

## Article

# An Analysis of Corporate Social Responsibility and Firm Performance with Moderating Effects of CEO Power and Ownership Structure: A Case Study of the Manufacturing Sector of Pakistan

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**Abstract:** Corporate social responsibility (CSR) are the activities of firms that are not only considered for economic profit but also include the social welfare returns. To find the key drivers that affect the relationship between corporate social responsibility (CSR) and firm performance, we investigated the moderating effects of CEO power and ownership structure. Ownership structure is classified into two parts: managerial ownership and ownership concentration. We selected a sample of firms from eight manufacturing sectors of the Pakistani economy for the analysis. We collected data from the State Bank of Pakistan (SBP), Securities and Exchange Commission of Pakistan (SECP), Pakistan Stock Exchange (PSX), and companies' annual reports over the period 2008 to 2017. We employed the Fixed Effects model and Generalized Method of Moment (GMM) to investigate the association between CSR and firm performance. The empirical analysis of this study highlights the following conclusions: First, CSR has a significant positive association with firm performance. Second, the relationship between CSR and firm performance shows the same results with the interaction of CEO power. Thirdly, interaction of the managerial ownership with CSR has a significant positive relationship with firm performance. Fourth, the interaction of the ownership concentration with CSR has a positive effect on firm performance.

**Keywords:** social contribution value per share; firm performance; CEO power; ownership structure; developing country; manufacturing sector

## 1. Introduction

In the last decade, sustainability has become a more important issue, and shareholders have been paying more attention to social activities. When the 21st century started, corporate social responsibility (CSR) became the main concern of businesses all over the world. CSR is commonly defined as those activities of firms that not only consider economic profit, but also include social welfare returns [1,2]. This explanation provides clear evidence on CSR actions revolving around people and sustainability [3]. In the world of CSR, many researchers have moved their attention from measuring CSR disclosure to exploring CSR determining factors [4–7]. In addition to this, K Davis [8] elaborated CSR as a firm motive not only to earn traditional profit, but also to contribute to society for long-term survival. H Wahba and K Elsayed [9] stated that a firm can gain an edge over its competitors by investing in societal activities. L Lambertini and A Tampieri [10] argued that firms with CSR activities can get more profit than non-CSR firms.

Furthermore, many researchers have discovered the association of CSR with firm performance (FP) in different countries. Some studies show mixed results of CSR and FP: positive, negative, and no relationship [11–13]. Moreover, CSR is not only a measure of societal activity, but also provides

commitment promised by the organization, such as the structure of management, vision, and mission statement and the process of the corporation that is required to deal with socially responsible issues in appropriate ways [14]. In spite of the huge amount of research on CSR, some questions are still unexplored, such as whether CSR disclosure increases value makings, and if so, then what are the major factors? The existing research does not give an appropriate answer [15–17].

Corporate governance (CG) involves making strategies and standards and developing measures to control and direct the organization, which leads to a trustful and transparent environment and disclosure of CSR [18]. Further, CG revolves around solving issues that rise in agency relations when interests and goals among the agents and the principals are different [19]. CG is used to measure the association between firms and their shareholders and discover a positive association [20], while other scholars have found that CG contains both external and internal stakeholders [21,22]. Corporate governance is a key factor for every industry's success or failure, and CG has two major components, the chief executive officer (CEO) and ownership structure.

Therefore, the important point of CSR is to recognize noble activities that are frequently constructed by following excellent corporate governance principles [23]. Good corporate governance practices improve shareholders' confidence and encourage them to adopt CSR activities; for a company it is a decent approach to financing and obtaining capital at lower cost [24]. Revealing CSR information is imperative for every firm, because it can reduce the asymmetry of information and enhance the relationship between firms and shareholders. A firm can acquire long-term benefits with improved CSR disclosure and transparency, and visibility could be improved in return by developing society's trust. Prior studies revealed that agency cost can be reduced by stimulating shareholders to engage in and perform CSR activities and disclose them to shareholders [25].

There are different theories in the literature of corporate governance. First, according to agency theory, it depends on the shareholder wealth maximization assumption. CSR is considered as an agency problem M Friedman [26] because managers invest in CSR to acquire personal advantages [27]. Furthermore, agency theory explains that CSR is assumed as a shareholder expense and leads to lower profit [28–30]. On the other hand, a second opinion presented by stakeholder theory RE Freeman [31] assumes that CSR is a tool to enhance shareholder wealth, and further, it encourages other stakeholders to participate in CSR activities. Moreover, risk management and stakeholder theory suggests that CSR creates rational wealth and additional capital resulting from the stakeholder relationship [32]. This additional capital creates firm goodwill, which provides protection as insurance in the case of lower profit and alleviates bad stakeholder assessment [32,33]. Social impact theory claims that CSR has a positive association with FP [34]. Economic theory postulates that CEO with high power may create conflict between managers and shareholders that leads to agency problem. On the contrary, organizational and management theory suggest that CEO with high power has more advantages and less costly [35]. The managerial power theory (MPT) describes the association between CEO pay and FP [36]. Property rights theory suggests that ownership structure has a positive association with FP [37].

However, for CSR studies, it is important to discuss the key decision-making groups, such as CEOs, and the ownership structure, because they have the main power to control the operational activities of the company, and also give important policy guidelines for better comprehension of CSR and FP. So, the primary aim of this study is to explore the moderating role of the CEO and ownership structure for CSR disclosure and to check the connection of CSR with FP.

The CEO is the major position of corporate governance, and different studies shows that Chief executive officer (CEO) in the organizational setup, has a lot of power. The CEO is generally assumed as the most influential figure in a firm. The CEO can influence the firm's information disclosure regarding CSR and firm value [38–42]. J Francis, D Philbrick and K Schipper [38] found that sometimes firm disclosure misleads the market, while KW Hui and SR Matsunaga [42] discovered that changes in annual bonuses for chief financial officers (CFOs) and CEOs have a positive association with disclosure quality. QR Yasser, A Al Mamun and AR Suriya [43] inspected the relationship between CEO and FP in Pakistan with three measures, CEO duality, CEO affiliation, and CEO qualification, and

found a negative association between CEO duality and FP, but a positive relationship between CEO affiliation and FP, and CEO qualification and FP. Furthermore, MF Sheikh, SZA Shah and S Akbar [44] highlighted that CEO compensation is positively associated with FP, and ownership concentration also has a positive connection with CEO compensation. Y Shafique, S Idress and H Yousaf [45] suggested that firms that have a high-quality relationship with the board have a positive association between board independence, earning management, and CEO duality, but a negative association between women CEOs and FP. Furthermore, F Li, T Li and D Minor [46] found negative effects of CEO power on the association of CSR and FP.

After the CEO, the ownership structure is another important factor in corporate governance, because it involves organizational decision-making and improvement and plays a vital role in CSR improvement related to FP, as different studies have shown that the ownership structure has a significantly positive role in FP [47]. Ownership structure is basically divided into two parts, ownership concentration and managerial ownership; a negative association was found between managerial ownership and FP, and an insignificant association between ownership concentration and FP [47,48]. On the other hand, many studies found that FP has a positive association with ownership concentration [49,50].

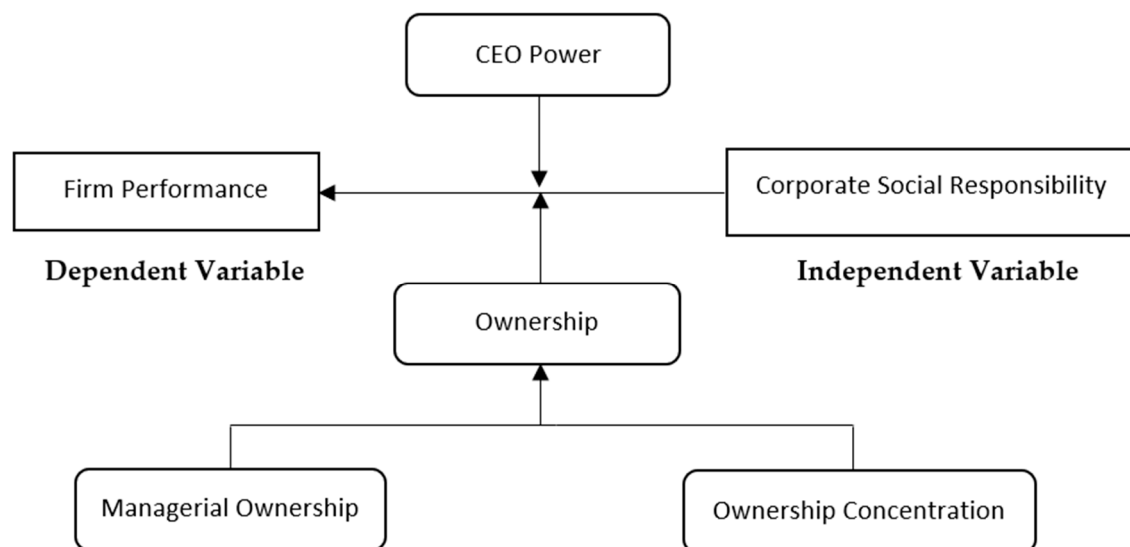
Furthermore, multiple studies highlighted a positive connection between managerial ownership and firm financial returns [51–53]. S Garas and S ElMassah [48] found that ownership concentration and managerial ownership have a positive relationship with CSR. By examining CSR and FP with moderating effects, we can better understand managerial incentives and CEO motivations for investing in CSR activities. Using stakeholder and agency theory, we examine the moderating role of CEO power and ownership structure on the association of CSR and FP.

Despite awareness of CSR practices, most of this area is investigated in developed countries. CSR practices are different in developed and developing countries, so there is still gap in CSR research in developing economies [54]. Various studies have found the association of CSR and FP with different moderating effects; a positive association was found between CSR and FP, because CSR has positive effects on reputation, competitive advantage, and customer satisfaction [55]. Further, CSR and FP have a positive association with the moderating effects of marketing competence [56]. Another study found a positive association of CSR with FP by using advertising intensity as a moderator [57]. Firms can retain higher levels of customers if they produce good and innovative products [58]. Furthermore, a study using brand performance and brand equity as moderators found a positive association between CSR and FP [59]. The association of CSR and FP can be mediated by intellectual capital, and industry type has a moderating effect [60].

As reported by S Lee and H Jung [61] CSR and FP have a positive connection with differentiation and outside moderators, but cost reduction has negative effects. A firm can engage more stakeholders with improved CSR activities [62]. No study has investigated the combined impact of CEO power and ownership structure on the association of CSR and FP, especially in developing countries. Such as F Li, T Li and D Minor [46] investigated CEO power impact on the CSR and FP and found negative association between CEO power and firm choice to involve in CSR in developed country.

Furthermore, multiple studies have been done on CSR in the context of developing economies, revealing that there is lack of CSR education and institutional support, therefore CSR still needs to be explored in developing economies [63,64]. The cost of reporting about CSR activities is another reason to narrow work on CSR in developing economies, because motivation is low and minimal resources are available [65]. Generally, firms in developing economies like India, Pakistan, Bangladesh, and China rarely stick to the government code of practice in aspects such as dishonesty, tax payment problems, work-related safety and health (WSH), environmental protection, practices of employees, social rights for humans, and child labor. In these conditions, there are many challenges for firms to complete their CSR task [66,67]. Therefore, there is a great need to explore CSR activities in the developing economy context.

Therefore, this study intends to explore the CSR role in firm profitability with the moderating effects of CEO power and ownership structure, as shown in Figure 1.



**Figure 1.** Conceptual framework.

The purpose of this study is to investigate the connection of CSR with FP by considering the moderating effects of CEO power and ownership structure in a developing economy like Pakistan. CEO power has an influence on initial investments made in CSR, while ownership structure affects managerial decision-making regarding CSR. For an empirical analysis, we employed the fixed effects model and generalized method of moment (GMM) to investigate the relationship of CSR with the performance of manufacturing firms. The results of this study reveal that CSR has a positive connection with FP, and CEO power is highly imperative for this connection. Furthermore, managerial ownership and ownership concentration also show a positive association with CSR and FP. Agency problems can be reduced by CSR contributions, encouraging both managers and shareholders to invest more in CSR activities [68,69]. This is purely new study in the context of developing economy as we have investigated major components of corporate governance together.

This study significantly contributes to the empirical studies about the CSR connection with FP in the following ways:

First, this study is imperative for developing countries, because the scope of CSR includes more than social and environmental activities and human rights problems, and CSR plays a major role in minimizing poverty [70]. Second, CSR activities are totally different from accounting activities in organizations. Investors' judgments are based on data published by companies, and if a firm publishes all of its information regarding society, that could attract investors' interest. For the last 20 years, the demand to publish all nonfinancial data has increased, and CSR is the main element. Basically, manufacturing, use of raw materials, technology, and relationships with communities and boards are covered in CSR activities. Considering the above facts, we focused on inspecting the CSR impacts on FP and other benefits. Third, we selected the sectors for this study based on their significance to the developing Pakistani economy: cement, chemical, fertilizer, oil and gas exploration, oil and gas marketing, pharmaceutical, refinery, and textile composite. Fourth, we constructed an index to measure the social contribution value per share (SCV) of CSR for the Pakistani market. We followed the methodology of the Shanghai Stock Exchange, which developed this index in 2008. Fifth, to our knowledge, prior to this, there have been no studies exploring the moderating effect of CEO power on the connection of CSR with FP in any developing economy. Therefore, this is the first study to highlight the role of CEO power in CSR activities in the context of Pakistan. Sixth, we studied both types of ownership structure, managerial ownership and ownership concentration, to explore the connection

of CSR with FP. Seventh, we considered the interaction of CEO power and ownership structure to explain the relationship between CSR and FP. Eighth, we discuss the relationship with stakeholders, because it became stronger with the improvement of internal management following CSR activities.

This paper is categorized as follows. Section 2 briefly discuss the CSR need in the Pakistani context. Section 3 presents a literature review on the relationship between CSR and FP with the moderating effects of CEO power and ownership structure. Section 4 covers data collection and methodology. Section 5 presents the study results. Section 6 presents conclusions and policy implications.

## 2. Corporate Social Responsibility Insight from Pakistan

Pakistan represents a developing economy, and CEOs and ownership structure operations may be different from those in developed countries. The Pakistani economy has been suffering from low economic growth for the many years. Stakeholder attention to CSR activities as a substitute growth model may enhance firm growth. Pakistan offers fascinating circumstances for the examination of CSR actions encouraged by international and national organizations for a number of important reasons. Pakistan is a country that has variety of problems, such as unstable economic and political situations, terrorist acts, poor education and health development, and energy and industrial crises, in addition to communal conflict, widespread corruption, and an insufficient controlling agenda. On a larger scale, altogether these problems have implications for the industrial sector. In addition, organizations operate in an environment regarded to have low-quality product manufacturing, human rights violations, insufficient living environments, labor wage problems that do not allow a rational living standard, and, more noticeable, a high rate of child labor. A further threat is growing water and environmental pollution, because most of the companies mishandle their waste materials [71]. Furthermore, Pakistan is one of the developing countries where a lack of awareness about CSR activities exists. In Pakistan, large firms participate more in CSR activities as compared to small firms [72].

From the Pakistani context, investigations into the environment and the extent of CSR are associated with growth, and the present condition of CSR implementation by Pakistani businesses is somewhat immature [73], particularly related to CSR execution. Consequently, there is a need to look into CSR from the Pakistani perspective to increase the requirements, significance, and awareness of CSR for both local societies and governing authorities.

According to the Pakistani perspective, CSR is a new trend, because the Security and Exchange Commission of Pakistan (SECP) presented the CSR general ordinance in 2009, just 10 years ago. As per the SECP ordinance, it is mandatory for every firm in Pakistan to disclose all information regarding CSR actions performed in a year. This has to be described in annual reports in the directors and shareholders part. The SECP described 12 directives under the category of CSR. Conversely, firms are not restricted to consider only CSR actions, and present information about other areas as well. They can take part in a number of features of CSR actions per shareholders' interests. Further, the SECP presented voluntary CSR guidelines in 2013 to encourage more accountability in business ethics and firm decisions according to shareholders' interests. The SECP directs every organization to implement well-defined CSR policy in its vision statement that reveals its obligation to CSR in terms of time and the allocation of personnel and resources, while developing a business plan and code of ethics SECP [74]. Considering the above guidelines, firms are directed to form a CSR Counseling Committee and a CSR Supervision System to develop an inclusive charter for CSR within the firm. For that reason, there is a need to look at how Pakistani corporations take part in CSR activities by considering the above issues.

## 3. Review of Literature and Theoretical Framework

O Sheldon [75] first presented the CSR notion, addressing not only profit maximization but also ethical issues. AB Carroll [76] discovered that society has expectations for organizations with respect to different issues such as ethical, legal, economic, and humanitarian. WC Frederick [77] explored the four stages of CSR development: CSR 1 (1950s–1960s) recommended that public interest is essentially that managers must work gladly as public trustees; CSR 2 (1960s–1970s) discovered that legal corporate



response toward social needs is necessary for every organization; CSR 3 (1980s–1990s) suggested that organizations produce an ethical culture for the sake of stakeholders and communities by using societal agreements; and CSR 4 (1990s–2000s) explored the negative effects of organizations on society and the environment, which, as a main concern for the entire society, firms need to set right.

Corporate social responsibility disclosure (CSRD) was explored for developing countries by MI Azim, S Ahmed and MS Islam [78]. Mainly, CSRD, measured through financial characteristics (leverage, profitability, and firm size), has been extensively described for developed countries in the literature [79–81].

### 3.1. Corporate Social Responsibility and Firm Performance

The relationship of CSR with FP has been investigated in a variety of studies in developed and emerging economies, therefore it is not a new trend [82]. Some studies show mixed results of CSR and FP: positive, negative, and no relationship [11–13]. Such questionable conclusions create a research gap, allowing for more investigations in an effort to attain satisfactory results. There are presently two competing theoretical foundations for the association of CSR and FP. Some argue that there is a negative association, because CSR is assumed to increase cost when firms make contributions to charity, support social development programs, and create procedures for environmental protection. On the other side, some argue that there is a positive association, because CSR improves employee satisfaction and company goodwill. It is further explained that social activities may enhance associations with investors, government officials, and bankers, which leads to firms having easy access to capital [46].

Investors perceive positively those firms that are more involved in environmental activities than those that are less involved [83]. Multiple scholars have empirically examined the association of CSR with FP. A study conducted on the cement sector found that CSR had a positive association with FP [84]. Different researchers have shown that FP can be enhanced by CSR participation [13,85]. Another study found a positive association of CSR with FP using a sample of 50 companies [86]. At present, the literature verifies that FP can be enhanced by CSR disclosure [79,87,88]. Firms with higher profit are more willing to publish environmental and social disclosure in reports, proving their loyalty to society [89]. Furthermore, social impact theory suggests that CSR has a positive connection to FP and enhances firms' social relationships [34]. A study found that return on equity (ROE) is vital for CSR and FP, and the literature verifies that companies extensively use ROE as a performance measure [90]. Empirical studies mostly use accounting-based performance measures to investigate CSR and FP such as return on assets (ROA), sales growth, and total assets, and their findings suggest a positive association between CSR and FP [91]. Research conducted in Ghana found a positive association between CSR and company performance by using structural equation modeling [92].

In addition, agency theory postulate that CSR is assumed as shareholder expense and, as a result, leads to lower profit [29,30]. A study conducted in Brazil indicated that CSR has a significant negative correlation with FP [93]. M Feng, X Wang and JG Kreuze [94] explored the relationship of CSR with firm financial performance, and most of the time they have a positive connection but it varies across the industry structure; some industries have a negative association. In contrast to agency theory, stakeholder theory contends that FP is increased by multiple stakeholders [31]. Basically, stakeholders are classified in two categories: investing stakeholders (shareholders) and non-investing stakeholders (customers, employees, suppliers, society, etc.). It further contends that CSR improves firm performance by protecting all stakeholders' interests and by decreasing the risk of attaining resources. A B. Casado-Díaz, J L. Nicolau-Gonzálbez, F Ruiz-Moreno and R Sellers-Rubio [95] explored CSR activities and found that CSR has a positive impact on FP. A firm with CSR activities can improve its relationships with stakeholders, ultimately leading to higher profits [96,97]. D Cormier and M Magnan [98] and W Aerts, D Cormier and M Magnan [99] found progressive outcomes when a company is involved in CSR actions, enhancing shareholder confidence.

Many other empirical studies show that firms' CSR practices are considered to have direct relationship with employee welfare and FP [100]. Latin American research found that CSR has

a positive connection with FP, and results vary according to the country's industry structure [101]. Even though scholars have reported mixed outcomes in the literature concerning CSR and FP, a majority of previous studies confirmed a positive affiliation of CSR with FP in developed countries. On the other hand, there are still mixed and unsatisfactory results in developing countries. By summarizing the above literature, we developed the following hypothesis:

**Hypothesis 1:** *CSR has a significant and positive effect on firm performance.*

### 3.2. Corporate Social Responsibility and Firm Performance with the Moderating Effect of CEO Power

Corporate governance is a key factor for industry success or failure. The CEO is a key position of corporate governance in every business, so CEO power influences corporate decision-making. CEO power has attracted many scholars to investigate it in multiple fields such as management, finance, and economics. A firm's innovation strategies normally depend on its CEO R Berger, Dutta, S., Raffel, T., & Samuels, G. [102], and the CEO is assumed to be the leader for shareholders to maximize value [103]. Conversely, there is no permanent consent that reveals how accurately CEO power creates higher value. Economic theory postulates that greater CEO power may create problems with managers' and shareholders' interests that may lead to agency problems. On the other side, organizational and management theory shows that sometimes CEO power is beneficial and associated with cost [35].

In addition, stakeholders have different opinions about corporate CSR practices. For example, if a company donates to the local community, it may be appreciated by local employees but criticized by distant stakeholders. Therefore, a detailed analysis is required for awareness of the association between CSR and the firm's financial value. Unique significance factors of stakeholder management are associated with relevant power [104]. There are different channels for corporate governance, as reported by X Giroud and HM Mueller [105]. Competition is a channel to find the governance level, and the major problem for noncompetitive firms is loose management, as economists frequently explain that a noncompetitive environment relaxes managers' discipline, while competition puts pressure on managers' discipline. A weak governance system in a noncompetitive environment leads to low productivity, low profit, low equity return, and low firm value. Further, FP and financial and investment policy can be explained with CEO industry tournament incentives. According to JL Coles, Z Li and AY Wang [106], industry tournament incentives are measured as CEO pay gap and highly paid CEOs. They contend that firm risk, performance, and financial and investment policies have a positive connection with industry tournament incentives. Firms grant restricted and option stocks to CEOs for the management of incentive level of equity. J Core and W Guay [107] found that there is a negative connection between them and suggested that firms should consider economy theory when granting these kinds of stocks.

Moreover, ZF Li [108] highlights the benefits of mutual monitoring; for example, the agency problem can be mitigated by mutual monitoring by a highly organized authority. Mutual monitoring is an important tool to maintain and inspect CEO power. Further, mutual monitoring and future FP have a positive association. For firms with higher information asymmetry between the CEO and the board, mutual monitoring was found to be imperative.

We use CEO pay ratio, as used by different researchers, to find CEO power, such as CEO annual pay divided by total annual pay of all directors of the board [109]. LA Bebchuk and J Fried [36] discovered that highly paid CEOs have high power and the ability to make decisions in their organizations.

A number of studies have analyzed the compensation of executives over the last two decades. The studies focused on whether executive compensation can be defensible to check the corporate financial value [110]. In a developing country such as Pakistan, it is supposed that the CEO is more powerful than the board of directors because this key post is mainly held by family members [111,112]. All components of CEO compensation in Pakistan are required to be published in annual reports, but other Asian countries may not disclose this information properly [113–115].

On the other hand, F Li, T Li and D Minor [46], considering classical agency theory, assumed CSR as overinvestment and discussed the CEO role with the association of CSR and FP. They measured CEO power with CEO pay, duality, and tenure and found that it is negatively connected to the choice to engage in CSR, and involvement in more CSR activities is actually value enhancing. Stakeholder theory suggests that a firm can improve its relationships with shareholders by being involving in CSR activities [31]. MA Harjoto and H Jo [68] proved that managers are involved in CSR actions to solve problems and improve relationships among numerous stakeholders, and further, by considering stakeholder theory, managers want to maximize profit with improved relationships with shareholders.

Different empirical studies have explained that the CEO has the power to affect disclosure strategies. F Song and AV Thakor [116] examined facts about CEO compensation to manage the statistics revealed to the panel. Managerial power theory (MPT) is presented to find the association of CEO compensation with FP [36]. Moreover, Pakistani markets give an exclusive background to research how CEO compensation is observed by boards and associated with FP, how CEO pay is set by concentrated or family ownership, and how CEO compensation decisions are affected by board structure. Studies have shown that FP has a positive connection with CEO compensation [114,117–119]. Pay and performance are positively interdependent [120]. Furthermore, a standard discovered by Chang et al. [121] reveals that CEO pay is highly linked with quality-oriented disclosure. Summing up the above facts, we developed the following hypothesis:

**Hypothesis 2:** *Firm with the highest CEO power have a significant and positive effect on the association of CSR with firm performance.*

### 3.3. Corporate Social Responsibility and Firm Performance with the Moderating Effect of Ownership Structure

The relationship between CSR and CG has been investigated in a variety of studies. CSR establishes a firm's responsibilities internally as employees and externally as societies, which reflects on the CG structure and FP [122]. First-time ownership structure was investigated by H Demsetz [123], and H Demsetz and K Lehn [124], who argued that ownership structure is examined endogenously. According to agency theory, managerial compensation has an association with FP and is an important tool for balancing shareholder and manager interests [125]. According to property rights theory, ownership structure has an association with FP and determines firm efficiency. Scholars have investigated the association of ownership structure with FP and found mixed results: positive, negative, and U-shaped [37,126]. Stakeholder theory postulates that a firm's success is measured not only by shareholders' influence, but also by other stakeholders such as employees, governments, customers, suppliers, and societies. Firms with social responsibility try to maintain all stakeholders' interests, which may lead to higher profit. This goal can be achieved with a well-established ownership structure [127].

Ownership structure is divided into two parts, managerial ownership and ownership concentration [47,48]. Davis [8] explored how firms' traditional financial profits belong to the CSR activities that they create for society. Thus, CSR is concerned with the actual value that firms create for their shareholders: employees, customers, creditors, communities, and society. Wahba and Elsayed [9] discovered that firms can enhance their competitive edge over rivals by making an investment in social responsibility.

Managerial ownership is defined as the total percentage of shares held by the managers, the board of directors, and insider owners [128,129]. Jensen and Meckling [125] explained agency disputes of managers and owners could be improved by managerial ownership and found a negative association between them, but managerial ownership and FP have a positive association. Shareholders who have tradable shares carry voting rights and participate in shareholder meetings, therefore they have additional access to company management and the authority to deal with social responsibility activities. Numerous studies have found an association between managerial ownership and FP, including a positive relationship [51–53]. Garas [48] explored the relationship of managerial ownership and CSR and found a positive association.



Top managers assumed as key drivers for improving CSR [130]. According to Y-L Cheung, D Kong, W Tan and W Wang [131], CSR performance can be enhanced with the involvement of foreign ownership. Foreign leadership may improve CSR activities by following international rules, regulations related to social reporting [132] further, a firm can be strong in CSR activities with outside managers than family members [133]. A manager can solve shareholders' problems by engaging them with CSR practices, increasing the shareholders' wealth as well as company profits [68]. From the above literature, we developed the following hypothesis:

**Hypothesis 3:** *Managerial ownership has a significant and positive effect on the association of CSR with firm performance.*

Benefits and cost of ownership concentration determined and suggested that proportion of shareholding by large or small shareholders depends upon the firm features and its agreement [123,124]. Agency theory proposes that extra incentives encourage institutional investors to observe firm disclosure strategies and monitor management decisions in a better way because of experience and resources [125,134]. R Zeitun [135] inspected FP in the context of ownership concentration in (Gulf Cooperation Council (GCC) countries by selecting 203 firms and found a significant and positive association, which verifies the findings of A Shleifer and RW Vishny [20].

Ownership concentration is defined as a proportion of firm shares held by major shareholders [136]. The top five shareholders or fraction of significant shareholders is used to measure ownership concentration [49,136]. Ten percent or more of the shares of a firm held by the shareholder makes them a large or major shareholder [137]. Ownership concentration is found to have a positive correlation with FP [19]. Ownership concentration provides an opportunity for managers and controlling shareholders to participate in preventing misappropriation from minority shareholders, therefore, ownership concentration is an important factor for corporate governance [20]. Feng et al. [138] found that government ownership is positively related to corporate social responsibility in Chinese listed companies. The Pakistani ownership structure is concentrated at a high level, and firms are mainly controlled by family ownership. The top shareholder percentage is taken to check the effect on corporate financial performance, which is examined by ROA and ROE. The ordinary least squares (OLS) model was applied to this research, and a significant positive association between ownership concentration and FP was found [139]. In his study, Garas [48] found that ownership concentration has a positive association with corporate social responsibility. In the corporate governance literature, ownership concentration normally has a positive connection with FP [140]. L Dam and B Scholtens [141] explained that highly concentrated ownership may lead to inferior CSR actions, because shareholders may feel that the firm provides goods at higher prices. On the other hand, the results of C Lau, Y Lu and Q Liang [142] in Brazil reveal that CSR is positively connected to ownership concentration. The important studies from the previous literature about the relationship between CSR and FP with different aspects such as CEO power, managerial ownership, and ownership concentration are shown in the Table 1. By considering the above literature, we developed the following hypothesis:

**Hypothesis 4:** *Ownership concentration has a significant and positive effect on the association of CSR with firm performance.*

**Table 1.** Summary of important studies about the relationship between CSR and firm performance.

Authors	Period	Country	Methodology	Relationship
Crisóstomo et al., (2011)	2001–2006	Brazil	Lagged effects	CSR & FP (–)
A Rehman, Q Baloch and S Sethi [84]	2006–2012	Pakistan	Correlation and generalized least square Random effect regression.	CSR & FP (+)
Javaid Lone, Ali, & Khan, (2016)	2010–2014	Pakistan	Paired-samples t-test and Regression analysis	CSR & FP (+)

Table 1. Cont.

Authors	Period	Country	Methodology	Relationship
A B. Casado-Díaz, J L. Nicolau-Gonzálbez, F Ruiz-Moreno and R Sellers-Rubio [95]	1990–2007	Spain	The event study technique	CSR & FP (+)
Y Li, M Gong, X-Y Zhang and L Koh [25]	2004–2013	United Kingdom	An instrumental variable approach and Heckman two-stage estimator	ESG & FP with CEO POWER (+)
S Leung and B Horwitz [51]	1997–1998	Hong Kong	Univariate T-test and Regression	Managerial ownership & FP (+)
S Bhagat and B Bolton [52]	1998–2007	United State	Instrumental variable estimation and Hausman OLS & 2OLS	Managerial ownership & FP (+)
S Garas and S ElMassah [48]	2007–2012	GCC Countries	Multivariate regression analysis	Managerial ownership, Ownership concentration & FP (+)
A Abbas, HA Naqvi and HH Mirza [139]	2006–2009	Pakistan	Regression analysis	Ownership Concentration & FP (+)

## 4. Materials and Methods

### 4.1. Sample Selection and Data Collection

We selected a sample of 133 firms from the eight manufacturing sectors of the Pakistani economy: cement, chemical, fertilizer, oil and gas exploration, oil and gas marketing, pharmaceutical, refinery, and textile composite. During sample selection, we excluded all firms that did not mention CSR activities in their annual reports, and firms for which data were not available or which were declared defaulted by the Pakistan Stock Exchange (PSX). Furthermore, we selected firms that were registered with the PSX before 2008 and had at least 100 million rupees in outstanding shares, because larger companies generally publish sustainability reports on a regular basis. Finally, we used the data of 99 manufacturing firms obtained from the Pakistan Stock Exchange, the State Bank of Pakistan (SBP), the SECP, sustainability reports, and companies' annual reports from their respective websites over the period 2008–2017.

There are several reasons to select the manufacturing sector for this investigation. First, manufacturing firms have greater CSR activities compared to companies in other sectors LC Jennifer Ho and ME Taylor [89]. Second, studies that focused on the manufacturing sector showed a positive relationship between CSR and FP [84,143,144]. Third, manufacturing firms have higher disclosure regarding production, environmental, and welfare activities than other sectors [79,145]. Fourth, manufacturing firms in Pakistan have huge CSR disclosure because they hold higher market capitalization in the PSX and have more resources with which to participate in CSR actions and publish them in annual reports [71]. Fifth, the manufacturing sector of Pakistan does more exporting than other sectors [146]. Sixth, it is imperative for exporting firms to adopt CSR activities to compete and grow in the international market and fulfill international standards.

CSR activities in the Pakistani market vary according to firm size, nature of the business, value, and managers' and owners' beliefs. Large local companies in Pakistan participate more in CSR practices than SMEs; for example, fertilizer, cement, refinery, oil and gas, and other manufacturing businesses have well developed and formalized CSR programs. These companies publish sustainability reports by following the SECP guidelines and the Global Reporting Initiative (GRI). In Pakistan, these companies contribute significantly to social welfare programs such as education and health improvement, poverty reduction, development of infrastructure for local societies, vocational and technical teaching, orphanages, human resource development, and emergency assistance in natural disasters [70].

## 4.2. Measurement of Variables

### 4.2.1. Corporate Social Responsibility

Numerous studies have constructed CSR measurement indices, and mainly these cover similar factors, such as human rights, state rights, stakeholder rights, community rights, and others. A study conducted in Pakistan for CSR used Carroll's [76] charter to develop a questionnaire to measure CSR [147]. An Indian study constructed a CSR index on the basis of minority rights such as castes, tribes, children's meals, and combined marriages at a large level and firms' annual reports with CSR disclosure; furthermore, environmental factors were considered in the form of unsafe gases [148]. Using five indicators, a CSR index was constructed in Korea that follows employee training and education, firm charity activities, adopted standard reporting format for accounting, auditing, and environment, trustworthy relationships with customers, and environmental participation [149]. The researcher presented CSR with regard to people's propensity for suspicion, refusal to accept, and questions about CSR participation and constructed a CSR index on the basis of four elements using the Skarmas and Leonidou scale: the socially liable retailer, the retailer's concern for society, the retailer's ethical principles, and the retailer's method of accountability [150].

The CSR scores used for this study were assigned to firms for societal and ecological participation by using Thomson Reuters ASSET4 [151]. This study measured the firms' societal, economical, and environmental dimensions of CSR and evaluated the implementation and outcomes of CSR [152].

A study in China constructed a CSR index on the basis of 63 features including rights for stakeholders, labor, and humanity and performed an unbiased operation [153]. A study conducted in the US developed a CSR index on the basis of seven indicators: environment, community, human rights, relationships with employees, higher management diversity, products, and governance [154].

We used an index for CSR as social contribution value per share (SCV) by following the guidelines of the Shanghai Stock Exchange (SSE) [127]. This index is based on all the components necessary for social value, such as earnings per share produced value for shareholders, value produced for society measured as state tax revenues, employee salaries, creditors' loan interest, and other values for stakeholders, and eliminating environmental pollution as a social cost. We calculated SCV by using the following formula:

$$\frac{EPS + (Total\ Tax + Staff\ Expenses + Interest + Public\ Welfare\ Expenditure - Social\ Cost)}{Total\ Equity}$$

### 4.2.2. Firm Performance

Shen et al. [155] reported that return on asset (ROA) and return on equity (ROE) are the best performance measures for CSR activities. In this study, we used the same performance measures. ROA was calculated as the ratio of net profit to total assets [156]. This measurement shows the asset efficiency production procedure and management performance. Bhagat and Bolton [52] stated that greater ROA suggests that the efficient and effective use of assets maximizes value for shareholders. ROE was calculated as the ratio of operating profit to shareholder equity [157]. ROE is mostly used for corporate governance-related research. ROE is better, according to the shareholder's point of view, for examining the operating performance of the business [158].

### 4.2.3. CEO Power

We measured CEO power in a way similar to Veprauskaitė and Adams [109]. They used CEO compensation as a proxy for CEO power. CEO power was calculated as CEO annual compensation divided by all board of directors' compensation. We made a quartile of distribution to find the companies with high CEO power. We set those companies in the top quartile of distribution for high CEO power at 1 and others at zero, following the study conducted by Y Li, M Gong, X-Y Zhang and L Koh [25].

#### 4.2.4. Ownership Structure

Ownership structure contains two dimensions: ownership concentration and managerial ownership. Ownership concentration is explained as the ratio concentration of the top five shareholders [49,136,159], while managerial ownership is represented as a proportion of shares held by managers [128,129,160].

#### 4.2.5. Control Variables

Firm size is an imperative variable in corporate finance among all control variables. There are different measures for firm size in the literature, but total assets, total sales, and market value of equity are most important, as used by C Dang, ZF Li and C Yang [161]. Firm size matters for empirical studies in corporate finance, but results vary according to the industry. Most of the time firm size has a significant and positive effect, but sometimes it has an insignificant and negative effect. We measured firm size by taking a natural log of total assets [25].

We also used other control variables in our study: PPE ratio, leverage, and asset turnover ratio. PPE is calculated as the ratio of property, plant, and equipment to total sales [25]. Earlier studies showed that profitability, leverage, and firm size have a positive association with CSR disclosure [6,79,87,89]. Leverage was measured as the ratio of total liabilities to total assets [127]. Asset turnover ratio was calculated as total sales divided by total firm assets [47]. The measures of all variables considered in this study are shown in the Table 2.

**Table 2.** Variable measurement.

Variable Names	Abbreviations	Measures
<b>Dependent Variable</b>		
Return on Equity	ROE	Operating income/shareholder equity
Return on Asset	ROA	Net profits/Total Assets
<b>Independent &amp; Control Variables</b>		
Social Contribution Value Per Share	SCV	EPS + (Total Tax + Staff Expenses + Interest + Public Welfare Payout – Social Cost/Total Equity
CEO power	CEO power	CEO annual compensation to all board of directors compensation
Managerial Ownership	TR	Percentage of shares held by Managers
Ownership Concentration	H5	Major top 5 shareholders to total shares
The property, Plant, and Equipment (Control variable)	PPE	The ratio of property, plant, and equipment to total sales
Firm Size (Control variable)	LNTA	The natural log of total assets
Leverage (Control variable)	LEV	Total liability divided by total assets
Asset turnover (Control variable)	ASSETTO	The ratio of total sales to total asset

#### 4.3. Empirical Approach

To examine the relationship between CSR and FP, we used a panel dataset of firms from different sectors. In the panel dataset, an endogeneity issue commonly occurs during empirical analysis because explanatory variables correlate with error terms in regression, which leads to biased and unreliable results. F Li [162] elaborated two circumstances that can make independent variables endogenous. First, causality occurs both ways if we run from dependent to independent variables or independent to dependent variables. When entering into a regression model with random shock, the error term affects dependent variables, because the dependent variables affect the independent variables and

independent variables correlate with the error term. Second, there is no direct effect on dependent and independent variables, but some other variable makes a correlation between them.

There are different methods to deal with the endogeneity issue, such as the one described by F Li [162]. First, control variables are used to control the third factor effects. Second, lagged independent variables are used to solve the simultaneity issue. Third, industry or firm fixed effects are used to control unobservable time invariants. Fourth, an instrumental variable is used to detect causality. Fifth, the lagged dependent variable is used for observable and unobservable past information of the firm. Sixth, a GMM or dynamic model controls upward and downward bias in certain situations in OLS assessment. To solve the endogeneity issue, various econometrics technique were applied by F Li [162], such as instrumental variables, lagged dependent and independent variables, fixed effects, control variables, and GMM or dynamic model. After investigation, GMM was found to be more reliable than other techniques, because it has extreme effects for coefficient correction.

In this study, we estimated Equations (1) to (4) by employing fixed effect model based on Likelihood and Hausman test results. First, we employed both likelihood and Hausman test to select the consistent model by following previous study conducted by Y Feng, HH Chen and J Tang [127]. Second, we detected the endogeneity between independent variables and error terms. The results of both Likelihood and Hausman tests were in favor of fixed effect model. Moreover, we employed Generalized Method of Moments (GMM) to control the endogeneity between stochastic error terms and explanatory variables, in line with prior studies conducted by [25,162,163].

$$Y_{i,t} = \alpha_1 + \beta_1 X_{1i,t} + \gamma_1 Z_{i,t} + \mu_{i,t} \quad (1)$$

$$Y_{i,t} = \alpha_2 + \beta_2 X_{1i,t} + \beta_3 X_{2i,t} + \beta_4 X_{1i,t} \times X_{2i,t} + \gamma_2 Z_{i,t} + \mu_{i,t} \quad (2)$$

$$Y_{i,t} = \alpha_3 + \beta_5 X_{1i,t} + \beta_6 X_{3i,t} + \beta_7 X_{1i,t} \times X_{3i,t} + \gamma_3 Z_{i,t} + \mu_{i,t} \quad (3)$$

$$Y_{i,t} = \alpha_4 + \beta_8 X_{1i,t} + \beta_9 X_{4i,t} + \beta_{10} X_{1i,t} \times X_{4i,t} + \gamma_4 Z_{i,t} + \mu_{i,t} \quad (4)$$

From Equations (1) and (4),  $Y_{i,t}$ : represents the firm performance (ROA and ROE) of firms  $i$  at year  $t$ , creating two sub equations for each index;  $X_{1i,t}$ : Social Contribution Value per share (SCV);  $X_{2i,t}$ : Chief Executive Officer (CEO) Power;  $X_{3i,t}$ : Managerial Ownership (TR);  $X_{4i,t}$ : Ownership Concentration (H5);  $X_{1i,t} \times X_{2i,t}$ : Interaction term of  $X_1$  and  $X_2$  of firm  $i$  at year  $t$ ;  $X_{1i,t} \times X_{3i,t}$ : Interaction term of  $X_1$  and  $X_3$  of firm  $i$  at year  $t$ ;  $X_{1i,t} \times X_{4i,t}$ : Interaction term of  $X_1$  and  $X_4$  of firm  $i$  at year  $t$ ;  $Z_{i,t}$ : control variables of firm  $i$  at year  $t$ ;  $\mu_{i,t}$ : Error term;  $\alpha_n$ : Constant term,  $n = 1, 2, 3, 4$ ;  $\beta_m$ ,  $\gamma_n$  Coefficients to be estimated;  $m = 1, 2, 3, 4, 5, 6, 7$ .

## 5. Results and Discussion

### 5.1. Descriptive Statistics

Table 3 shows a descriptive summary for each variable. A total of 990 observations for each variable as data for 10 years for each company were considered. Minimum and maximum ROA values are 0.000 and 47.223, respectively. The mean ROA value is 10.2814, with a standard deviation of 9.5044. This shows that company return on assets is 10 times assets. The minimum ROE value is 0.000, and the maximum value is 28. This indicates that there is variation in earnings from 0.00 times equity to 28 times equity for companies included in the sample. The average ROE value is 6.4387, with standard deviation 6.0791. This indicates that company return on equity is six times owners' equity. The minimum SCV is 0.0003 and the maximum value is 0.3782. The mean SCV is 0.0448 with a standard deviation of 0.07195. The minimum value of CEO power is 2.733 and the maximum value is 0.141. The mean and standard deviation of CEO power are 0.8833 and 0.5830, respectively. Ownership concentration has a minimum value of 0.0025 and a maximum value of 0.4323, with a mean of 0.0661 and standard deviation of 0.0842. Managerial ownership has minimum and maximum values of 0.0003 and 0.1095, respectively, with a mean of 0.0115 and a standard deviation of 0.0154. Firm size was measured by taking the natural log of



total assets and is represented as LNTA, which has a minimum value of 10.752 and a maximum value of 19.588, with a mean 15.4809 and standard deviation of 1.9426. Leverage was calculated as total liabilities to total assets, with a minimum value of 0.0325 and a maximum value of 2.087, with a mean of 0.5698 and standard deviation of 0.3258. Property plant and equipment ratio, denoted by PPE, indicates a minimum 0.0077 and maximum of 27.415, with a mean of 1.2864 and standard deviation of 3.6960. Asset turnover ratio has minimum and maximum values of 0.00 and 5.0061, respectively, with a mean of 1.1555 and a standard deviation of 0.8599.

**Table 3.** Descriptive statistics.

Variable	Observation	Mean	Std. Dev.	Min	Max
ROE	990	6.4387	6.0791	0.000	28
ROA	990	10.2814	9.5045	0.000	47.223
SCV	990	0.0448	0.07195	0.0003	0.3783
LNTA	990	15.4809	1.9426	10.752	19.588
LEVERAGE	990	0.5698	0.3258	0.0326	2.087
PPE	990	1.2864	3.6960	0.0077	27.415
ASSETTO	990	1.1555	0.8599	0.000	5.006
CEOPOWER	978	0.8833	0.5830	2.734	0.141
SCV*CEOPOWER	926	−1.3401	0.7078	3.848	0.2669
TR	990	0.0115	0.0154	0.0003	0.1095
SCV*TR	925	−5.6227	1.1276	9.1820	12.6102
H5	990	0.0661	0.0842	0.0025	0.4323
SCV*H5	925	−1.8752	0.6595	3.5703	7.3174

## 5.2. Empirical Analysis

To examine the change dynamics, it is appropriate to use the panel data when investigating the repetitive cross-sectional observations [164]. Our panel data contain two performance measures as dependent variables (ROE and ROA) and seven as independent variables (SCV, CEO POWER, TR, H5, SCV\*CEO POWER, SCV\*TR, and SCV\*H5). Three estimators are available for panel data: fixed effects (FE), random effects (RE), and ordinary least squares (OLS). To conduct the empirical analysis, we first applied the Hausman test to investigate which model is more appropriate, FE or RE. After processing the results of the Hausman test, which showed a significance level ( $p < 0.05$ ) for each model, we employed a fixed effects model. To control the endogeneity problem in the panel dataset and achieve more robust results, we employed the GMM by including instrumental variables. This model was applied to minimize the association between stochastic error terms and explanatory variables.

### 5.2.1. Hypothesis 1 Examination

Table 4 presents the estimations of coefficients of variables to test the association of CSR and FP with the moderating effects of CEO power. Model 1 shows that SCV is positive and statistically significant at the 1% level with a coefficient value of 26.47. Model 2 shows that SCV is statistically significant and positive at the 1% level with a coefficient value of 16.13. SCV shows a statistically significant and positive relationship with both performance measures, ROA and ROE. Hence, Hypothesis 1 is accepted according to the results explaining that FP will be enhanced as social responsibility increases. Owners and stakeholders have benefits from social activities because the FP improves with CSR activities. Accordingly, the advantage of investing in social activities is that it will lead to a positive comeback of the market, make net profits surge, and reinforce the solidity of total financial growth [165]. Therefore, the association of CSR and firm performance was found to be positive. According to C Dang, ZF Li and C Yang [161], firm size is important to discuss. Model 1 presents an LNTA coefficient of −3.57 significant at the 1% level, and model 2 presents −0.742 but not significant. Our firm size results vary, and this is not unexpected because negative or insignificant results show that smaller firms have more growth opportunity than bigger firms. This is because firm size and FP have a true relationship that can be curvilinear [60,61,161,166].

**Table 4.** CSR and firm performance with the moderating effects of CEO power.

Dependent Variables	Model 1		Model 2		Model 3		Model 4	
Independent Variables	ROA		ROE		ROA		ROE	
	FE	GMM	FE	GMM	FE	GMM	FE	GMM
SCV	27.63 *** 0	26.47 *** −0.001	16.93 *** 0	16.13 *** −0.001	28.66 *** 0	28.77 *** 0	17.35 ** 0	17.18 *** −0.001
CEO POWER					0.558 −0.5693	1.02 −0.43	−0.031 −0.963	0.221 −0.794
SCV*CEOPower					2.761 *** 0	4.012 *** 0	1.208 *** −0.005	2.032 *** −0.002
LNTA	−2.46 *** −0.0005	−3.57 *** −0.001	−0.465 −0.2966	−0.742 −0.298	−1.789 ** −0.0143	−0.192254	0.053 −0.912	0.037 −0.962
LEVERAGE	−0.34 −0.1612	3.39 −0.145	−0.0185224	2.807 * −0.062	−0.036312	−1.011 −0.712	−0.289 ** −0.044	−0.002 −0.999
PPE	0.080 ** −0.0438	0.124 −0.342	0.056 ** −0.0251	0.093 −0.27	0.090 * −0.091	0.281 * −0.093	0.042 −0.241	0.16 −0.142
ASSET TO	1.999 *** −0.0006	2.32 *** −0.007	1.251 *** −0.0007	1.233 ** −0.027	2.357 *** −0.0001	2.214 ** −0.018	1.443 *** −0.0003	1.216 ** −0.048
Constant	44.86 *** −0.0001	56.84 *** −0.002	11.52 * −0.099	12.31 −0.289	38.35 *** −0.0007	40.86 ** −0.031	4.774 −0.522	4.501 −0.714
R <sup>2</sup>	0.5822		0.5753		0.6322		0.596	
F	11.86 *** 0		11.53 *** 0		13.374 *** 0		11.471 *** 0	
Hausman Test	36.48 *** −0.0003		28.48 *** 0		38.872 *** 0		28.642 *** 0	
Wald Chi <sup>2</sup>	93.30 *** 0		54.20 *** 0		121.54 *** 0		69.03 *** (0.000)	

Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

### 5.2.2. Hypothesis 2 Examination

To examine Hypothesis 2, we formulated models 3 and 4. Model 3 shows that SCV has a statistically significant and positive effect on performance measures at the 1% significance level with a coefficient value of 28.77. Model 4 shows that SCV has a statistically significant and positive effect on performance measures at the 1% level with a coefficient value of 17.18. This outcome suggests that SCV and FP have a statistically significant and positive relationship for both ROA and ROE with the effects of CEO power. For the moderation hypothesis test, the most important variable at this point is the interaction term (SCV\*CEO POWER). The positive coefficient value of SCV\*CEO POWER is 4.012, with ROA and ROE of 2.032, and both are statistically significant at the 1% level, suggesting that adjusting for further elements, the average upsurge in organizational performance controlled by CSR is greater for firms in which the CEO has power. Hence, the results also support our second hypothesis, that CEO power has positive effects on the association of CSR and FP, suggesting that this positive association is more noticeable for organizations with higher CEO power. To support our conclusion, several studies have found that CSR and FP have a positive association with the effects of CEO power [22,160,161]. CEO pay is related to FP as well as quality-oriented disclosure [121]. Family-oriented firm CEOs want to have a good and reputable image for the long-term survival of their business and be respectable in a society where they are highly involved in CSR activities [167,168]. Model 3 presents an LNTA coefficient of −0.192254, which is insignificant, and model 4 presents an LNTA coefficient of 0.037, also insignificant. Firm size most of the time is negative and insignificant, while examining moderating effects as supported by [60,61,166], mostly CEOs are family members, and this can lead to firm size being negative and insignificant [169].

### 5.2.3. Hypothesis 3 Examination

We developed models 5 and 6 to test Hypothesis 3, and the results are shown in Table 5. Model 5 indicates that SCV has a coefficient value of 28.77 at the 1% significance level. The estimation of Model 6 highlighted that SCV has a coefficient value of 17.07 and is statistically significant at the

1% significance level. The results imply that managerial ownership has a statistically significant and positive relationship with corporate social responsibility and financial performance for both ROA and ROE. Furthermore, for the moderation hypothesis test, the main noticeable variable is the interaction term (SCV\*TR). A statistically significant and positive association was found in SCV and firm financial performance with an interaction term. The interaction term SCV\*TR has a coefficient value of 3.395 in Model 5 and 1.814 in Model 6, and both are statistically significant at the 1% level. These results prove that managerial ownership positively affects firm financial performance when involved in CSR actions. Garas [48] supports our conclusion for developing countries, finding that managerial ownership has a positive association with FP, and our findings are consistent with [51–53]. Furthermore, Belal and Owen [167], Islam et al. [168], and Block and Wagner [170] confirmed that if managerial ownership is highly involved in CSR activities, then firm profits will increase, because family members in developing countries hold key positions in management. Actually, family members are highly motivated to participate in CSR activities to make their organizations reputable and give them a good image for society. Another reason is that family managers running export businesses in developing countries may have greater motivation to be involved in CSR activities to fulfill international shareholders' requirements [167,168]. Model 5 presents an LNTA coefficient of  $-2.179$  at the 10% level, which is significant and insignificant, and model 6 presents an LNTA coefficient of  $-0.002$ , which is insignificant. This is because firm size may vary with different moderators, as supported by [60,61,166]. According to agency theory, asymmetric information might be associated with firm size. Large firms have more of a gap of information between managers and owners. Therefore, sometimes firm size could be negatively associated with managerial ownership in cases where the manager holds less than 50% of the shares in the firm [171].

**Table 5.** CSR and firm performance with the moderating effect of managerial ownership and ownership concentration.

Dependent Variables	Model 5		Model 6		Model 7		Model 8	
Independent Variables	ROA		ROE		ROA		ROE	
	FE	GMM	FE	GMM	FE	GMM	FE	GMM
SCV	27.39 *** 0	28.77 *** 0	21.04 *** 0	17.07 *** −0.001	34.53 *** 0	27.63 *** 0	20.78 *** 0	16.67 *** −0.001
TR	−95.04 *** −0.0003	−94.82 ** −0.045	−85.56 *** 0	−44.04 −0.153				
H5					−13.77 ** −0.013	−20.983 ** −0.026	−13.148 *** 0	−10.741 −0.077
SCV*TR	1.597 *** 0	3.395 *** 0	1.033 *** 0	1.814 *** 0				
SCV*H5					4.678 *** 0	6.161 *** 0	2.603 *** 0	3.320 *** 0
LNTA	−2.078 *** −0.003	−2.179 * −0.06	−0.113 −0.81	−0.002 −0.999	−1.723 ** −0.017	−1.733 −0.147	−0.129 −0.789	0.289 −0.705
LEVERAGE	−6.238 *** 0	−1.802 −0.517	−3.744 *** −0.001	−0.423 −0.816	−6.343 *** 0	−1.823 −0.508	−3.969 *** −0.001	−0.604 −0.737
PPE	0.272 ** −0.015	0.295 ** −0.018	0.130 * −0.082	0.223 ** −0.041	0.283 ** −0.013	0.374 ** −0.024	0.132 * −0.081	0.207 * −0.056
ASSET TO	2.492 *** 0	2.525 *** −0.006	1.441 *** 0	1.356 ** −0.025	2.554 *** 0	2.628 *** −0.004	1.435 *** 0	1.416 ** −0.019
Constant	52.93 *** 0	3.10 *** −0.002	14.95 * −0.067	12.72 −0.288	45.09 *** 0	43.32 ** −0.024	13.39 * −0.088	4.54 −0.712
R <sup>2</sup>	0.6354		0.6014		0.6369		0.6016	
F	17.03 *** 0		11.48 *** 0		17.67 *** 0		11.76 *** 0	
Hausman Test	34.70 *** 0		30.40 *** −0.001		41.57 *** 0		37.96 *** 0	
Wald Chi <sup>2</sup>	129.54 *** 0		75.86 *** 0		130.51 *** 0		77.76 *** 0	

Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

#### 5.2.4. Hypothesis 4 Examination

We developed Models 7 and 8 to test Hypothesis 4, and the results are shown in Table 5. Model 7 indicates that SCV has a coefficient value of 27.63 with statistical significance at the 1% level. Model 8 indicates that SCV is significant at the 1% level with a coefficient value of 16.67. The results indicate that ownership concentration has a significant and positive association with CSR and firm financial performance for both ROA and ROE. Moreover, we examined the moderation hypothesis, and the main noticeable variable is the interaction term (SCV\*H5). Results highlight that there is a significant and positive association between CSR and FP with an interaction term. The interaction term SCV\*H5 has a coefficient value of 6.161 in Model 7 and 3.320 in Model 8 and both are statistically significant at the 1% level. These results support our hypothesis that ownership concentration positively affects firm financial performance when engaging in CSR activities. Feng et al. [138] and Garas [48] confirmed the positive association of FP and CSR with the effects of ownership concentration. Several studies support our hypothesis and found a positive connection between CSR and FP with the effects of ownership concentration [79,167,168,172,173]. Model 7 presents an LNTA coefficient of  $-1.733$ , which is insignificant, and Model 8 presents an LNTA coefficient of  $0.289$ , which is insignificant. This is because firm size varies with the moderator, as supported by [60,61,166]. Large firms may be likely to have a low level of ownership concentration, which could lead to a negative relationship between ownership and firm size [174].

## 6. Conclusions and Policy Recommendations

This study sheds light on the empirical association of CSR and FP. Results revealed that CSR and FP are positively associated because social activities enhance the confidence of firms for the inside and outside environment. Furthermore, we found that CSR with the interaction of CEO power has a positive relationship with FP, consistent with [46]. This suggests that CSR can increase FP and stakeholder confidence through improved transparency and accountability. Since most businesses are under family ownership in Pakistan, the CEO is more powerful than other board members. Multiple studies have shown that the CEO has the power to affect CSR activities and firm value [175,176].

Furthermore, we tested CSR with the interaction of managerial ownership on FP. We found that FP and CSR have a positive association with the effects of managerial ownership, with our findings supported by several studies [48,52,53]. In managerial ownership, every manager has a share in the company, with the goal of obtaining maximum profit. Therefore, generally they are interested in CSR activities.

Moreover, we tested CSR with the interaction of ownership concentration on FP. We found that FP and CSR have a positive relationship with the effects of ownership concentration. Our findings are consistent with different studies [48,79,167]. Ownership concentration is positively influenced by the association of CSR with FP, because every shareholder wants to maximize profit and social trust. They are highly motivated to invest in society to get the maximum profit and a positive image in return. Results suggest that ownership concentration increases CSR disclosure and firms' guarantee to the general public.

The findings of this study suggest imperative suggestions and policy implications.

Based on the findings of the study, we have given the following suggestions to further improve CSR activities in Pakistan: First, firms should acknowledge the role of top executives because they provide long-term vision and commitment during the developing phase of CSR. Second, firms should consider the needs of the community where they operate their business activities and develop a fine approach to solving the community's issues. Third, firms should improve CSR activities by involving employees and societies. Fourth, the Government of Pakistan (GOP) should develop more strict regulations and constantly monitor the firms' activities. Fifth, the GOP should encourage those firms that operate fairly and disclose all CSR activities to the general public. Sixth, NGOs and civil society can play a role in convincing firms to perform CSR activities in a better way in Pakistan. Furthermore, the findings of this study would be beneficial for industries and official directives to identify the

existing conditions of CSR development and latent CSR problems in Pakistan. These findings may help the government, the economic sector, and the public to develop future CSR programs. This study is applicable to numerous advanced entrepreneurial firms and other organizations that are targeted beyond domestic markets. Moreover, advanced CSR activities may help to attain long-term anticipated performance in terms of loyal customers, the firm's socioeconomic reputation, and employee pride. This study outlines imperative implications for regulatory bodies, firms, and other stakeholders. Furthermore, this study is an addition to the narrow literature on ownership and CEO influence on sustainability initiatives. This study will encourage owners, shareholders, and investors to participate more in CSR activities. Other industries in Pakistan and around the globe can also obtain benefits by considering this study. For future research, the CEO's role and ownership structure would be the main concerns for every industry to maximize profit by exploring CSR activities. Consequently, we suggest considering other moderators that affect the association of CSR and FP, such as product market competition, financing configuration, and organization pattern, by selecting more sectors of the economy.

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