investigate the relationship between CSR and financial performance. Table 2 presents the demographics of the sample, most respondents were male and had a Master's degree, while around 18 % were women. Most of the respondents were under the age of 30, with only one respondent over the age of 50. In terms of experience, the majority had less than five years of banking experience, while 29 respondents had more than sixteen years of experience. The study primarily focused on branch managers from the Federal, central, and southern regions of Pakistan.

To ensure the reliability of the data, a reliability analysis was conducted which is presented in Table 3. The Cronbach's alpha value was used to assess reliability, which should ideally fall between 0.7 and 0.9 for the data to be considered reliable. The analysis results revealed that the values of almost all variables in the study fall within this range, indicating that the data is reliable and can be used for further analysis. It is worth noting that Cronbach's alpha value for financial performance was 0.785. In addition to this, the study also used CR and AVE values to assess convergent validity, which was found to be within acceptable benchmarks. These results further support the reliability and validity of the data used in the study.

Descriptive statistics presented in Table 4 provide information on central tendency and variability through the mean and standard deviation measures. Additionally, they are used to assess normality by examining measures of skewness and kurtosis. The sample for this research consists of 405 respondents after the exclusion of inadequate and inappropriate questionnaires. A correlation matrix was employed to depict the relationship between CSR and financial performance.

This matrix examined the level of association between the dependent and independent variables. The use of the correlation framework was advantageous as it revealed the analytical relationship among the factors. The results demonstrated a significant positive correlation (0.416) between CSR and financial performance. Additionally, CSR had a significant positive correlation (0.467) with non-financial performance. The moderator, stakeholder pressure, had a significant impact on all the factors, while innovation and corporate reputation, acting as mediators, also influenced the relationship between CSR and financial performance.

**Table 1**  
Fitness levels of measurement scales.

Index	Threshold Level	Measurement Scales					
		CSR	CR	IP	SP	FP	NFP
$\chi^2$	Small preferable	101.02	2.681	16.001	6.226	3.213	1.749
$\chi^2/df$	$\leq 5.0$	5.000	2.681	4.001	3.113	3.213	1.749
RMR	$\leq 0.08$	0.049	0.016	0.049	0.020	0.014	0.011
CFI	$\geq 0.90$	0.860	0.994	0.927	0.991	0.996	0.997
GFI	$\geq 0.90$	0.945	0.997	0.980	0.993	0.996	0.998
NFI	$\geq 0.90$	0.833	0.990	0.920	0.987	0.994	0.994
RMSEA	$\leq 0.10$	0.100	0.065	0.072	0.072	0.074	0.043

Note: Evaluation of measurement scale fitness using various indices for Corporate Social Responsibility (CSR), Construct Reliability (CR), Internal Performance (IP), Social Performance (SP), Financial Performance (FP), and Non-Financial Performance (NFP).

**Table 2**  
Demographics of sample.

Characteristics	Quantity	%	Characteristics	Quantity	%
<b>Gender</b>			<b>Age</b>		
Male	332	82.0	Between 20 and 30 Years	180	44.4
Female	73	18.0	Between 30 and 40 Years	145	35.8
<b>Qualification</b>			<b>Experience</b>		
Bachelor	109	26.9	Between 40 and 50 Years	79	19.5
Master	199	49.1	More than 50 Years	01	0.20
M.Phil.	92	22.7	<b>Experience</b>		
Other Certifications	05	1.30	Between 0 and 5 Years	260	64.2
<b>Designation</b>			Between 6 and 10 Years	65	16.0
Branch Manager	405	100.0	Between 11 and 15 Years	51	12.6
			More than 16 Years	29	7.20

Note: Table 2, “Demographics of Sample,” provides information about the characteristics of the study participants or subjects involved in the research.

**Table 3**  
Reliability and validity analysis.

Variable	Scale Developed	Cronbach Alpha	CR	AVE
Corporate Social Responsibility	Turker, 2009	0.747	0.758	0.611
Corporate Reputation	Weiss, Anderson, & MacInnis, 1999	0.774	0.816	0.596
Innovation	Manu, 1992	0.726	0.801	0.506
Stakeholder Pressure	Delmas & Toffel, 2008	0.783	0.760	0.514
Financial Performance	Govindarajan, 1984	0.785	0.797	0.579
Non-financial Performance	Govindarajan, 1984	0.745	0.814	0.593

Note: The table reflects the reliability and validity of the constructs.

**Table 4**  
Statistics and correlation matrix.

	Mean	Std. Dev	CSR	IP	CR	SP	FP	NFP
CSR	3.731	0.443	1.000					
IP	3.670	0.638	0.323**	1.000				
CR	3.738	0.618	0.502**	0.390**	1.000			
SP	3.644	0.828	0.299**	0.269**	0.173**	1.000		
FP	3.882	0.688	0.416**	0.264**	0.356**	0.306**	1.000	
NFP	3.823	0.502	0.467**	0.316**	0.437**	0.307**	0.518**	1.000

Note: \*\*Correlation is significant at the 0.01 level Source: Own Elaboration.

**Table 5**  
Direct relationship.

IV	DV	$\beta$	S.E	T-Value	P-Value
CS	FP	0.299	0.129	2.323	0.020
CSR	NFP	0.224	0.100	2.248	0.025
CSR	Innovation	0.289	0.115	2.516	0.012*
CSR	CR	0.279	0.075	3.737	0.000**
Innovation	CR	0.825	0.330	2.498	0.012*
Innovation	FP	1.526	0.666	2.293	0.022*
CR	NFP	-0.082	0.237	-0.348	0.728
Innovation	NFP	1.266	0.563	2.247	0.025*
CR	FP	-0.076	0.286	-0.265	0.791

Note: The presented table illustrates the direct relationships between the specified variables in the study. These findings contribute to the understanding of the immediate impacts and connections among the variables under investigation.

#### 4.1. Hypothesis testing

Structural equation modeling was utilized to test the hypothesis, the results are presented in Tables 5–8. The first-order confirmatory factor analysis results indicated that the model had a good fit and suggested further analysis. The findings revealed a significant and positive relationship between CSR and financial performance, consistent with previous studies [40,72]. Earlier research has produced mixed results regarding the relationship between CSR and financial performance. The current study found a significant and positive correlation between CSR and non-financial performance, consistent with several studies' findings [73,74]. However, these findings contradict the results of a few studies [75].

CSR can act as a driving force for innovation in the automobile industry. By integrating CSR as a strategic component, organizations can create value, generate new ideas, and identify innovation opportunities, leading to long-term solid performance. Innovative CSR is the key to strategic CSR and creating new values for various stakeholders and shareholders and CSR positively contributes to innovation. Literature suggested that CSR initiatives can improve a company's reputation and overall performance. The study revealed that not only competitive operational capabilities but also soft investments such as social responsibility and a good reputation could significantly impact a company's performance in terms of return on investment, sales growth, market share, and overall profitability. Therefore, managers must pay critical attention to social responsibility initiatives, such as investments in projects that improve society and the environment, care for the safety of employees and clients, and respect human rights.

Innovation was found to significantly influence corporate reputation, financial performance, and non-financial performance, with coefficients of 0.622, 0.566, and 0.740, respectively. Innovation and technological advancement are crucial in establishing a corporate reputation among consumers. However, managers should remember that a reputation based on innovation is sustainable only if it is positively linked with integrity and courage. Corporate reputation was included as the second mediator but showed no significant influence on financial and non-financial performance. These findings support the stakeholder theory, which suggests that organizational decisions are influenced by the pressures of various stakeholder groups [76].

Sequential mediation explained that the weight of the total effect of CSR on financial performance was 0.646 ( $p < 0.01$ , 95 % CI [0.508, 0.784]), while the weight of the second indirect effect when controlling innovation and corporate reputation was 0.021 ( $p < 0.01$ , 95 % CI [0.008, 0.046]). The table also exhibited that innovation carried 46 % of the total effect of CSR on financial performance. There are multiple models developed by Preacher and Hayes while for serial mediation Model 6 is used. A comparison of estimates revealed that there was evidence for partial mediation as CSR's total effect reduced a little but remained significant when controlling for the mediator's innovation'. The significant probability value of the Sobel test indicated that there is existing mediation in the model and the reduction in the standardized regression weight indicates partial mediation since it is observed that the standardized regression weight is greater than zero.

Sequential mediation explained that the weight of the total effect of CSR on non-financial performance was 0.529 ( $p < 0.01$ , 95 % CI [0.431, 0.627]), while the weight of the second indirect effect when controlling innovation and corporate reputation was 0.022 ( $p < 0.01$ , 95 % CI [0.010, 0.043]). The table also exhibited that innovation carried 46 % of the total effect of CSR on financial performance. Upon comparing the estimates, it became evident that partial mediation existed, as the total effect of CSR was slightly reduced but remained significant even after accounting for the mediator variable, namely 'innovation'. The significant probability value obtained from the Sobel test confirmed the presence of mediation within the model. The reduction observed in the standardized regression weight further supported the notion of partial mediation, as the weight remained greater than zero.

Preacher and Hayes' method was applied to test the hypothesis of moderation [77]. Firstly, it is tested that CSR influences financial and non-financial performance positively and standardized regression weight is 0.825 and 0.830. It means that with one unit change in CSR will lead to 0.825- and 0.830-unit changes in financial and non-financial performance. The impact of stakeholder pressure was also tested on financial and non-financial performance. Interaction terms showed a significant and positive relation which means moderation is affecting. The empirical analysis concluded that stakeholder pressure is significantly establishing the CSR with financial and non-financial performance relationship. In the context of conditional effect, the relationship between CSR, and financial and non-financial performance is very significant and positive. As the influence of stakeholder pressure moderates, the relationship

**Table 6**  
Mediation analysis I.

	Effect	SE	T-Value	P-Value	LLCI	ULCI
Total Effect	0.646	0.070	9.19	0.000	0.508	0.784
Direct Effect	0.466	0.081	5.773	0.000	0.307	0.625
	Effect		Boot SE		Boot LLCI	Boot ULCI
Total Indirect	0.180		0.045	0.096	0.096	0.275
CSR→IP→FP	0.052*		0.032	0.003	0.003	0.125
CSR→IP→CR→FP	0.021*		0.009	0.008	0.008	0.046
CSR→CR→FP	0.108*		0.036	0.046	0.046	0.187
	1		2	3	4	
R <sup>2</sup>	0.104		0.31	0.218		0.173
F-Statistics	46.89		90.37	35.71		84.40
P-Value	0.000		0.000	0.000		0.000

Note: The table provides insights into the mediation analysis, focusing on the initial stage of assessing the mediating role of specific variables. The results contribute to understanding the intermediate mechanisms influencing the relationships among the variables studied.



**Table 7**  
Mediation analysis II.

	Effect	SE	T-Value	P-Value	LLCI	ULCI
Total Effect	0.529	0.050	10.60	0.000	0.431	0.627
Direct Effect	0.351	0.056	6.270	0.000	0.241	0.461
	Effect		Boot SE		Boot LLCI	Boot ULCI
Total Indirect	0.178		0.037	0.108	0.108	0.251
CSR→IP→NFP	0.046		0.032	−0.005	0.120	
CSR→IP→CR→NFP	0.022		0.008	0.010	0.043	
CSR→CR→NFP	0.110		0.028	0.062	0.172	
	1		2	3	4	
R <sup>2</sup>			0.104	0.31	0.286	0.219
F-Statistics			46.89	90.37	53.45	112.30
P-Value			0.000	0.000	0.000	0.000

Note: This table presents the second stage of mediation analysis, delving deeper into the mediating effects of specific variables identified in the study. The results contribute to a comprehensive understanding of the mediated relationships among the variables under investigation.

**Table 8**  
Moderation analysis.

	IV	DV	$\beta$	S.E	T-Value	P-Value	LLCI	ULCI
1	CSR	FP	0.825	0.267	3.126	0.002	0.306	1.343
2	SP	FP	0.468	0.185	6.004	0.000	0.746	1.473
3	Int-1	FP	0.815	0.286	3.515	0.000	0.232	0.069
1	CSR	NFP	0.830	0.201	4.141	0.000	0.436	1.224
2	SP	NFP	1.109	0.185	6.004	0.000	0.746	1.473
3	Int-1	NFP	0.193	0.054	3.617	0.000	0.298	0.088
Conditional Effect								
I			0.595	0.082	7.268	0.000	0.434	0.756
II			0.528	0.076	6.929	0.000	0.378	0.677
III			0.461	0.113	4.056	0.000	0.237	0.683
							R <sup>2</sup>	$\Delta R^2$
							0.212	0.002
F-Statistics							35.85	1.14
P-Value							0.000	0.000

Note: The table showcases the results of moderation analysis, emphasizing the influence and interaction effects of specific variables on the relationships studied. These findings contribute to a nuanced understanding of how moderation factors impact the overall dynamics among the variables under investigation.

weakens and the value of the coefficient decreases. But in the end, when the moderator is influencing completely, the coefficient drops enormously [60,78].

## 5. Discussion

This study aims to investigate the influence of corporate social responsibility (CSR) on both financial and non-financial performance in the Pakistani banking sector by applying a quantitative research approach to the primary data from 405 branch managers in the Pakistani banking sector. Following the global financial crisis of 2007–2008, banks were under increasing social pressure to become more socially responsible [79–81]. We set several hypotheses in our study where the first hypothesis investigated the relationship between CSR and financial performance. Consistent with previous studies [40,72], our findings for the first hypothesis we set reveal a significant and positive correlation between the two factors. The second hypothesis examined the link between CSR and non-financial performance. Our findings for the second hypothesis we set indicate a significant and positive correlation between the two factors, which aligns with some previous studies [73,74] but contradicts the findings of other researchers [75,82]. These findings help to resolve inconsistencies in previous research on the relationship between CSR and performance. According to stakeholder theory [83], each of the four measures of Carroll's CSR model was expected to impact performance positively.

This study suggests that CSR has positive impact on financial and non-financial performance in the Pakistani banking sector. Consistent with the findings by past studies, our findings indicate that CSR initiatives can improve financial performance and stakeholders' reputations. The findings in our study also support the stakeholder theory, which posits that organizations must provide benefits to their stakeholders that ultimately benefit the organizations themselves. Additionally, our study finds that CSR initiatives have positive contribution to innovation in the automotive industry [84,85], as well as companies' overall reputation and performance. Moreover, the integration of CSR as a strategic component creates value and innovation opportunities that lead to sustainable long-term performance. Therefore, managers need to prioritize social responsibility initiatives that improve the world, prioritize employee and customer safety, respect human rights, and invest in environmental sustainability to contribute to better financial and non-financial performance [76].

This study explored the relationship between CSR, corporate reputation, and financial and non-financial performance. Our findings suggest that corporate reputation acts as a positive mediator between CSR and performance [86], indicating that investments in social responsibility initiatives and a good reputation can have a significant positive impact on a company's performance [70]. Therefore, managers should prioritize social responsibility initiatives, which have the power to improve the reputation and performance of their companies.

The study makes a significant contribution to the literature in the banking sector of Pakistan by examining the relationship between CSR, corporate reputation, and financial and non-financial performance. The study proposes that socially responsible activities can enhance the performance of the banking industry by establishing trust among stakeholders. Our research findings are useful for management scholars, students, and researchers in their decision making related to the areas we studied. Our study also contributes to the existing literature on CSR in developing economies and validates the stakeholder theory in the context of a developing economy. The study introduces a new model of CSR and financial performance relationship based on past studies and enriches the literature on corporate social responsibility.

## 6. Conclusion

In conclusion, this study sheds light on the significant impact of corporate social responsibility (CSR) on both financial and non-financial performance in the Pakistani banking sector. Our findings underscore the importance of CSR initiatives in improving financial outcomes and enhancing stakeholder reputation. By aligning with stakeholder theory, which emphasizes mutual benefits for organizations and stakeholders, our study highlights the strategic value of prioritizing CSR activities that promote employee and customer safety, environmental sustainability, and respect for human rights. Moving forward, bank managers can leverage CSR initiatives to enhance both financial and non-financial performance by integrating social responsibility into their strategic decision-making processes. Specifically, they should prioritize initiatives that contribute positively to the world, prioritize employee and customer well-being, and invest in environmentally sustainable practices. By doing so, managers can build trust among stakeholders, improve corporate reputation, and ultimately drive sustainable long-term performance.

### 6.1. Limitations & future directions

The study has several implications for corporate managers, policymakers, and professionals in the banking sector of Pakistan. The findings can assist corporate managers in formulating stakeholder-centric strategies to improve their level of satisfaction and build a sound corporate reputation, which can have material advantages such as low cost of doing business, low cost of capital, and a competitive edge. The study can also contribute to professional business practices by understanding the best strategies, knowledge, and experience related to CSR and performance. By using our findings, policymakers could adopt different approaches to encourage firms to increase CSR investments, relying on firm initiatives instead of regulating or encouraging CSR activities. The study also contributes to positive social change by helping bank supervisors, executives, financial specialists, controllers, and the government enhance the optimal allocation of assets to competing social activities to enhance performance and stakeholder welfare.

The study's limitations include relatively small sample size, focusing on only one sector (banking) in Pakistan, limited data validity analysis, potential issues with generalizability due to sample selection, lack of generalizability to other countries, and a lack of longitudinal data. These limitations suggest that caution should be taken when interpreting the results and that further research in different contexts is needed to provide more robust findings. Several future directions could be pursued to improve the robustness and generalizability of research on the relationship between CSR and financial performance. Firstly, increasing the sample size and targeting a larger population would overcome the limitations of the current study (Carroll, 2004) and increase the reliability of the results. Secondly, focusing on multiple sectors would enhance the generalizability and applications of findings [74,87,88]. Thirdly, ensuring data validity through exploratory factor analysis before confirmatory factor analysis and structural model testing would increase the credibility of the results [60]. Fourthly, conducting a longitudinal study to detect long-term effects is necessary. Exploring other aspects of stakeholder pressure, such as total quality management as a mediating variable, could provide valuable insights into the relationship between CSR and financial performance [74]. Finally, comparing the impact of CSR on financial and non-financial performance across different countries, sectors, and industries would provide a better understanding of the relationship between CSR and performance [31].

### Data availability

Data will be available on request.

### CRedit authorship contribution statement

**Muzammal Ilyas Sindhu:** Writing – review & editing, Writing – original draft, Software, Formal analysis, Conceptualization. **Windijarto:** Writing – review & editing, Supervision, Resources. **Wing-Keung Wong:** Writing – review & editing, Validation. **Laila Maswadi:** Writing – review & editing, Software, Investigation.

## Declaration of competing interest

We declare no conflicts of interest regarding my submission to this journal.

## References

- [1] I. Robin, R. Salim, H. Bloch, Financial performance of commercial banks in the post-reform era: further evidence from Bangladesh, *Econ. Anal. Pol.* 58 (2018) 43–54.
- [2] T. Fatima, S. Elbanna, Corporate social responsibility (CSR) implementation: a review and a research agenda towards an integrative framework, *J. Bus. Ethics* 183 (1) (2023) 105–121.
- [3] M. Mushafiq, T. Sehar, Reality of short-term causality of Islamic and conventional banking term deposit rates in Pakistan, *Asian J. Econ. Bank.* 5 (1) (2021) 66–78.
- [4] F. Abbas, S. Ali, W.-K. Wong, Impact of economic freedom and its subcomponents on commercial banks' risk-TAKING, *Ann. Fin. Econ.* 17 (3) (2022) 2250022.
- [5] A. Erulgen, et al., Financial inclusion and bank profitability: evidence from island banking sector, *Adv. Decis. Sci.* 26 (4) (2022) 78–97.
- [6] M. Mushafiq, B. Prusak, Does being socially good save firms from bankruptcy? A systematic literature review and bibliometric analysis, *Econ. Environ.* 83 (4) (2022) 35–59.
- [7] Z. Hoque, A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance, *Int. Bus. Rev.* 13 (4) (2004) 485–502.
- [8] M.I. Sindhu, S.F. Urooj, M.S. Ullah, Intervening influence of non-economic factors between corporate social responsibility and financial performance: a banking perspective, *Global Manag. J. Acad. Corp. Stud.* 10 (1) (2020) 11, 11.
- [9] L. Zhao, et al., Trends in the dynamic evolution of corporate social responsibility and leadership: a literature review and bibliometric analysis, *J. Bus. Ethics* 182 (1) (2023) 135–157.
- [10] M. Mushafiq, M.I. Sindhu, M.K. Sohail, Financial performance under influence of credit risk in non-financial firms: evidence from Pakistan, *J. Econ. Admin. Sci.* 39 (1) (2023) 25–42.
- [11] D.T.T. Nhan, et al., Evaluating the efficiency of Vietnam banks using data envelopment analysis, *Ann. Fin. Econ.* 16 (2) (2021) 2150010.
- [12] S.M. Johari, W.-K. Wong, A.R.F.A. LC, Driven determinants to Indonesia Sharia commercial banks' performance: the important role of diversification strategy, *Adv. Decis. Sci.* 26 (2) (2022) 64–96.
- [13] M.I. Sindhu, M. Arif, The inter linkage of corporate reputation between corporate social responsibility and financial performance, *Pak. J. Commer. Soc. Sci. (PJCSS)* 11 (3) (2017) 898–910.
- [14] R.S. Perera, K. Sato, The impact of savings withdrawals on a banker's capital holdings subject to Basel III Accord, *Ann. Fin. Econ.* 15 (2) (2020) 2050006.
- [15] M. Noman, et al., Impact of cashless bank payments on economic growth: evidence from G7 countries, *Adv. Decis. Sci.* 27 (1) (2023) 1–20, 0.
- [16] J.A. Schumpeter, *Capitalism, socialism and democracy*, Routledge, 2013.
- [17] R.C. Padgett, R.C. Moura-Leite, Innovation with high social benefits and corporate financial performance. *Journal of technology management & innovation* 7 (4) (2012) 59–69.
- [18] H. Tang, et al., Implications of corporate innovation investment on environment sustainability with moderating role of managerial stock incentives: a case of the oil and gas sector of the United States of America. *Frontiers in Environmental Science* 10 (2023) 962258.
- [19] J. Pirsch, S. Gupta, S.L. Grau, *A framework for understanding corporate social responsibility programs as a continuum: An exploratory study*. *Journal of business ethics* 70 (2007) 125–140.
- [20] L. Tarquinio, S.C. Posadas, Exploring the term “non-financial information”: an academics' view, *Meditari Account. Res.* 28 (5) (2020) 727–749.
- [21] H. Herwartz, Y.M. Walle, Determinants of the link between financial and economic development: evidence from a functional coefficient model, *Econ. Modell.* 37 (2014) 417–427.
- [22] M.I. Sindhu, et al., Implications of corporate social responsibility on credit rating, *Acad. Strat. Manag. J.* 20 (SI 2) (2021) 1–11.
- [23] A. Rahman Belal, *A study of corporate social disclosures in Bangladesh*. *Managerial Auditing Journal* 16 (5) (2001) 274–289.
- [24] M.I. García-Rivas, et al., Corporate social responsibility reports: a review of the evolution, approaches and prospects, *Heliyon* (2023) e18348.
- [25] T. Tarjo, et al., Corporate social responsibility, financial fraud, and firm's value in Indonesia and Malaysia, *Heliyon* 8 (12) (2022) e11907.
- [26] M. Kilic, C. Kuzey, A. Uyar, The impact of ownership and board structure on Corporate Social Responsibility (CSR) reporting in the Turkish banking industry, *Corp. Govern.* 15 (3) (2015) 357–374.
- [27] K.-H. Pho, D.T. Van Anh, M. McAleer, The safety of banks in Vietnam using CAMEL, *Adv. Decis. Sci.* 25 (2) (2021) 158–192.
- [28] V.T.N. Quynh, An integrated dynamic generalized trapezoidal fuzzy AHP/TOPSIS approach for evaluating sustainable performance of bank, *Adv. Decis. Sci.* 27 (1) (2023) 1–17, 0.
- [29] X. Chen, X. Liang, H. Wu, Cross-border mergers and acquisitions and CSR performance: evidence from China, *J. Bus. Ethics* 183 (1) (2023) 255–288.
- [30] A.B. Carroll, The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders, *Bus. Horiz.* 34 (4) (1991) 39–48.
- [31] A.B. Carroll, Managing ethically with global stakeholders: a present and future challenge. *Academy of Management Perspectives* 18 (2) (2004) 114–120.
- [32] D. Dumitrescu, L. Simionescu, Empirical research regarding the influence of corporate social responsibility (CSR) activities on COMPANIES' EMPLOYEES and financial performance, *Econ. Comput. Econ. Cybern. Stud. Res.* 49 (3) (2015).
- [33] K. Buysse, A. Verbeke, *Proactive environmental strategies: a stakeholder management perspective*. *Strategic management journal* 24 (5) (2003) 453–470.
- [34] S. Du, C.B. Bhattacharya, S. Sen, Corporate social responsibility and competitive advantage: overcoming the trust barrier, *Manag. Sci.* 57 (9) (2011) 1528–1545.
- [35] J.G. Klein, N.C. Smith, A. John, Why we boycott: consumer motivations for boycott participation, *J. Market.* 68 (3) (2004) 92–109.
- [36] J.D. Margolis, J.P. Walsh, Misery loves companies: rethinking social initiatives by business. *Administrative science quarterly* 48 (2) (2003) 268–305.
- [37] R.J. Baumgartner, D. Ebner, *Corporate sustainability strategies: sustainability profiles and maturity levels*. *Sustainable development* 18 (2) (2010) 76–89.
- [38] S. Schaltegger, Sustainability as a driver for corporate economic success. Consequences for the development of sustainability management control. *Society and Economy, J. Corvinus Univ. Budapest* 33 (1) (2011) 15–28.
- [39] J. Klewitz, E.G. Hansen, Sustainability-oriented innovation of SMEs: a systematic review, *J. Clean. Prod.* 65 (2014) 57–75.
- [40] P. Jain, V. Vyas, D.P.S. Chalasani, Corporate social responsibility and financial performance in SMEs: a structural equation modelling approach, *Global Bus. Rev.* 17 (3) (2016) 630–653.
- [41] W.F.W. Yusoff, M.S. Adamu, The relationship between corporate social responsibility and financial performance: evidence from Malaysia. *International Business Management* 10 (4) (2016) 345–351.
- [42] S.J. Cho, C.Y. Chung, J. Young, Study on the relationship between CSR and financial performance, *Sustainability* 11 (2) (2019) 343.
- [43] B.B. Lahouel, et al., Re-thinking about U: the relevance of regime-switching model in the relationship between environmental corporate social responsibility and financial performance, *J. Bus. Res.* 140 (2022) 498–519.
- [44] J. Huang, Corporate social responsibility and financial performance: the moderating role of the turnover of local officials, *Finance Res. Lett.* 46 (2022) 102497.
- [45] R. Coelho, S. Jayantilal, J.J. Ferreira, The impact of social responsibility on corporate financial performance: a systematic literature review, *Corp. Soc. Responsib. Environ. Manag.* (2023).
- [46] M.A. Kabir, S.S. Chowdhury, Empirical analysis of the corporate social responsibility and financial performance causal nexus: evidence from the banking sector of Bangladesh, *Asia Pac. Manag. Rev.* 28 (1) (2023) 1–12.
- [47] M. Wagner, Corporate social performance and innovation with high social benefits: a quantitative analysis, *J. Bus. Ethics* 94 (4) (2010) 581–594.
- [48] L. Ardito, et al., *Sustainable innovation: processes, strategies, and outcomes*. *Corporate social responsibility and environmental management* 26 (5) (2019) 1009–1011.

- [49] N. Boso, V.M. Story, J.W. Cadogan, *Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy*. *Journal of Business Venturing* 28 (6) (2013) 708–727.
- [50] S. Brammer, A. Millington, B. Rayton, The contribution of corporate social responsibility to organizational commitment. *The International Journal of Human Resource Management* 18 (10) (2007) 1701–1719.
- [51] H.S.T. Pham, H.T. Tran, *CSR disclosure and firm performance: The mediating role of corporate reputation and moderating role of CEO integrity*. *Journal of Business Research* 120 (2020) 127–136.
- [52] D.M. Muthoni, G.M. Kinyua, Corporate reputation and firm performance: an empirical analysis of motor vehicle assemblers in Nairobi city county, Kenya. *Journal of Business and Economic Development* 5 (2) (2020) 73–81.
- [53] S.R. Miller, L. Eden, D. Li, *CSR reputation and firm performance: a dynamic approach*. *Journal of Business Ethics* 163 (2020) 619–636.
- [54] P. Ratajczak, D. Szutowski, Exploring the relationship between CSR and innovation, *Sustain. Account. Manag. Pol. J.* 7 (2) (2016) 295–318.
- [55] G. Rexhepi, S. Kurtishi, G. Bexheti, Corporate social responsibility (CSR) and innovation—the drivers of business growth? *Procedia-Soc. Behav. Sci.* 75 (2013) 532–541.
- [56] M. Javed, et al., The effects of corporate social responsibility on corporate reputation and firm financial performance: moderating role of responsible leadership. *Corporate Social Responsibility and Environmental Management* 27 (3) (2020) 1395–1409.
- [57] M.E. Clarkson, *A stakeholder framework for analyzing and evaluating corporate social performance*. *Academy of management review* 20 (1) (1995) 92–117.
- [58] J.B. Barney, M.H. Hansen, Trustworthiness as a source of competitive advantage, *Strat. Manag. J.* 15 (S1) (1994) 175–190.
- [59] C. Fombrun, M. Shanley, *What's in a name? Reputation building and corporate strategy*. *Academy of management Journal* 33 (2) (1990) 233–258.
- [60] Q. Zhu, J. Sarkis, The moderating effects of institutional pressures on emergent green supply chain practices and performance. *International journal of production research* 45 (18–19) (2007) 4333–4355.
- [61] H. Tajfel, et al., An integrative theory of intergroup conflict, *Organizational identity: A reader* 56 (65) (1979), 9780203505984–16.
- [62] C.B. Bhattacharya, S. Sen, Doing better at doing good: when, why, and how consumers respond to corporate social initiatives, *Calif. Manag. Rev.* 47 (1) (2004) 9–24.
- [63] D. Matten, J. Moon, 'Implicit' and 'Explicit' CSR: a conceptual framework for understanding CSR in Europe, 2004.
- [64] M. Saunders, P. Lewis, A. Thornhill, *Research methods for business students*, Pearson Education, 2009.
- [65] D. Turker, Measuring corporate social responsibility: a scale development study, *J. Bus. Ethics* 85 (2009) 411–427.
- [66] A.M. Weiss, E. Anderson, D.J. MacLinnis, Reputation management as a motivation for sales structure decisions, *J. Market.* 63 (4) (1999) 74–89.
- [67] F.A. Manu, *Innovation orientation, environment and performance: a comparison of US and European markets*. *Journal of International Business Studies* 23 (1992) 333–359.
- [68] M.A. Delmas, M.W. Toffel, Organizational responses to environmental demands: opening the black box, *Strat. Manag. J.* 29 (10) (2008) 1027–1055.
- [69] V. Govindarajan, Appropriateness of accounting data in performance evaluation: an empirical examination of environmental uncertainty as an intervening variable. *Accounting, organizations and society* 9 (2) (1984) 125–135.
- [70] R.E. Schumacker, R.G. Lomax, *A beginner's guide to structural equation modeling*, Psychology Press, 2004.
- [71] L.t. Hu, P.M. Bentler, Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives, *Struct. Equ. Model.: A Multidiscip. J.* 6 (1) (1999) 1–55.
- [72] W.S.W. Ahamed, M.K. Almsafir, A.W. Al-Smadi, Does corporate social responsibility lead to improve in firm financial performance? Evidence from Malaysia. *International Journal of Economics and Finance* 6 (3) (2014) 126–138.
- [73] L. Becchetti, G. Trovato, Corporate social responsibility and firm efficiency: a latent class stochastic frontier analysis. *Journal of Productivity Analysis* 36 (2011) 231–246.
- [74] S. Mishra, D. Suar, Does corporate social responsibility influence firm performance of Indian companies? *J. Bus. Ethics* 95 (2010) 571–601.
- [75] D.F. Vitaliano, G.P. Stella, The cost of corporate social responsibility: the case of the community reinvestment act. *Journal of Productivity Analysis* 26 (2006) 235–244.
- [76] S. Famiyeh, A. Kwarteng, S.A. Dadzie, Corporate social responsibility and reputation: some empirical perspectives. *Journal of Global Responsibility* 7 (2) (2016) 258–274.
- [77] K.J. Preacher, A.F. Hayes, *SPSS and SAS procedures for estimating indirect effects in simple mediation models*. *Behavior research methods, instruments, Computers* 36 (2004) 717–731.
- [78] S.P. Saeidi, et al., How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction, *J. Bus. Res.* 68 (2) (2015) 341–350.
- [79] S. Sahoo, S. Kumar, Existence of cointegration between the public and private bank index: evidence from Indian Capital Market, *Adv. Decis. Sci.* 25 (4) (2021) 152–172.
- [80] L.N.T. Trang, et al., Does bank liquidity risk lead to bank's operational efficiency? A study in Vietnam, *Adv. Decis. Sci.* 25 (4) (2021) 46–88.
- [81] N.D. Suu, et al., Impact of foreign ownership and foreign bank presence on liquidity risk: evidence from Viet Nam, *Adv. Decis. Sci.* 27 (1) (2023) 23–44.
- [82] M. Naveed, et al., Role of financial and non-financial information in determining individual investor investment decision: a signaling perspective. *South Asian Journal of Business Studies* 9 (2) (2020) 261–278.
- [83] A. McWilliams, D.S. Siegel, P.M. Wright, Corporate social responsibility: strategic implications, *J. Manag. Stud.* 43 (1) (2006) 1–18.
- [84] J.-G. Cegarra-Navarro, et al., Linking social and economic responsibilities with financial performance: the role of innovation, *Eur. Manag. J.* 34 (5) (2016) 530–539.
- [85] D.Y. Aharon, S. Ali, M. Naved, Too big to fail: the aftermath of Silicon Valley Bank (SVB) collapse and its impact on financial markets. *Research in International Business and Finance* 66 (2023) 102036.
- [86] D.M. DiSegni, M. Huly, S. Akron, *Corporate social responsibility, environmental leadership and financial performance*. *Social Responsibility Journal* 11 (1) (2015) 131–148.
- [87] S. Mishra, S.B. Modi, Corporate social responsibility and shareholder wealth: the role of marketing capability, *J. Market.* 80 (1) (2016) 26–46.
- [88] M. Naveed, et al., When giants fall: tracing the ripple effects of Silicon Valley Bank (SVB) collapse on global financial markets. *Research in International Business and Finance* 67 (2024) 102160.