

RESEARCH ARTICLE

HOW CONTROLLING SHAREHOLDERS PLAY THEIR DECISIVE ROLES IN CORPORATE SOCIAL INVESTMENTS: A CASE STUDY OF PAKISTAN

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ABSTRACT – This study examines the role of controlling shareholders in determining the level of corporate social responsibility (CSR) investments. The data was collected from Pakistani listed firms and analysed using the panel regression technique. The results revealed that controlling shareholders have direct and nonlinear relationships (U-shaped) with social investments. The U-shaped relationship indicates that CSR investments decrease at lower levels of shareholders and increase when controlling shareholders own more shares. Subsequently, controlling shareholders may be risk-averse or consciously keep lower level of CSR investments while owning less shares. However, CSR investments may later increase as controlling shareholders own more shares for reputation and survivability concerns. The findings are useful for managers and policymakers to explore the impact of main corporate governance actors (i.e., controlling shareholders) towards CSR investments. It offers guidelines for managers, minority shareholders, and the government regarding CSR investments and whether controlling shareholders will align or contradict these endeavours. The study also extends the theoretical boundaries of the agency theory and reference point for developing economies with weak governance mechanisms and poor investor protection.

ARTICLE HISTORY

Received : 02-08-2024

Revised : 30-10-2024

Accepted : 30-12-2024

Published : 02-06-2025

KEYWORDS

Controlling shareholders

Corporate social responsibility

Nonlinear

Panel regression

Pakistani listed firms

1. INTRODUCTION

In the era of competitive environment and technological breakthrough, the corporate world bears greater amount of responsibilities than before. Therefore, corporate social responsibility (CSR) has gained growing attention from managers, policymakers, governments, and environmentalists (Frynas & Yamahaki, 2016). The main notion behind CSR is that firms are not only responsible to their shareholders but also must address the concerns of various stakeholders, such as employees, customers, governments, and the general public (Freeman, 2010; Mishra & Suar, 2010). Addressing these concerns will offer firms certain benefits like positive reputation, customer loyalty, employee satisfaction, regulatory relaxations, and competitive advantage (Ikram et al., 2020; Saeidi et al., 2015; Wei et al., 2020). Moreover, CSR acts as a buffer against uncertainties and provides insurance-like protection to companies amidst crises (Alvarez, 2012). It is also deemed beneficial for the financial performance of companies (Kong et al., 2020).

Despite these benefits, the governance of CSR investments remains a pivotal issue in previous literature. The seminal work of Friedman (1970) argues that CSR is an extra burden on firms and should not be carried out. On the other hand, firms that conduct CSR gain economic and reputational benefits and possess a competitive edge over their rivals in the marketplace (Surroca et al., 2010). Stakeholders have also pressured firms to be involved in CSR activities. Thus, governance of CSR investments is the main concern in contemporary business dynamics whereby concentrated ownership of controlling shareholders becomes a governance norm, especially in countries with weak governance mechanisms and poor investor protection (Hooy et al., 2020). Subsequently, controlling shareholders stand as the key driver of a firm's strategic decisions in developing countries (Hsieh et al., 2020).

As a developing country, Pakistan is characterised by poor governance mechanisms and weak investor protection (Javid & Iqbal, 2008). Khan (1996) studied the traditional and modern risks of Pakistan and revealed that the majority of the latter are related to environmental issues, such as automobile and industrial air pollution, surface and groundwater pollution, toxic chemical release, hazardous wastes, as well as urban stress and noise. The study by Khwaja (2012) also highlighted the problems of air pollution, water pollution, noise pollution, solid waste management, legislative compliance, global warming, and industrial effluents. While the findings establish the link between these issues with CSR measures, there is a lack of coherent studies that fill the gap of governance-related research concerning CSR in Pakistan.

CSR is one of the strategic decisions of firms that involves practices related to ethics, governance, business relationships, transparency, financial returns, community involvement environmental protection, employee welfare, and product value (Epstein, 2018). The main purpose is to achieve sustainability objectives. The features of CSR investments commonly entail substantial costs, long-oriented, and riskier (Sprinkle & Maines, 2010). Firms often need to dedicate huge financial resources to address environmental concerns through sophisticated technologies, which are costly. The

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benefits of CSR investments can only be reaped in the long run. Moreover, CSR investments are riskier and may not provide the desired outcomes, which can expose companies to opportunity costs (Sprinkle & Maines, 2010). It is also probable for the benefits of CSR investments to be a trade-off with their costs, causing a waste of time, effort, and resources (Shabbir et al., 2020). Additionally, CSR investments could have backlash impacts on the firms and create controversies (Aouadi & Marsat, 2018; Khan et al., 2023). Conversely, Dam and Scholtens (2012) mentioned that different types of owners have different implications for CSR activities. This suggests that CSR investments should be governed by those with the ability to address the costly, longitudinal, and riskier aspects of its activities.

Controlling shareholders are long-oriented shareholders with enormous capital and greater risk-taking abilities (Caixe et al., 2019; Shapiro et al., 2015). They often have high reputational concerns about the firms due to transition motives (Banerjee & Homroy, 2018) and possess the largest voting rights and control over company strategic decisions through board composition (Hsieh et al., 2020). This indicates that controlling shareholders have both the incentives and abilities to affect CSR investments. According to Courteau et al. (2017), controlling shareholders bring both costs and benefits to the firms and they can influence CSR investments in opposing ways. For example, while controlling shareholders may increase the level of CSR investments for long orientation, value-seeking, reputation, and compliance purposes, they may be restricted to investing in CSR activities due to risk avoidance or speedy returns (Anderson et al., 2012). Likewise, they may overinvest to draw their private benefits (Caixe et al., 2019). Many studies also highlight that controlling shareholders may tunnel the resources of their organisation to their affiliate firms even through philanthropic activities (Russino et al., 2019; Solarino & Boyd, 2020).

Therefore, this study aims to examine the role of controlling shareholders on CSR investments in the weak governance and poor investor protection environment of Pakistan. It stands as a pioneer in investigating the nonlinear relationship between controlling shareholders and CSR within the context of emerging countries like Pakistan. The panel regression technique was employed to analyse a Pakistani firm's data over different cross-sections and time period. This provides the opportunity to combine the effects of alignment and entrenchment of controlling shareholders and extend the boundaries of agency theory. The findings will be useful for managers, investors, and policymakers to explore the psyche of controlling shareholders regarding their social investments and investment strategies according to the CSR levels.

This paper is organised as follows. Section 2 contains a review of previous literature and develops the testable hypothesis. Section 3 explains the methodology employed in the study. Section 4 presents the data analysis procedure and results. Finally, Section 5 concludes the study by highlighting the limitations and future research directions.

2. LITERATURE REVIEW

2.1 *Theoretical Background-Agency Theory*

This study relies upon the framework of agency theory. According to Jensen and Meckling (1976), conflict of interest prevails between shareholders and managers because managers pursue their personal goals instead of prioritising shareholders' concerns. It is logical to believe that managers, being agents, should follow the directions of their principal (i.e., shareholders). Shleifer and Vishny (1986) further argue that agency conflict may exist between controlling and minority shareholders. According to type-II agency theory, controlling shareholders may diverge their interests from those of minority shareholders. This agency conflict may become worse in the case of CSR investments because these investments require substantial financial resources. Controlling shareholders have the largest voting rights and can influence the strategic decisions of companies, such as CSR, according to their own choices and preferences (Chen & Gavius, 2015). Courteau et al. (2017) reported that controlling shareholders can influence a company in opposing ways. This highlights their position as influential owners who can bring both benefits and costs through CSR investments.

2.2 *Hypotheses Development*

2.2.1 *Controlling shareholders affect CSR investments*

Previous research has reported both advocating and opposing evidence regarding social investments. Many studies claim that CSR investments have positive impacts on firm outcomes in the form of positive reputation, customer satisfaction, and better financial performance (Aguinis & Glavas, 2012; Al-Shammari, Banerjee, & Rasheed, 2022; Saeidi et al., 2015). On the contrary, few studies have found negative outcomes of CSR like heavy opportunity cost (Sprinkle & Maines, 2010) and backlash from stakeholders (Khan et al., 2023). The outcomes of CSR investments heavily depend on how these investments are governed (Kim, Jung, & Cho, 2022). The governance of CSR is crucial, especially in developing countries with weak governance mechanisms and poor investor protection. Experts believe that the phenomenon of weak governance mechanisms in many developing countries, such as Pakistan, coexist with concentrated ownership (Javid & Iqbal, 2008). The study by Connelly et al. (2010) suggests that concentrated ownership serves as an alternative governance measure. Different owners have their own idiosyncratic vision concerning CSR activities (Dam & Scholtens, 2012). Thus, controlling shareholders can influence firms' strategies like CSR decisions.

Controlling shareholders affect CSR investments for certain reasons. First, CSR investments are valuable for companies and controlling shareholders seek values from their concentrated investments. Second, CSR investments provide reputational benefits and controlling shareholders, being long-oriented shareholders, are interested in CSR activities. Third, CSR investments attract better human capital for the company and controlling shareholders often look

for better human capital to scaffold the longevity of the company. Fourth, CSR engagement helps firms to take additional loans on easy terms, which could be the motive for controlling shareholders to expand their business operations. Furthermore, CSR investments are risky in nature and require substantial investments. Thus, controlling shareholders can wait for longer horizons and bring patient capital to firms (Shapiro et al., 2015). This is supported by Al-Shaer et al. (2023) who argue that controlling shareholders invest in CSR while having slack resources. Finally, controlling shareholders' risk-taking abilities are greater than other shareholders (Thien, et al., 2023), which can affect CSR investments. Therefore, the following hypothesis is formulated:

H₁: Controlling shareholders affect the CSR investments of firms.

2.2.2 Nonlinear effects of controlling shareholders on CSR investments

The agency theory posits that controlling shareholders can affect CSR investments in two opposing ways. First, they might align their interests with those of minority shareholders. Both controlling and minority shareholders are value seekers (Hsieh et al., 2020) and CSR investments can provide value through positive reputation, customer satisfaction, and favours from community members (Ikram et al., 2020). For example, customers can buy frequently from an underlying firm (Sprinkle & Maines, 2010), hence increasing firm performance.

On the other hand, there is a possibility for controlling shareholders to diverge their interests from those of minority shareholders to satisfy their personal benefits (Shleifer & Vishny, 1986). For example, they might abuse CSR resources to satisfy personal intrinsic philanthropy needs, which could contradict other shareholders. Similarly, controlling shareholders can take advantage of CSR activities to tunnel valuable resources to their affiliate firms (Solarino & Boyd, 2020), ultimately distorting the overall value of the firm. Those with transitional motives would hire their family members as managers of CSR investments (Oh, Chang, & Jung, 2019) who might be underqualified and abuse the position to pursue their personal goals. Furthermore, controlling shareholders might invest continuously in CSR initiatives, which could negatively affect the company's value.

The study by Hsieh et al. (2020) found that controlling shareholders extract their private benefits through intellectual capital resources because of their opaque nature. They may pursue less risky projects due to their risk avoidance behaviour (Anderson et al., 2012), which may diminish the level of CSR investments. Other research pointed out that controlling shareholders extract their pecuniary and non-pecuniary benefits (Claessens, Djankov, & Lang, 2000). Pucheta-Martínez and Chiva-Ortells (2018) argue that institutional directors form a nonlinear relationship with CSR disclosure. The entrenchment hypothesis denotes that pressure-resistant directors may collude with executive directors and lower CSR activities, and after a certain threshold, may increase CSR disclosures. Similarly, Harjoto, Jo, and Kim (2017) found a nonlinear association between institutional investors and CSR. These findings suggest that both CSR enhancing and CSR diminishing effects can form the nonlinear relationship between controlling shareholders and CSR investments. Therefore, the following hypothesis is developed:

H₂: Controlling shareholders have a nonlinear relationship with CSR investments.

3. DATA AND METHODOLOGY

3.1 Sample and Source of Data

The sample of this study were non-financial listed firms in Pakistan. The sectors involved were textile, sugar, chemical, cement, automobiles, oil and gas, pharmaceuticals, food and personnel care goods, transport, technology and communication, and paper and board. Meanwhile, financial firms were excluded due to different regulatory and reporting frameworks following previous studies (Liang et al., 2011). The 2001-2020 data was collected from 292 firms. Any missing values were rectified, resulting in 1,177 final firm-year observations. Finally, panel regression was employed for data analysis purposes using the Stata software.

3.2 Variables Measurement

Dependent Variable: The dependent variable of this study is corporate social responsibility (CSR). This study defined CSR as "a discretionary allocation of company resources towards social welfare according to the expectations of various stakeholders" (Oh et al., 2019). It was measured by adopting the CSR expense and dummy variable approaches (Trihermanto & Nainggolan, 2020). The data for CSR expense was collected from annual reports—CSR is an indicator variable 1 if the firm conducts CSR and 0 if otherwise. These CSR measurement proxies are consistent with previous studies (Chen & Gavius, 2015; Trihermanto & Nainggolan, 2020).

Independent Variable: The independent variable of this study is controlling shareholdings. This study defined controlling shareholders as ultimate owners who can influence the strategic decision-making of firms (Hsieh et al., 2020). The proxy of controlling shareholders is consistent with previous studies (Hovey et al., 2003; Hsieh et al., 2020). The percentage of the top five controlling shareholders was collected through the companies' annual reports.

Control Variables: This study adopted company-specific and board-specific control variables. The company-specific variables are tangibility and liquidity while the board-specific variables are board independence and board diversity. The selection of these control variables is consistent with previous research (Hsieh et al., 2020; Kweh et al., 2024).

3.3 Regression Technique

This study utilised the panel regression technique to analyse the data. This technique is superior than pooled ordinary least squares (OLS) as it can handle data from both cross-sections and time series points of view as well as the longitudinal aspects of the data. Breusch-Godfrey serial correlation tests were conducted to examine the autocorrelation in regression models and decide between pooled OLS and panel regression models. Additionally, the Hausman test was applied to choose between the random effect and fixed effect model of panel regression.

3.4 Regression Models

Model 1.1 examines the role of controlling shareholdings on CSR investments.

$$CSR_{it} = \beta_0 + \beta_1 CS_{it} + \beta_2 TANG_{it} + \beta_3 LIQ_{it} + \beta_4 BIND_{it} + \beta_5 BDIV_{it} + \varepsilon_{it} \quad (1.1)$$

Model 2.2 examines the nonlinear relationship between controlling shareholdings and CSR.

$$CSR_{it} = \beta_0 + \beta_1 CS_{it} + \beta_2 CS_{it}^2 + \beta_3 TANG_{it} + \beta_4 LIQ_{it} + \beta_5 BIND_{it} + \beta_6 BDIV_{it} + \varepsilon_{it} \quad (1.2)$$

In Models 1.1 and 2.2, CSR represents corporate social responsibility, CS is controlling shareholdings, CS^2 is quadratic term of controlling shareholdings, TANG represents tangibility of the firms, LIQ is liquidity of the firms, BIND is board independence, and BDIV is board diversity.

4. RESULTS AND DISCUSSION

4.1 Descriptive Statistics

Table 1 shows the descriptive statistics results (mean, standard deviation (SD), minimum, median, and maximum values) of the variables. The mean value of 2.3692 for CSR indicates that each company is investing 2.3692 for every 1 unit of asset. The average mean value for CS denotes that the top five shareholders own 43% of shares in Pakistani listed firms. The mean value of tangibility (TANG) indicates that on average, the sampled firms own more fixed assets than total assets. The liquidity (LIQ) value of 3.4232 shows that the firms have better liquidity, while the average value of 0.2186 for board independence (BIND) suggests that the firms have 21.86% of independent directors. Finally, board diversity (BDIV) indicates 58.75% of female directors on board.

Table 1. Descriptive statistics

Variables	Mean	SD	Minimum	Median	Maximum
CSR	2.3692	29.3672	0.0000	0.00000	894.7940
CS	0.4300	0.3321	0.0000	0.38780	0.9990
TANG	11.8478	78.4104	0.0000	0.51240	695.1740
LIQ	3.4232	31.5888	-0.0668	0.43690	366.0110
BIND	0.2186	0.1723	0.0000	0.14286	1.0000
BDIV	0.5875	0.4923	0.0000	1.00000	1.0000

4.2 Correlation Analysis

Table 2 shows the correlation values among the variables. The results denote that controlling shareholders have a positive relationship with CSR, firm-specific control variables are negatively correlated with CSR, while board-specific control variables are positively associated with CSR investments. The main reason for the negative correlation between tangibility and CSR is that firms with slack resources do not invest in CSR investments. Similarly, higher resource investments will diminish the level of CSR investments. However, board independence and board diversity will improve CSR investments.

Table 2. Correlation among variables

Variables	CSR	CS	Tangibility	Liquidity	BIND	BDIV
CSR	1.0000					
CS	0.0679**	1.0000				
TANG	-0.0031	0.0124	1.0000			
LIQ	-0.0082	0.0924***	0.5753***	1.0000		
BIND	0.0365	-0.0355	0.0106	-0.0333	1.0000	
BDIV	0.0094	-0.0184	-0.1148***	-0.0424	-0.0413	1.0000

Note: *** and ** represent significance at 1% and 5% levels. Source: Authors' own creation

4.3 Regression Analysis

For brevity purposes, the unreported significant value of Breusch-Godfrey serial correlation tests suggests autocorrelation in regression models. Thus, preference is given to panel regression models rather than pooled OLS. Furthermore, the Hausman test was applied to choose between the random effect and fixed effect model of panel regression. The significant value of the Hausman test in Model 1.1 indicates that the fixed effect model is the best fit model, while the insignificant value in Model 1.2 suggests that the random effect model is better. Table 3 shows the panel regression results of this study. Model 1.1 indicates a significant positive relationship between the shareholdings of controlling shareholders and CSR investments. This suggests that the high level of shareholdings will enhance social investments. These results align with the notion of alignment of interests of controlling shareholders (Hsieh et al., 2020).

Table 2. Impact of controlling shareholders on CSR

Variables	Model 1.1, DV=CSR		Model 1.2, DV=CSR	
	Fixed Effect		Random Effect	
	Coefficient	t-stat.	Coefficient	t-stat.
Constant	-7.3896	-2.1600**	1.1763	0.4900
CS	18.6209	3.1400***	-29.1628	-2.5100**
CS ²			39.3871	3.1200***
TANG	-0.0001	-0.0100	-0.0038	-0.2600
LIQ	-0.0084	-0.2400	-0.0069	-0.2000
BDIV	4.4470	1.7000*	0.6090	0.3400
BIND	-4.5259	-0.5700	8.0088	1.5400*
R-Square	0.0124		0.0248	
F-Stat	2.4800**		16.98***	

Notes: The panel regression results between controlling shareholders and CSR investments, with ***, **, and * showing significance at 1%, 5%, and 10% levels, respectively.

Intuitively, controlling shareholders are the longer-horizon investors of an organisation who are more inclined towards CSR, such as long-term investments (Gloßner, 2019). They play fiduciary roles and tend to invest towards CSR investments. This fiduciary role can be subject to different stakeholders, including, but not limited to, the environment, society, employees, suppliers, and shareholders. Lim (2018) mentioned that controlling shareholders may play the fiduciary duty on behalf of their firms. Moreover, controlling shareholders are the long-oriented actors of an organisation and are concerned about the long-termism of their firms (Courteau et al., 2017). Thus, investing in CSR activities becomes imperative for controlling shareholders' survival. Controlling shareholders are value seekers and capitalise on the benefits of CSR activities through enhanced reputation, customer loyalty, employee commitment, and community favours (Ikram et al., 2020; Sprinkle & Maines, 2010). CSR entails the adoption of ethical and legal considerations by firms, which accrue reputational benefits (Li & Xia, 2018). Therefore, controlling shareholders tend to enhance CSR initiatives to cultivate reputational gains. It is also pertinent to mention that CSR investments require substantial initial investments and results, which are unseen in the near future. In this scenario, controlling shareholders can dedicate their patient capital (Shapiro et al., 2015), thus enhancing CSR endeavours. They also have more resilience towards riskier investments compared to other shareholders and tend to invest more towards these longer-horizon riskier investments. These results align with prior studies (Al-Shaer et al., 2023; Dam & Scholtens, 2012).

Model 1.2 indicates that CS and CS² have negative and positive coefficient values, respectively. It suggests a nonlinear U-shaped link between controlling shareholders and CSR investments. The findings indicate that controlling shareholders decrease CSR investments initially; however, CSR investments increase at a later stage by controlling shareholders. A possible explanation is that controlling shareholders are risk-averse (Anderson et al., 2012) and tend to restrict risky CSR investments while having low shareholdings. CSR investments are costly to bear and profit-oriented controlling shareholders tend to reduce these investments. Another explanation is that controlling shareholders, while playing their fiduciary roles, attempt to make optimal CSR investments (Lim, 2018). Previous studies mentioned that continuous investments in CSR, such as long-oriented investments, might harm firm value (Asif et al., 2020; Kweh et al., 2022).

After a tangent point of optimal, controlling shareholders increase CSR investments for certain reasons. First, when controlling shareholders have enormously invested in one company, their longevity concerns will grow and lead them to pursue reputational and customer loyalty benefits. Furthermore, controlling shareholders have family owners like transitional concerns (Anderson et al., 2012). These results agree with Cao et al. (2019) who suggest that non-controlling large shareholders increase CSR reporting because of reputational concerns. Second, when controlling shareholders become entrenched, they may want to pursue their personal benefits using CSR activities. Their position as larger owners provide them with greater voting rights and representation on the company boards, allowing them to make discretionary decisions concerning CSR investments to address personal motives. For example, controlling shareholders may tunnel firm resources to their subsidiaries and be involved in charitable activities while expropriating minority shareholders

(Caixe et al., 2019; Russino et al., 2019). In this regard, many companies will participate in symbolic CSR activities rather than taking substantive measures (Li et al., 2019).

Another possible reason for the nonlinear relationship is that controlling shareholders are more efficient in exerting their monitoring roles than other shareholders and change the optimal levels according to their horizons (Gloßner, 2019). For instance, controlling shareholders may keep the level of CSR investment low at the beginning stage to observe their net outcomes and later increase it upon unlocking the wall of their benefits. Moreover, CSR investments have varied implications for different shareholders (Chen & Gavius, 2015). These results thus support hypothesis H2.

4.4 Discussion

This study examined the linear and nonlinear relationships between controlling shareholders and CSR investments. The main objective is to determine whether the change in controlling shareholders will impact CSR differently. This was achieved by evaluating the linear and quadratic models to gather in-depth knowledge about the underlying phenomenon. In the industrial economy, CSR activities are pivotal to the sustainable success of a business (Kweh et al., 2024). CSR activities entail, but are not limited to, environmental concerns, such as reducing CO₂ levels, enhancing environmental innovation, improving employee welfare, supporting product development and innovation, and promoting the betterment of the community. Developing countries like Pakistan are suffering from environmental pollution, bad quality of air and water, and fast-paced depletion of natural resources (Ikram et al., 2020; Khan, 1996). These issues become more intense due to rising population, heavy energy demands, traffic density, urbanisation, and poor corporate governance (Farooq et al., 2022; Khwaja, 2012). The metropolitan cities of Pakistan, such as Karachi and Lahore, are characterised by heavy road traffic, causing CO₂, haze, and smog emissions. Additionally, the industrial activities of highly demanding sectors, including textile, leather, oil refineries, chemicals, and ceramics, are among the major reasons for environmental emissions and industrial effluents. This is in addition to the poor quality of air and water in other cities like Sialkot, Faisalabad, Multan, Hyderabad, Lahore, and Rawalpindi, which is caused by poor sanitation and wastewater management (Khwaja, 2012).

The issue of pollution in Pakistan is made worse by certain company operations that add more towards the ongoing environmental complexities. Therefore, it is important to examine the role of controlling shareholders in CSR investments because they are the main actors of firms' strategic decision-making and CSR activities can help to curb these environmental and social problems. Gloßner (2019) highlights that large blockholder shareholders possess the incentives and means to monitor managers' actions concerning CSR activities. Likewise, Li and Xia (2018) indicate that both state and private owned shareholders attain their goals through CSR activities. This is because their position as the largest owners provides controlling shareholders greater voting powers and indirect channels (e.g., board seat control) to influence the strategic decision-making of the firm (Hsieh et al., 2020).

Thus, controlling shareholders may have discretionary powers and influence over the bottom line of the company. Our findings revealed that controlling shareholders can increase the level of CSR investments. It confirms the alignment of interest hypothesis by arguing that controlling shareholders having longevity concerns play fiduciary roles to enhance the level of CSR investments (Gloßner, 2019). Results from the nonlinear examination indicated that controlling shareholders can increase CSR investments when shareholdings are low; however, they may decrease CSR investments after certain thresholds. These results confirm the entrenchment hypothesis and show that controlling shareholders may pursue their personal goals and expropriate the minority shareholders. Another possible explanation is that controlling shareholders have fiduciary roles subject to society and different stakeholders and they often think better when leveraging from CSR investments. Chen and Gavius (2015) argue that different controlling shareholders have varied implications for CSR investments according to their own idiosyncratic vision.

The insights gained from this study are valuable for various stakeholders, including managers, investors and policymakers. Managers can focus on the management behaviour of controlling shareholders and align their interests with them. Investors can rely on controlling shareholders in terms of social endeavours as they have the incentives and power to monitor managers' actions on CSR activities. Finally, policymakers can devise regulations to prevent minority shareholders from controlling shareholders' expropriation act.

4.5 Robustness

Following Cao et al. (2019), the analysis in this study was also conducted using alternative proxy of CSR. It specifically focused on analysing the relationship between controlling shareholdings and CSR Dummy (CSR_{DUM}). Model 1.1 (a) suggests that controlling shareholders are positively associated with CSR. The findings are consistent with the main analysis of this study. Meanwhile, Model 1.2 (b) indicates the nonlinear relationship between controlling shareholders and CSR. The positive and negative coefficients of CS and CS² formulate the inverse U-shaped relationship between the two variables. These findings partially confirm the prior results.

Table 3. Probit regression between controlling shareholders and CSR investment

Variables	Model 1.1 (a), DV=CSR DUM		Model 1.2 (b), DV=CSR DUM	
	Probit Model		Probit Model	
	Coefficient	z-stat.	Coefficient	z-stat.
Constant	-0.7023	-7.4400***	-0.8689	-8.1000***
CS	0.9716	8.4200***	2.6442	5.2200***
CS ²			-1.8458	-3.4000***
TANG	-0.0023	-2.6900***	-0.0020	-2.3000**
LIQ	-0.0052	-1.1000	-0.0057	-1.1700
BDIV	-0.1126	-1.4500	-0.1079	-1.3900
BIND	0.7782	3.4600***	0.6999	3.0800***
Chi-Square	106.16***		117.7000***	
Pseudo R-Square	0.0662		0.0735	

Notes: The results of probit regression between controlling shareholders and indicator CSR dummy.

*** and ** show significance at 1% and 5% levels, respectively.

5. CONCLUSION

This study investigated the role of controlling shareholders on CSR investments among Pakistani listed firms. Panel regression was employed to analyse the data and conduct the hypothesis testing procedure. The findings confirm the linear and nonlinear relationships between controlling shareholders and CSR investments of firms. Such insights are useful for managers, non-controlling shareholders, governance policymakers, and other stakeholders. Managers and non-controlling large shareholders can benefit from the findings in pursuing CSR initiatives. For instance, they can better assess the controlling shareholders' alignment or colluding with the overall social agenda of the company. Meanwhile, governance bodies in Pakistan, such as the Securities and Exchange Commission of Pakistan (SECP), can devise various steps to bridge the gap between ultimate resource handler and other stakeholders regarding CSR investments. SECP and other stakeholders can pave the way to balance the economic and social benefits of a company. The findings also serve as a guideline to develop regulatory frameworks in determine the impact of concentrated ownership structures over company operations at minute levels. For instance, controlling shareholders, being the ultimate authority, can decide the quality of inputs used by the company. The low price of fuels and other raw materials can benefit shareholders but may harm the environment, employees, society, and other stakeholders.

The findings of this study can be generalised to developing economies with poor corporate governance mechanisms. It provides insights into the phases of developing regulatory frameworks for environmental protection or enforcing the rules and regulations pertinent to CSR. Nevertheless, this study has several limitations worth highlighting. First, the data was collected from Pakistani listed firms and relied on one proxy of CSR due to data availability issues in emerging economies. Future studies can conduct comparative, cross-country investigations by collecting data from multiple economies to gather further insights about the topic. Second, future studies can collect CSR data from different agencies. Although there might be variations in CSR scores provided by different rating agencies, these scores will act as a starter for future investigation. Third, future studies can classify different types of controlling shareholders. This is because controlling shareholders can either be transactional, long-oriented, and sustainable as well as individual, institutional, and governmental. All these types of controlling shareholders have different implications towards CSR endeavours.

ACKNOWLEDGEMENTS

The authors would like to thank the Faculty of Management Sciences, Riphah School of Leadership, Riphah International University, Lahore, Pakistan.

FUNDING STATEMENT

The authors did not receive financial support for this work.

AVAILABILITY OF DATA AND MATERIALS

The data is available upon request from the corresponding author.

AUTHORS CONTRIBUTION

Quratulain (Data Collection, Data Analysis, Literature Review, Writing of Results)

M. W. Zafar (Writing, Data Validation, Supervision)

J. Asif (Conceptualisation, Software, Writing, and Proofreading)

CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICS STATEMENT

This research was conducted in accordance with ethical standards.

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