The role of corporate governance and reputation in the disclosure of corporate social responsibility and firm performance.

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Research article

The role of corporate governance and reputation in the disclosure of corporate social responsibility and firm performance

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ABSTRACT

This aim of this research is to examine the role of Corporate Governance and Corporate Reputation (CR) in the disclosure of Corporate Social Responsibility (CSRD) and firm performance. A moderating – mediation model addresses this research objective based on 3588 observations from 833 firms from 31 countries between 2005 and 2011. Significant effect of CSRD on CR was observed, especially contributing to firm performance. The results verified a moderate effect of "corporate governance" on "CSRD" and CR. The study also demonstrated how CEO integrity, ownership concentration, and CR contribute to fostering CSRD and firm performance. This paper also discusses about the theoretical contributions and practical implications of the study.

1. Introduction

As per ISO 26000 imposition regarding corporate social responsibility (CSR), most companies must prepare annual reports about CSR activities. According to Mathews [1], there are three reasons to report CSR information: (1) to improve a firm financial and economic performance; (2) to improve its legitimacy; and (3) to achieve a connection of social contact. A possible relationship between corporate social responsibility disclosure (CSRD) and organization performance may arise when organizations are proactive in delivering the impression of goodwill through reproducing and disseminating CSR-related knowledge that meets or delights the expectations of stakeholders [2,3] (see Fig. 1).

In addition, recently, most stakeholders have become skeptical about the CSR practices of some organizations as they believe that, in some instances, the objectives behind CSR initiatives are not genuine. Indeed, they perceive that some CSR activities are merely greenwashing, through which organizations intentionally demonstrate their commitment to CSR activities, enhancing social performance while concealing unsustainable business activities [4]. Habek and Wolniak [5] evidenced that when CSRD is voluntary, organizations will only provide some selected corporate information, representing positive firm performance. In addition, there is criticism that what organization claims as CSR activities may not happen in reality. Therefore, CSR reporting of organizations has become less trustworthy and more harmful than its benefits [6]. It is possible that inattentive presentation of CSR activities could adversely affect an organization's status since individuals may view the activities in terms of appearance over meaning, thus, negatively impacting the organization's performance. Therefore, a robust answer regarding how CSRD impacts organizational performance

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is imperative for management practices.

Although several empirical studies examined the link between CSRD and organizational performance, their findings reflect inconsistent outcomes [7]. The direct link, such as positive, negative, or neutral, is ambiguous and suggests extended investigation due to the high degree of variation in the association [7]. The direct relationship can be affected by intervening variables that need further empirical support, as reflected in several literature reviews on the link between CSRD and organization performance [8–10]. CSR initiatives are a way for businesses to abide by the norms of society [11]. Rating organizations frequently release rankings of businesses based on how well they adhere to legal requirements, and the media then cover these rankings. Using such publicly available information, stakeholders can assess a company's social responsibility towards society. As a result, businesses are going the extra mile to set themselves apart through CSR initiatives to maintain their positive social image [12]. However, studies exploring the determinants that could intervene in this relationship remain underdeveloped.

Companies distribute economic, social, and political benefits to the groups from which they derive their power to survive and grow [13]. Consequently, the importance of socially, environmentally, and ethically responsible behaviour by corporations is becoming increasingly recognized within the business sphere [14,15]. As businesses become more aware of their stakeholder's expectations, CSR reporting becomes increasingly important to fulfill their accountability obligations [16,17]. Several empirical studies have demonstrated the validity of Ullmann's conceptual framework, except for the power of shareholders, who represent the main stakeholders [16]. Because the study considered only one group of stakeholders representing concentrated ownership, the results were insignificant for this type of stakeholder. The assumption was based on the notion that most shareholder interests are incompatible with CSR practices and disclosure.

As a consequence, western continental European countries are often characterized by a majority shareholder who exercises control over a company by owning only a small fraction of the company's cash flows, often using multiple classes of shares, pyramids, and cross-holdings [18,19]. While companies that adopt socially responsible practices are likely to generate benefits that are not directed to stockholders, they may also be positioned to take advantage of previously undiscovered business opportunities [20,21]. Also, it will be necessary for corporations to communicate appropriately with the market about their corporate behaviour if they wish to preserve their reputation. Ullah et al. [22] demonstrates, however, that institutional investors and their active engagement are important corporate governance mechanisms that influence corporate governance regarding social, ethical, and environmental issues. In this study, we examine the impact of shareholder power and dispersed ownership on the decision to disclosing corporate social responsibility (CSR) information, controlling for the other dimensions that Ullmann proposes. According to previous research [23–25], shareholders, financial institutions, and dominant shareholders are the most important stockholders in the European and Spanish contexts. The interests of CSR and its disclosure differ based on previous research.

As a result of the theoretical and empirical arguments suggesting that corporate reputation (CR) can be developed through CSR initiatives and CSR performance differs from organization performance when transmitted through CR [26,27], this research proposes to examine the mediating effect of CSRD on firm performance through CR. Furthermore, motivated by the outcome from Waldman et al. [28] about the relationship between strategic choices and ethical protagonists linked with CSR and responding to a gap in literature proposed by Refs. [27,29] regarding the primary mechanism that could link integrity of leaders to the firm orientation with CSR; this research also examines if a leader's (i.e., CEO's, CFO's, and CMO's) integrity and ownership concentration moderates the impact of CSRD on organization reputation.

This study contributes to prior literature in several possible ways. First and foremost, this study broadens the understanding of CSR activities, business reputation, CEO traits, and firm success by explaining the significance of CSRD in achieving competitive performances of business firms. Second, this study investigates the relationship between CSRD and firm performance by providing a novel perspective on the company's reputation and CEO honesty. Third, this study validates the direct and indirect relationships between CSRD and firm performance by explicitly focusing on possible intervening variables such as ownership concentration and corporate reputation. Consequently, this study adds to the body of knowledge about executive traits, corporate reputation, CSRD, and business performance. The research outcome of the present study is drawn from the analysis of data about 830 world's most admired companies, classified by the Fortune from 31 nations during 2005–2011. Utilizing Stata 13, the generalized method of moments (GMM) technique is employed for the data analysis.

The rest of the paper is organized as follows. Section 2 focuses on theoretical support and hypotheses development. Sections 3, 4,

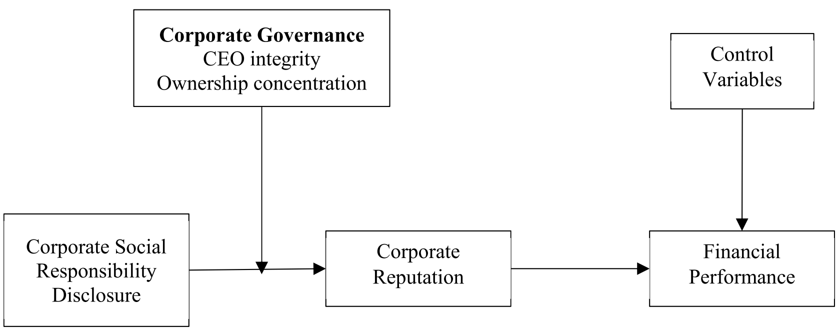

Fig. 1. Conceptual framework.

and 5 outline the methodology, findings, results, and discussion, followed by theoretical and practical contributions.

2. Theoretical support and hypotheses development

2.1. Corporate social responsibility disclosure (CSRD) and firm performance

CSRD is defined as a firm's communication about its social activities (communities, environment, and employees) to the general public. It is possible to make CSRD a mandatory requirement mentioning disseminating information as a legal requirement. Alternatively, on the other hand, CSRD can be made volitionally, whereas the amount of information and type may differ significantly from organization to organization [4]. With time, several countries have introduced CSR reporting as mandatory and considered it a disclosure regulation [3]. For dealing with CSR information/reporting beyond essential information, an organization can be proactive (willingly working beyond stakeholders' minimal expectations) or reactive (responding to societal pressure) [30]. Despite these cases, an organization's CSRD, to some extent, reveals what it has done concerning CSR practices.

The empirical literature examines the direct relationship between CSRD and firm performance primarily through the theory of stakeholder interaction. Stakeholder theory holds that organizations' stakeholders, e.g., investors, customers, suppliers, and personnel who regulate possessions, can support the execution of firm decisions [31]. Meeting stakeholders' expectations and showing concerns may aid an organization in avoiding determinations that might induce stakeholders to thwart or undercut firm objectives. According to Suchman [32], legitimacy theory is the concept that a group is regarded as a member of the community and functions to fulfill social expectations. In this perspective, if the firm miscarries to activate following social values, it will encounter intimidation to its reputation. Thus, companies with reputed CSR activities will enjoy legitimacy in the eyes of the stakeholders and the public, significantly influencing organizations' economic outcomes. However, those organizations that engage in undesirable CSR activities risk being considered illegitimate. Many scholars have shown that CSR activities positively impact on firm performance in light of these perspectives.

Given that CSRD reveals what an organization has done in association with CSR activities, a possible relationship between CSRD and firm performance has been assumed to originate from organizations' preemptive in establishing the positive sign by reporting the CSR information which satisfies or delights expectations of stakeholders. Following this viewpoint, many scholars have evidenced the positive effect of CSRD on firm performance [33–35]. Despite this, Pham and Tran [27] stated that empirical studies witnessed an inconsistent link between CSRD and firm performance. Thus, based on the above discussion, we hypothesized as:

H1. *CSRD has a significant influence on firm performance.*

2.2. Corporate reputation (CR) as a mediator

CR is an assessment of an organization's quality. It reveals the evaluation of an organization by its stakeholders (i.e., customers, employees, investors, suppliers) who compare the company's behaviour to the behaviour of other organizations and their subjective expectations for practices [36]. The review study by Lange et al. [37] highlighted three aspects of CR: (1) being recognized, (2) being recognized for something, and (3) generalized favorability. The present study emphasizes the third aspect and defines CR as an inclusive public view regarding an organization.

Fombrun [38] concludes that a company can build esteem through CSR practices. Consequently, the public's opinion and judgment of an organization are positively impacted when the organization exhibits socially responsible behaviour. From the public's perspective, a company's CSR practices must be communicated and reported to the public in order for the public to be aware of these practices. Effective reporting and communication are essential to ensuring that CSR conducts have a positive impact on society.

No matter how much is invested in CSR activities, they are useless. Thus, through the exhibition of CSR using CSRD, an organization might acquire positive intuitions into the factors which direct to an improved reputation. Several scholars advocate the positive influence of CR on firm performance. For instance, using the resource-based view theory, Boyd et al. [39] reported that a firm's reputation significantly affects its performance [40,41]. Likewise, Lee and Jungbae Roh [42]studied 230 Fortune's America's Most Admired Companies and evidenced the significant effect of CR on firm performance.

In the existing literature, few scholars have attempted and suggested the mediating role of CR between CSRD and firm performance. For example, Zhu et al. [43] studied a sample of 96 manufacturing companies located in Taiwan and found that CR partially mediates the relationship between CSR and brand performance. Likewise, Galbreath and Shum [44] surveyed 280 Australian organizations and evidenced a full mediating effect of CR between CSR and firm performance. Similarly, based on 205 Iranian organizations, Saeidi et al. [45] evidenced that customer satisfaction and firm reputation mediate the relationship between CSR and organizational performance. Similarly, Agyemang and Ansong [26] reported a significant mediating role of firm reputation between CSR and firm performance, focusing on Ghanaian SMEs. However, to the best of scholarly knowledge, there is still scant literature related to assessing the mediating role of CR in linking CSRD and firm performance. Therefore, based on the above discussion, we hypothesized that:

H2. *CR mediates the link between CSRD and firm performance.*

2.3. CEO integrity as a moderator

Integrity is stated as the "quality of being honest and having strong moral principles." However, there is little consensus in the existing literature on ethical leadership about the conceptualization and definition of integrity. Most of the time, in existing literature, integrity convergence with several considerations such as authenticity, morality, honesty, and justice [29]. The scant review of literature devoted to integrity [46,47] summarized several aspects of integrity that are widely used and cited in recent studies. Therefore, we adopt the integrity concepts from Bauman [46]and Palanski and Yammarino [47] and describe the CEO's integrity as the feature of being fidelity, truthful, and morally courageous.

According to the ethical leadership perspective, a CEO or senior executive who makes ethical judgments would not take unethical actions. Additionally, the CEO's actions would encourage others, such as followers or supporters' integrity, honesty, moral strength, and self-esteem. In addition, a CEO with a high degree of integrity will likely hold firmly held-beliefs. Consequently, they would be more apt to filter and recognize ethical components within a decision-making situation, carefully appraise such characteristics, and give precedence to ethical concerns when making decisions for business success [48]. As a result of these initiatives, a corporation began to practice actual CSR. According to this perspective, the public will believe CSRD information if they observe an organization's genuine commitment to CSR operations [27].

CEOs with high integrity will likely disclose accurate facts and figures concerning CSR practices and a company's actual performance. The public, and stakeholders tend to be more confident in the company's true performance of CSR. Such action leads to a good image and positive word of mouth in public, establishing the organization's reputation. In essence, the great extent of CEO integrity improves the impact of CSRD on CR. Thus, based on the above arguments, we hypothesized as:

H3. *CEO's integrity moderates the link between CSRD and CR.*

2.4. Ownership concentration as a moderator

Managers and shareholders in widely held corporations may have diverging interests, which may reduce the firm value as managers pursue their own interests rather than maximizing the firm's reputation. As a result of managers' excessive investment in CSR dynamism to enhance a company's reputation as a good social citizen, CSR can be viewed as a principal-agent problem [49]. This reputation can boost managers' confidence, and overconfident CEOs may make value-destroying decisions due to their overconfidence [50]. Consequently, considering ownership concentration has become necessary when exploring the relationship between CSR and company reputation. The consolidation hypothesis argues that administrators adopt the approach of entrenchment to maintain their power, maintain their position, and increase their compensation, instead of maximizing the company's value. Following this hypothesis, concentrated ownership structures could exacerbate the cost of managing an agency [51]. Information asymmetries may result from obtaining information to determine corporate policy, which is one of the controlling shareholder's incentives. These asymmetries may impact decisions in the area of CSR [52]. Due to information asymmetry, managers may be able to conceal their true motives for making CSR decisions. Consequently, decisions concerning CSR are often driven by managers' personal interests rather than the company's best interests, resulting in adverse effects on the bottom line. The number of empirical studies that examine how corporate governance factors influence the CSR-firm reputation relationship is relatively low, as discussed in the previous section.

However, the stakeholder theory advocates that companies should be good to all stakeholders and that CSR expenditures can indirectly improve CR [53]. According to the resource-based view theory, CSR contributes to financial performance by assisting firms in developing new internal resources, such as managerial and technical know-how and corporate culture, while enhancing CR, which generates external benefits [54]. Several observed studies confirmed this prediction. For instance, Buertey [55] and Karim et al. [56] analyzed equity returns and demonstrated that portfolios comprising the world's best CSR companies generated positive abnormal returns. However, some studies still showed no significant association between CSR and firm reputation [57]. Therefore, based on the above discussion, we hypothesized that:

H4. *Ownership concentration moderates the link between CSRD and CR.*

3. Methodology

3.1. Data and sample selection

A sample of companies from Fortune's list of the World's Most Admired Companies (WFMA) is examined in this study. There were three stages involved in the collection of data. We manually collected data from Fortune's website to identify the names of WFMA companies, the industries they belong to, and the countries where their headquarters are located, considering the period of March 2006 to March 2012. Only active public companies as of July 2012 are included in the final list [27].

In the second step, information is obtained from the Rankings of Fortune's global reputation and financial stability, which range from 1 to 17 according to the reputation ranking of the company. In addition, yearly data on return on assets (ROA), return of equity (ROE), sales revenue, independent directors' percentage on the board, net income, debt to equity ratio, CEO perks, expenses, total assets, and other financial data were collected automatically from Bloomberg between 2005 and 2011 for the calculation of Tobin's Q ratio. This study employed financial data to check CEO duality.

Additionally, Bloomberg has compiled a CSRD disclosure score for 2005–2011 to evaluate the social, environmental, and governance performance of organizations. This study finalizes a dataset of 3588 observations derived from 833 companies across 30 sectors categorized in Fortune's WFMA transversely seven financial years between 2005 and 2011 by eliminating observations with missing values. Lastly, from the World Economic Fortune's global competitive report, the study collects the annual count of the firms and the durability of reporting and auditing standards of each country.

The global competitive report has been published annually since 2006 to evaluate the distinctive and competitive features of 125 economies. Moreover, the global competitive report assesses private and public institutions in each country using twenty-two predictors. The global competitive report's annual survey of executives in each country provides the basis for giving the rating. A Likert scale was used to score each component within the institution pillar, with 1 indicating the lowest score and 7 representing the highest score. It is based on the weighted score of each aspect of the institution pillar that determines the overall score for the institution.

3.2. Control variables

3.2.1. CEO duality

If the CEO of a firm is also the chairman of its board, it may establish a robust and transparent leadership structure. However, it may also contribute to CEO entrenchment [58]. Consequently, CEO duality may adversely affect both the financial performance and the company's reputation. A dummy variable is used to measure CEO duality, with 1 indicating that the CEO is also the chairman of the board and 0 indicating otherwise.

3.2.2. Leverage

Generally viewed as a latent determinant of leverage, FP can also help solve the agency problem within a public concern. According to previous studies [59,60], financial leverage is calculated as the debt-to-equity ratio.

3.2.3. Firm size

Firm performance and reputation have long been attributed to financial strength. According to Feder and Weibengerger [61] and Rinawiyanti et al. [62], in prior studies, firm size is measured by combining total assets and the number of employees.

3.2.4. Industry performance

In previous studies examining firm performance, the industry has been controlled to capture the effect of industry on performance. Our analysis of the industry effect is based on Bari et al. [63] and Lu et al. [64], which examines the average return on assets based on the average return on assets for each industry.

3.2.5. Institutions

The institutions are the constraints that determine economic, social, and political interaction dynamics [65]. A legal institution has the ability to influence the behaviour of financial representatives indoors an economy. Accordingly, a legal institution may impact a firm's reputation and performance. Using an estimation model that controls the effect of an institution, we also capture the institution's effects on the reputation and performance of selected firms. Based on the World Economic Forum's Global Competitive report, we further determine whether home country institutions may significantly impact the operation of the firms we considered in this study.

3.2.6. Financial crisis

The global financial crisis that began in 2007 and culminated in 2008 may have adversely affected the reputations and performance of the selected companies. Because the dataset we considered covers the global financial crisis period, we use crisis as a dummy variable to control the effect of the crisis on our findings. There is a value of 1 for observations from 2007 to 2008 and 0 for observations from other years.

3.2.7. Dummy country

A firm's performance may be affected by factors related to its home country due to the diversification of capital costs and demand between countries. In addition, country elements can be causes of competitive desirability for firms on international markets in terms of performance and reputation.

3.2.8. Dummy year

We control the impact of the year effect since certain events not considered in our models may significantly impact a firm's business exertion and performance.

3.3. Empirical model

Equation (1) is used to test the *H1*, which reflects that CSRD is independent and organizational performance is the dependent variable. We have used several control constructs in Equation (1) to consider possible effects on firm productivity. The models are constructed with a one-year lag of control and explanatory constructs. Based on the assumption that current-year performance is a consequence of operations in the last year [66,67], these models are constructed with lags of control and explanatory variables.

$$FP_{i,t} = \beta_0 + \beta_1 CSRD_{i,t-1} + \beta_{ix} x_{i,t-1} + \beta_{9Crisis_t} + \beta_{10} Country\ Dummy_i + \beta_{11} Year\ Dummy_i + \varepsilon_{i,t}. \tag{1}$$

Based on the subsequent recommendations from Cole and Maxwell [68] related to the utilization of structural equational modeling (SEM) for assessing the indirect relationship, this study developed two Equations (2) and (3). In Equation (2), CSRD is the independent variable, while CR is the dependent variable. In Equation (3), CR is the independent variable, while organization performance is the dependent variable. Furthermore, several control variables, namely leverage, industry effect, performance, crisis, country, size, year, and CEO duality board independence are included because they may affect firm performance and CR. Control variables, are represented through X_i to X_t.

$$CR_{i,t} = \beta_0 + \beta_1 CSRD_{i,t-1} + \beta_{ix} x_{i,t-1} + \varepsilon_{i,t} \tag{2}$$

$$FP_{i,t} = \beta_0 + \beta_1 CR_{i,t-1} + \beta_{ix} x_{i,t-1} + \beta_{9Crisis_t} + \varepsilon_{i,t} \tag{3}$$

Regarding the H3, we followed Baron and Kenny's [69] suggestions related to the hierarchical regression method for examining the moderating effect. This research investigates CEO integrity's moderating (interaction) effect on the relationship between CSRD and CR. In Equations (4) and (5), CR is the endogenous variable, whereas CSRD, CEO integrity and ownership concentration are the independent constructs. In addition, we have included control variables in Equation (4) due to their potential effect on CR. Furthermore, X_{it} represents the control variable in Equation (4). In addition, this study uses a one-year lag for the predictor variables since it is assumed that CRs of the present year are the result of operations performed a year ago.

$$CR_{i,t} = \beta_0 + \beta_1 CSRD_{i,t-1} + \beta_2 CEOI_{i,t-1} + \beta_3 CEOI_{i,t-1} * CSRD_{i,t-1} + \beta_{ix} x_{i,t-1} + \beta_{11Crisis_t} + \beta_{12} Country\ Dummy_i + \beta_{13} Year\ Dummy_i + \varepsilon_{i,t} \tag{4}$$

$$CR_{i,t} = \beta_0 + \beta_1 CSRD_{i,t-1} + \beta_2 OC_{i,t-1} + \beta_3 OC_{i,t-1} * CSRD_{i,t-1} + \beta_{ix} x_{i,t-1} + \beta_{11Crisis_t} + \beta_{12} Country\ Dummy_i + \beta_{13} Year\ Dummy_i + \varepsilon_{i,t} \tag{5}$$

There is scant literature on CEO integrity, and thus there is a need to develop further a measurement scale for assessing the impact of CEO integrity. However, Eisenbeiss et al. [48] and Palanski and Yammarino [47] previously attempted to measure CEO integrity using a survey of employee assessment of CEOs. As revealed, CEOs generally perform their role for the betterment of their company. Based on the agency theory Jensen and Meckling [49], our study concludes that shareholders may incur agency costs due to the CEO's opportunistic behaviour.

3.4. Estimation

This study used the variance inflation factor (VIF) to ensure that data is free from multicollinearity issues. All VIF values of the estimators were <3, which is far below the acceptable threshold value of 5 [70]. Thus, we conclude multicollinearity is not a concern. At first, we explore the potential endogeneity of CSRD. The residuals ε_1, ε_2 and ε_3 were derived from the pooled ordinary least square (OLS) models using ROA, ROE, and Tobin's Q, respectively, as dependent constructs. When dealing with the endogeneity problem of CSRD in the case of a loop of causality between the dependent and independent constructs, we employ the GMM approach as recommended by Semykina and Wooldridge [71]. Besides, we have used lagged variables as instrumental constructs for assessing CSRD, as Pham and Tran [27] suggested. The synoptic statistics of the Sargan test evidence that the effect of the independent variable is strong. Furthermore, the outcome of the Sargan (score) tests ($p > .05$) illustrates that this research model has no over-identifying constraints. Therefore, endogeneity is not considered a severe concern in the present study. Moreover, insignificant results of AR2 reflect that model is also free from auto-correlation [72].

Moreover, this study estimates Equations (1) and (3) using ROA, ROE, and Tobin's Q as the dependent variable. In Equations (2) and (4), CR is the dependent variable. When estimating Equations (4) and (5), this study uses CEOintegrity-1, 2, and 3. In addition, we use the GMM method to estimate Equations (1) and (5). At the same time, SEM, especially bootstrapping approach, was used to estimate Equations (2) and (2). Moreover, the bootstrapping approach is also used to estimate the indirect effects [73].

Table 1
Descriptive statistics.

Variables	Mean	S.D.	Min	Max
TobinQ	16.22	29.19	−2.03	9.1
ROA	2.31	1.65	−0.06	14.78
ROE	0.341	0.04	−68.65	38.73
Firm reputation	20.13	37.22	−157.41	556.12
Ownership concentration	20	11.14	−14.527	67.789
CSR-disclose	24.73	19.54	4.12	73.66
CEOintegrity1	21.36	20.6	1.51	79.75
CEOintegrity2	−0.06	0.9	−62.37	16.11
CEOintegrity3	0.56	0.8	−11.16	18.29
Institutions	0.97	0.61	0	1
CEO-duality	6.2	0.77	2.08	8.15
Leverage	47.097	14.681	0	100
Asset	6.98	3.2	−3.11	11.47
Employee	38.33	186.12	0	4600.2
Industry	16.17	4.77	0	18.546
Crises	4.13	1.19	1.33	9.15

4. Results

A summary of the mean, median, standard deviation, minimum, and maximum values of the independent and dependent variables is shown in Table 1, excluding the dummy variables for industry, year, and country.

Table 2 demonstrates the results of Equation (1), which reflects that CSRD has a positive and significant positive correlation with ROA and ROE. It also has a significant effect on Tobin's Q. Thus, we supported the *H1,* which stated the direct effect of CSRD on organization performance, measured by ROA, ROE (accounting performance), and Tobin's Q (market performance).

Table 3 exhibits the results of Equation (2) generated through SEM, especially using the bootstrapping technique. The findings reveal that CSRD has a positive and significant impact on CR in terms of performance (accounting, market) ($\beta = 0.774$; $p = .007$ for Tobin's Q; $\beta = 0.754$; $p = .007$ for ROA; and $\beta = 0.575$; $p = .000$ for ROE). Equation (2) results are exhibited through models 4, 5, and 6, the ROA, ROE, and Tobin's Q used to measure organizational performance.

Table 4 reveals the results of Equation (3), which shows that CR has a positive and significant relationship with firm performance ($\beta = 0.041$, $p = .000$ in case of Tobin's; $\beta = 0.039$, $p = .000$ in case of ROA; and $\beta = 0.074$, $p = .000$ in case of ROE).

Table 5 demonstrates the indirect effect of CR on the relationship between CSRD and firm performance. The results were generated using SEM. The findings evidenced that CR positively and significantly mediated the proposed relationship between SCRD and firm performance ($\beta = 0.21$, $p = .049$, CI = [0.00007:0.0077] on Tobin's Q; $\beta = 0.33$, $p = .041$, CI = [0.00049:0.0077] on ROA, and $\beta = 0.49$, $p = .037$, CI = [0.0024:0.0743] on ROE); therefore, *H2* was supported. Furthermore, this result reflects that the direct effect of CSRD on firm performance can be transmitted through CR. Hence, it is possible to conclude that CR mediates the CSRD–firm performance relationship.

Table 6 reflects a positive and significant moderating effect of CEO integrity on the CR–firm performance relationship ($\beta = 37.454$ and $p = .019$ when CEO-integrity1 was proxies by sale-to-asset ratio; $\beta = 0.277$ and $p = .027$ when the sale-to-expense proportion portrayed CEO-integrity2; $\beta = 0.172$ and $p = .027$ when CEO-integrity3 was proxies by the income to CEO ratio). The findings related to the proposed moderating effect of CEO integrity using three-level proxies strengthened the relationship. Hence, the findings support the *H3*. Furthermore, Table 5 reflects a positive and significant moderating effect of ownership concentration (OC) on the CR–firm reputation relationship ($\beta = 37.454$ and $p = .019$ when CEO-integrity1 was proxies by sale to asset ratio; $\beta = 0.277$ and $p = .027$). The findings related to the proposed moderating effect of OC using proxies strengthened the relationship, supporting the *H4* (see Table 7).

This study has also employed the GLS approach to double-check the proposed moderating effect of CEO integrity despite the GMM method. Table 6 findings are consistent with the results produced using the GMM method (see Table 5). Thus, we stated that the proposed moderating effect is robust.

5. Discussion and conclusion

The findings of this study evidence an indirect effect of CSRD on firm performance, demonstrating that CSRD exerts an indirect impact on firm performance through CR. Previously, although several studies estimated a direct effect of CSRD on organizational performance, their outcomes are inconclusive. Similarly, this study also evidenced an inconsistency when we investigated the direct effect of CSRD on Tobin Q when excluding the mediating effect of CR. These study findings are consistent with Yang and Lai [74] and Saeidi et al. [45], who investigate the mediating effect of CR on the link between CSR and firm performance. In contrast to the research

Table 2
Direct effect of CSRD on firm performance.

Constructs	Model-1 ROA	Model-2 ROE	Model-3 Tobin Q
L. CSRD	.777***	.799***	.517***
	(.000)	(.004)	(.000)
L. CEO duality	.473***	7.223***	4.977**
	(.000)	(.000)	(.007)
L. Leverage	−.049***	−7.099***	2.737***
	(.000)	(.000)	(.000)
L. Asset	−.000	−.007*	−0.009***
	(.447)	(.077)	(.007)
L. Employee	−.020	.097	.079
	(.293)	(.939)	(.977)
L. Industry average	.094***	.430***	7.404***
	(.000)	(.000)	(.000)
L. Institutions	.072	−7.074**	−2.477**
	(.379)	(.047)	(.027)
Crisis	.097	−.743	−2.299
	(.249)	(.701)	(.779)
Country dummy	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes
AR 2	0.245	0.298	0.276
SUGAN TEST	0.182	0.149	0.157

Note: p-values in parentheses; *p < .1, **p < .05, ***p < .01.

Table 3
Direct effect of CSRD on CR.

Constructs	Model 4 ROA	Model 5 ROE	Model 6 Tobin's Q
CSRD	.754* (.007)	.575 (.000)	.774* (.007)
Asset	.074*** (.000)	.074*** (.000)	.079*** (.000)
Employee	4.477*** (.000)	4.794*** (.000)	4.943*** (.000)
Industry average	7.092** (.017)	7.099*** (.000)	0.973** (.010)
Institutions	−2.372 (.247)	−2.397 (.294)	−2.949 (.774)

Table 4
Direct effect of CR on firm performance.

Constructs	Tobin Q	ROA	ROE
CR	0.041*** (0.000)	0.039*** (0.000)	0.074*** (0.007)
Asset	−0.000* (0.074)	−0.007** (0.047)	−0.004*** (0.007)
Employee	−0.092** (0.027)	0.277 (0.794)	0.733 (0.430)
CEO DUALITY	0.774*** (0.000)	7.322*** (0.007)	7.039* (0.072)
LEVERAGE	−0.039*** (0.000)	−7.270*** (0.000)	7.972 (0.247)
INDUSTRY AVERAGE	0.043*** (0.000)	0.379*** (0.000)	7.979*** (0.000)
Institutions	0.024 (0.479)	−0.474 (0.227)	−7.277 (0.233)
Crisis	0.040 (0.249)	0.277 (0.444)	0.049 (0.977)

Table 5
The mediating role of CR on the relationship between CSRD and firm performance.

Constructs	MODEL 7	CI [LL 2.5%; UL 97.5%]	MODEL 8	CI [LL 2.5%; UL 97.5%]	MODEL 9	CI [LL 2.5%; UL 97.5%]
CSRD→FR→DV	**0.33** (0.041)**	0.249912 0.577414	**0.49** (0.037)**	0.24971 0.75839	**0.21** (0.049)**	0.11234 0.35353
Asset	.0009*** (0.000)	0.000277 0.00123	0.007** (0.077)	0.00397 0.02942	0.0007*** (0.000)	0.0002773 0.005077
Employee	0.729*** (0.000)	0.340077 0.997476	0.237** (0.047)	0.12973 0.37313	0.020*** (0.000)	0.0103437 0.0700979
CEO DUALITY	1.0281*** (0.042)	0.87536 1.83501	.3383 *** (0.006)	0.10457 0.57721	.3836** (0.069)	−0.104662 0.284721
LEVERAGE	−2.596 (0.412)	−1.74952 3.14478	4.5356 (0.246)	−.317397 3.14718	.00510 (0.314)	−0.049417 0.126731
Industry average	0.077** (0.024)	0.034256 0.16023	0.047** (0.037)	0.018326 0.144423	0.004** (0.042)	0.001453 0.009030
Institutions	−0.037 (0.209)	−0.27729 0.044409	−0.732 (0.297)	−0.4944337 0.7703437	−0.077 (0.243)	−0.0773032 0.0033427
Crices	1.0308 (0.828)	−0.45792 0.00368	.30489 (0.928)	−.234687 0.136754	.2259 (0.626)	−0.431468 0.124197

studies described above that draws primarily from cross-sectional data, our study draws upon longitudinal data gathered from a large sample of global firms. In this perspective, this study's findings robustly exhibit that CSRD improves CR, enhancing organizational performance.

The study results reveal the impact of CSRD on organizational performance through an apparent channel. As CSRD's benefits are transferred to organizations' performance, intervening factors may obscure the positive effects, resulting in a minimal impact on organizational performance. The insufficiency of engagement of interacting variables that may deviate from the association between CSRD and organization productivity can cause the lack of consistent results in prior studies. Compared to previous research, this study's findings include intervening variables and empirical tests of their impact on the association between CSRD and organizational

Table 6
Moderating effect of CEO integrity **and ownership concentration**.

CR	MODEL 10	MODEL 11	MODEL 12	MODEL 13	MODEL 14	MODEL 15	MODEL 16	MODEL 17	MODEL 18	MODEL 19
L.CSRD-CEO-FR	0.937***	0.939***	0.723*	9.427***	−0.923	0.224	9.722***	–	–	–
	(0.000)	(0.000)	(0.097)	(0.003)	(0.709)	(0.204)	(0.009)	–	–	–
L.CSRD–OC–FR	–	–	–	–	–	–	–	.0310***	.0416***	.0159
	–	–	–	–	–	–	–	(0.036)	(0.018)	(0.747)
Moderator variables										
L. CEOintegrity1		270.747**			7747.772***					
		(0.022)			(0.004)					
L. CEOintegrity2			77.044***			72.994***				
			(0.000)			(0.000)				
L. CEOintegrity3				0.997			7.773**			
				(0.727)			(0.040)			
L. OC									.6560	.4774
									(0.006)	(0.047)
Moderator variables										
L. CEOint1*CSRD					37.494**					
					(0.019)					
L. CEOint2*CSRD						0.277**				
						(0.027)				
L.CEOint3*CSRD							0.172**			
							(0.027)			.15439
L. OC*CSRD										(0.018)
Control										
L. CEO duality	77.079***	74.370***	70.974***	779.434***	70.979***	9.779***	704.440**	.0180	.1308	.0245
	(0.000)	(0.000)	(0.002)	(0.000)	(0.007)	(0.000)	(0.044)	0.121	0.099	0.122
L. Leverage	−7.449**	−7.797**	−0.420	−4.434*	−0.992	−0.449	−7.229**	0.002***	0.070	0.037***
	(0.047)	(0.042)	(0.949)	(0.077)	(0.732)	(0.927)	(0.027)	(0.007)	(0.279)	(0.009)
L. Asset	0.079***	0.074***	0.092***	−0.004	0.079***	0.099***	0.072	0.023	0.050**	0.779***
	(0.000)	(0.000)	(0.000)	(0.377)	(0.000)	(0.000)	(0.473)	(0.149)	(0.072)	(0.000)
L. Institutions	7.222	7.243	−7.347	44.907	7.097	−2.777	94.729	.1930	.2857	0.0569
	(0.492)	(0.449)	(0.907)	(0.707)	(0.494)	(0.733)	(0.742)	(.1483)	(0.632)	(0.544)
Crisis	3.477***	7.940***	4.770**	4.097	4.042**	4.793**	7.774	.3133	.291***	.001***
	(0.000)	(0.009)	(0.029)	(0.997)	(0.047)	(0.023)	(0.349)	(0.457)	(0.010)	(0.029)
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
AR 2	0.423	0.452	0.413	0.517	0.598	0.530	0.556	0.089	0.222	.255
SARGN	0.347	0.435	0.384	0.402	0.532	0.573	0.519	0.76	0.99	.679

Table 7
Generalized least square (GLS) results – (Robustness check).

Variables	MODEL 10*	MODEL 11*	MODEL 12*	MODEL 13*	MODEL 14*	MODEL 15*	MODEL 16*	MODEL 17	MODEL 18	MODEL 19
L.CSRD→CSR→FR	0.847*** (0.000)	0.732*** (0.000)	0.799* (0.076)	4.372*** (0.000)	−0.867 (0.227)	0.442 (0.749)	5.34*** (0.000)			
L.CSRD →OC→FR								0.269*** (0.000)	0.183*** (0.000)	0.3391 (0.3178)
Moderator variables										
L.CEOintegrity1		70.747** (0.0331			6749.35*** (0.000)					
L.CEOintegrity2			23.13*** (0.000)			31.67*** (0.000)				
L.CEOintegrity3				0.649* (0.082)			2.36** (0.024)			
L.OC									.2187*** (0.040)	2.217*** (0.23)
Moderator variables										
L. CEOint1*CSRD					12.95** (0.017)					
L. CEOint2*CSRD						0.508** (0.019)				
L.CEOint3*CSRD							0.742** (0.034)			
L. OC*CSRD										2.971*** (0.50)

performance.

This study suggests that CEO's integrity is a critical determinant moderating the impact of CSRD on CR. This result supports the CEO's integrity in propelling the trustworthiness of CSRD, an idea Abernathy et al. [8] identified in their analytical study on exploring the CSRD–organization performance relationship. Second, we found that the CSR-CR relationship is positively moderated by ownership concentration, suggesting effective control mechanisms in this relationship. As revealed, in firms with concentrated ownership structures, minority shareholders' rights should be protected, as it is possible to invest in CSR activities in such firms that will improve their performance [75–77]. The findings of this study also contributed to an improved understanding of the actions taken by managers in conjunction with CSR that lead to the expropriation of minority shareholders in firms with concentrated ownership [78,79].

5.1. Theoretical implications

This research has several implications for the existing literature. First, this research complements previous studies by offering a comprehensive understanding and evidence about the CSRD and firm performance relationship. The present study postulates and reflects that CR mediated the CSRD-firm performance relationship, and CEO integrity moderates the said relationship. The relationship between CSRD and firm performance shown in the present study evidenced that it is confounding relatively to an assumed direct relationship as stated in previous literature. We construct comprehensive statistical models based on a global dataset by applying contemporary regression methods in this study. The present study results are more robust than previous studies exploring the direct link between CSRD and firm performance. Second, these research findings evidence that the effect of CSRD on organizational performance can be transmitted via CR. Even though many studies proposed CR as a possible mediator of the CSRD and firm performance relationship, the empirical witness regarding the benefits of CSRD to organization performance mediated via CR remains scant. Third, this research is among the few to posit and demonstrate that CEO integrity and ownership concentration act as moderators contributing to the effectiveness of CSRD. Fourth, this study lays the foundation for constructing a measurement scale for CEO integrity. Previous studies employ employee opinions about leaders or CEOs, which inevitably lack objectivity as they are subject to participants' views. This research provides objective proxies for measuring CEO integrity by utilizing the company's financial data.

5.2. Practical implications

This research suggests that organizations to involve in CSRD as it aids in building a CR and is so beneficial to enhance firm performance. For managers, investors, and policymakers, this study has inferences. Management must fund CSR initiatives and disclose them in corporate disclosure. It is expressly advised that businesses vulnerable to economic swings or unfavorable events should actively participate in CSR initiatives to better prepare for unforeseen reputational shocks. Additionally, managers might increase their involvement in CSR initiatives for reputational reasons, which will enhance the performance and image of the company. High levels of CSR disclosures improve a company's performance and reputation, increasing the financial gains from CSR activity. To attain the expected benefits for society, policymakers must ensure that CSRD is implemented. A board-appointed supervisor or monitor should keep an eye on CSRD when there is doubt about the integrity of the leaders. In addition, their supervision is also considered a replacement for a leader when a low level of integrity is evidenced. The fundamental motive is that leaders with less integrity are involved in fraudulent actions, which can damage the credibility of CSRD and, as a result, lose the CR and firm performance.

5.3. Limitation and future studies

This study is not free from limitations. One limitation related to the proxy of CEO integrity is that it may not adequately acknowledge the various aspects of CEO integrity. Thus, this research suggests further improvement in the evaluation of CEO integrity. In addition, we suggest that future scholars further investigate the moderating effect of CEO integrity and validate the results of this study. The results could be biased if CEO integrity is omitted from the study model. Many listed companies were included in the study, and the results may differ if small scale companies were included. A more comprehensive multi-country sample could address these limitations in future studies. Also, other corporate governance characteristics, such as family ownership, institutional ownership, and executive compensation, may contribute to the moderating effect of family ownership [80,81], could constitute fruitful avenues for further research.

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Author contribution statement

Faiza Abid Siddiqui; YuSheng Kong; Kayhan Tajeddini: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Data availability statement

Data will be made available on request.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix

Variables	Proxies
Firm reputation	A firm's FR is calculated by examining the overall reputation ranking that the firm receives from Fortune in a particular year [42]. Fortune's international reputation ranking system assigns individual firms a rating between 1 and 17, with 1 being the highest and 17 being the lowest.
Firm's performance	we measure corporate performance by calculating ROA, Tobin's Q, and ROE [79].
CEO integrity	For the purposes of this research, we use three types of indicators as proxy measures for CEO integrity. Based on the board's independence and the quality of the country's audit and reporting practices. Furthermore, we determine CEO integrity through the ratio of sales to operating expenditures/level of board independence and the quality of a country's reporting and auditing standards. As a proxy for CEO integrity, Company net income is compared with CEO perks, according to Ang et al. [80].
CSR disclosure	CSR disclosure is measured according to the proprietary Bloomberg ESG group's disclosure score. The company's disclosure of information related to its environmental, social, and governance responsibilities is considered in calculating the score.
Ownership Concentration	The percentage of a company's shares owned by its largest shareholder is known as ownership concentration.
CEO duality	A dummy variable is used for CEO duality, where 1 indicates the CEO is also the board chair and 0 indicates the opposite [81].
Leverage	We calculated the financial leverage by the ratio of debt/equity [74,82].
Size	Calculated with the total assets and employee numbers [83].
Industry performance	As in previous studies on firm performance, the industry is controlled to capture the industry effect.
industry effect	According to Le and O'Brien [84], this is indicated by the mean ROA of each industry in a particular year.
Institutions	In our study sample, we use the global competitive reports of the World Economic Forum [85] to identify each country's overall ranking of institutions.
Crisis	For the 2007–2008 observations, the value of crisis is 1; for the other observations, it is 0.
Country	A dummy variable.
Year	Due to some potential errors, we could not capture it in our model. However, this can affect a firm's operation and performance.

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