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ORIGINAL ARTICLE

Corporate Social Responsibility Disclosure and Financial Performance: Empirical Evidence From Vietnam

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Abstract

This study examines the relationship between corporate social responsibility (CSR) disclosure and firm performance, with particular attention to CSR's role as a mitigating mechanism during periods of economic crisis, notably the COVID-19 pandemic. Utilizing a unique hand-collected dataset comprising CSR disclosures from Vietnamese publicly listed firms in the VNR500 index between 2014 and 2021, the analysis employs both accounting-based (return on equity) and market-based (Tobin's *Q*) performance indicators. The empirical findings indicate a positive association between CSR disclosure and firm performance across both measures. Disaggregated analysis reveals that governance-related disclosures significantly enhance market valuation, whereas the presence of a well-articulated CSR vision and strategic orientation correlates positively with accounting profitability. These results suggest that robust governance frameworks, environmental stewardship, and socially responsible product strategies contribute to superior firm outcomes. Moreover, the study provides empirical support for the conceptualization of CSR as an insurancelike mechanism that mitigates the adverse effects of external shocks—such as the COVID-19 pandemic—by preserving firm value and protecting shareholder interests.

Keywords: CSR disclosure, Financial performance, COVID-19, Vietnam

JEL classification: M14, G32

1 Introduction

Corporate social responsibility (CSR) has increasingly been acknowledged as a strategic imperative in the global business environment. In recent years, CSR performance metrics have been systematically integrated into corporate annual reports, alongside a growing trend of firms issuing dedicated CSR or sustainability reports. The institutionalization of CSR practices accelerated notably during the 2000s, as evidenced by the substantial rise in CSR reporting rates. For instance, while in the late 2000s only around one-third of the world's 250 largest corporations by revenue published CSR reports, this figure has consistently exceeded 90% since the early 2010s (KPMG, 2020). The elevated importance of CSR as a strategic priority has intensified attention toward CSR disclosure practices, contributing to the emergence of various CSR-related directives and a proliferation of nonfinancial reporting regulations across multiple jurisdictions over the past decade (Gupta & Das, 2022).

CSR disclosures are generally categorized as either mandatory—where reporting is legally required—or voluntary, where the scope, depth, and quality of disclosures can vary substantially among firms. Additionally, significant differences exist across national CSR disclosure frameworks, with jurisdictions diverging in the specific types of information mandated or recommended for inclusion in sustainability reports. The value relevance of CSR

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disclosure has attracted growing scholarly interest in recent years. Nevertheless, empirical findings on the relationship between CSR disclosure and firm value remain mixed. Some studies report a positive, value-enhancing effect of CSR disclosure (Khan et al., 2021; Xu et al., 2020), while others find either negative or insignificant relationships. Moreover, the majority of existing research has concentrated on developed economies, with limited exploration in developing and emerging markets. This is particularly notable given that CSR practices and investment patterns in emerging markets often differ considerably from those in Western countries (Gupta & Das, 2022). Furthermore, although there is substantial evidence supporting the protective role of CSR activities for firm value during periods of crisis (Flammer, 2015; Godfrey, 2005; Godfrey et al., 2009), the specific role of CSR disclosure as a protective mechanism remains underexplored. Addressing these gaps, the present study seeks to examine the relationship between CSR disclosure and financial performance in an emerging market context. Specifically, it investigates the extent of CSR disclosure among publicly listed companies in Vietnam and evaluates the potential role of CSR disclosure as a protective mechanism during periods of crisis, focusing on the COVID-19 pandemic.

The inconclusive empirical evidence regarding the relationship between CSR disclosure and firm value can be interpreted through various theoretical lenses. Signaling theory (Akerlof, 1970) and stakeholder theory (Freeman, 1984) posit a positive association, suggesting that the disclosure of credible CSR information mitigates information asymmetries between firms and their stakeholders, enhances internal governance mechanisms, reduces the cost of capital, and improves expected future cash flows. In contrast, agency theory (Jensen & Meckling, 1976) predicts a value-destroying effect of CSR disclosure, emphasizing that significant information asymmetries and potential reputational risks may arise when managers opportunistically utilize CSR reporting to pursue personal interests (Lee, 2017). Additionally, legitimacy theory (Cho & Patten, 2007) contends that CSR disclosure may lack value relevance, functioning primarily as a symbolic response to socio-political pressures rather than as a medium for conveying substantive information. Against this backdrop, the present study aims to provide empirical evidence supporting the prevailing theoretical perspective within an emerging and relatively underexplored context.

To explore this relationship, the present study investigates the impact of CSR disclosure on firm performance and examines its potential role as a buffer during periods of crisis, with particular focus on the COVID-19 pandemic. Empirically, the analysis draws on a unique, hand-collected dataset of CSR disclosures from Vietnamese publicly listed firms over the period 2014 to 2021. Consistent with established literature, firm financial performance is assessed using return on equity (ROE) as a measure of accounting-based performance and Tobin's *Q* as an indicator of market-based valuation.

Examining the relationship between CSR disclosure and financial performance in Vietnam holds significant academic and practical relevance. As an emerging economy experiencing rapid integration into global markets, Vietnam is under growing pressure to meet international standards of transparency, sustainability, and ethical governance. However, the extent to which CSR disclosure contributes to financial performance remains underexplored, particularly within Vietnam's unique regulatory and institutional framework, where CSR practices are largely voluntary. This research is crucial for understanding whether CSR disclosure offers strategic value beyond regulatory compliance, especially in enhancing firm credibility and attracting foreign investment. Furthermore, the distinct socio-economic and institutional conditions in Vietnam limit the generalizability of findings from developed economies. As such, empirical research in this context can provide localized insights into how CSR disclosure affects firm outcomes. These findings will offer practical implications for firms, investors, and policymakers committed to promoting responsible business practices and long-term financial sustainability in Vietnam.

This study makes three key contributions to the literature on CSR disclosure and firm performance, particularly within the underresearched context of Vietnam's transitional economy. First, it deepens empirical insights into the relationship between CSR disclosure and firm performance by integrating international evidence and applying it to an emerging market. Existing literature offers mixed findings. For instance, Cho et al. (2015) compare CSR disclosures of Fortune 500 firms in the late 1970s and in 2010 and reveal that greater breadth of disclosure does not necessarily correspond to enhanced investor valuation, thereby challenging the assumption that more extensive CSR reporting always adds value. In contrast, Cahan et al. (2015), drawing on data from 21 countries, find that unexpected CSR disclosures—those exceeding stakeholder expectations—are positively associated with firm value, especially in countries with weaker institutional environments. Beck et al. (2018), using data from Australia, Hong Kong, and the UK and employing the Global Reporting Initiative (GRI) framework, show that CSR engagement is positively related to both financial outcomes and operational performance.

Similarly, Singh and Chakraborty (2021), focusing on Indian firms, develop a multidimensional CSR disclosure index and find that both the quality and quantity of CSR reporting are positively correlated with accounting-based performance metrics, though not with market-based measures. These studies collectively highlight the complex, context-dependent nature of the CSR–performance relationship, which this paper further explores through the lens of Vietnam's economic transition.

Second, the study addresses a significant gap in CSR research by focusing on a transitional developing economy, where CSR disclosure remains relatively nascent and institutionally constrained. Prior studies suggest that CSR practices in developed countries are supported by abundant financial and human capital, active stakeholder engagement, and robust institutional frameworks that facilitate voluntary and transparent CSR practices (Baughn et al., 2007; Chapple & Moon, 2005). Conversely, firms in developing economies face significant limitations, including scarce resources, weaker stakeholder pressure, high government control, and limited autonomy (Bhatia & Makkar, 2019). In such environments, CSR is often driven by regulatory compliance rather than embedded ethical norms (Gray et al., 1988). Bhatia and Makkar (2019) find that CSR disclosure levels in developed economies such as the UK and USA are significantly higher than those in BRICS countries, reflecting these structural differences.

Lastly, this study contributes to the growing body of literature that views CSR disclosure as a protective mechanism against adverse events. Shiu and Yang (2017) provide evidence that consistent CSR activities offer insurancelike benefits, shielding firms from reputational and financial damage. Albuquerque et al. (2019) argue that CSR reduces systematic risk by enhancing stakeholder loyalty and product differentiation. Xu et al. (2020) and Lins et al. (2017) further demonstrate that strong CSR engagement contributes to better crisis resilience, including improved access to capital, stronger performance during downturns, and enhanced stakeholder trust. This study builds on such findings, confirming that CSR can function not only as a performance enhancer but also as a risk management tool in volatile environments.

The article is structured into five main sections. Section 1 provides the introduction. Section 2 reviews the relevant literature and formulates the research hypotheses. Section 3 describes the data sources and outlines the methodological approach. Section 4 presents empirical findings along with a detailed discussion. Finally, Section 5 concludes the study by summarizing key insights, highlighting practical implications, and suggesting directions for future research.

2 Literature review and hypothesis development

2.1 Theoretical perspectives on CSR disclosure

CSR disclosure is frequently examined through two dominant theoretical lenses: legitimacy theory and stakeholder theory. CSR disclosure is frequently interpreted through legitimacy theory, which posits that firms aim to align their activities with societal norms to maintain their "license to operate." According to Suchman (1995), legitimacy is the perception that a company's actions are appropriate within a socially constructed value system. Organizations therefore disclose social and environmental information not solely for transparency, but to demonstrate alignment with societal expectations and protect their reputation. Deegan (2002) argues that companies, as members of the broader social system, must avoid actions that could damage their legitimacy. To maintain or restore legitimacy, firms may implement strategies such as educating stakeholders, reframing public perceptions, diverting attention from controversies, or reshaping societal expectations (Lindblom, 1994). Legitimacy theory is particularly relevant when firms face public scrutiny. Studies such as Deegan and Gordon (1996), O'Donovan (2002), and Patten (1991) highlight that CSR disclosure often increases in response to external pressure, especially for large or high-profile companies. For example, Deegan and Rankin (1996) found that Australian firms increased environmental reporting following legal action. Gray et al. (2001) observed rising CSR disclosure in the UK, particularly in health and safety. Overall, CSR reporting is viewed as a strategic tool for managing public perception and sustaining legitimacy.

Stakeholder theory offers a complementary explanation for CSR disclosure by emphasizing the importance of all groups affected by a firm's operations. As Freeman (2010) defines, stakeholders include not only shareholders but also employees, customers, suppliers, communities, governments, and other interest groups. The theory argues that to maintain legitimacy and operate effectively, firms must respond to the expectations of these diverse stakeholders. Donaldson and Preston (1995) identify three dimensions of stakeholder theory: descriptive (how firms behave), instrumental (linking stakeholder engagement to performance), and normative (ethical responsibilities). Deegan et al. (2000) further divide the theory into ethical and managerial branches, with the former promoting equal information access and the latter focusing on satisfying powerful stakeholders. CSR disclosure is seen as a strategic response to stakeholder demands, used to secure ongoing support and enhance reputation. Empirical studies support this view. Roberts (1992) found that CSR reporting is linked to stakeholder power and corporate strategy, while Epstein and Freedman (1994) showed that external stakeholders prioritize social and environmental impacts over financial ones. Ruf et al. (2001) also demonstrated a positive relationship between CSR and financial performance. Thus, stakeholder theory frames CSR disclosure as both a strategic and ethical tool to manage stakeholder relationships and promote long-term success.

2.2 *CSR disclosure and financial performance*

The link between CSR disclosure and financial performance has received increasing scholarly attention across both developed and developing economies. While early studies suggested a generally positive relationship, more recent findings indicate that this relationship is nuanced and often dependent on institutional, regulatory, and firm-specific contexts.

In developed countries, CSR disclosure practices have evolved significantly over the past few decades. In the UK, Gray et al. (1995) documented substantial changes in social and environmental reporting between 1979 and 1991. Supporting this trend, Campbell (2000) found consistent growth in CSR disclosures in Marks & Spencer's reports from 1969 to 1997. Campbell (2004) extended the analysis to ten UK firms across five sectors from 1974 to 2000, identifying limited disclosure in the early 1980s but rapid growth by the late 1980s and early 1990s. In France, Kahloul et al. (2022) examined firms listed on the SBF 120 index between 2008 and 2015. Their results showed a neutral effect of CSR disclosure on firm value (Tobin's *Q*) and a negative impact on profitability (return on assets [ROA]), suggesting that CSR may enhance market perception without immediately improving operational efficiency. In Italy, Rossi and Harjoto (2020) found that nonfinancial disclosure ratings were positively associated with firm value and negatively related to risk and agency costs, underscoring the role of regulatory frameworks and third-party verification in strengthening the value of CSR disclosures.

In contrast, findings from developing countries reflect more variation, often influenced by weaker institutions and different stakeholder expectations. In India, Fahad and Busru (2021) found that CSR disclosure negatively affected both profitability and firm value for firms listed on the BSE 500, particularly in environmental and social dimensions. Xu et al. (2020) reported that CSR disclosures added value in China, especially for privately owned enterprises (POEs), while state-owned enterprises (SOEs) benefitted mainly through risk mitigation. In Bangladesh, Khan et al. (2021) showed a positive relationship between green disclosure and firm value in the banking sector, though the effect was weakened by high nonperforming loan ratios.

Overall, the literature suggests that the impact of CSR disclosure on financial performance is highly context-specific. Developed markets benefit more from regulatory clarity and stakeholder engagement, while firms in developing economies face institutional challenges that can diminish the financial returns from CSR initiatives.

Building on established theoretical frameworks and prior research, we propose the following hypotheses:

Hypothesis 1: *CSR disclosure is positively correlated with firm financial performance.*

Hypothesis 1a: *Firms providing detailed governance disclosures in CSR reports demonstrate higher financial performance due to increased transparency and stakeholder trust.*

Hypothesis 1b: *CSR disclosures emphasizing a clear vision and strategic commitment are positively associated with firm value, reflecting alignment with long-term goals and stakeholder expectations.*

Hypothesis 1c: *Greater credibility in CSR reporting, facilitated by external assurance or standardized frameworks, is positively linked to superior market-based performance.*

2.3 *CSR disclosure as an insurancelike mechanism*

CSR disclosure has increasingly been recognized not just as a communication tool, but as a strategic asset that mitigates risk and enhances firm resilience during crises. Drawing from stakeholder theory and the resource-based view, CSR builds intangible assets such as trust, legitimacy, and reputation, which serve as buffers in times of disruption—whether financial, environmental, or reputational. Godfrey (2005) introduces the concept of "moral capital," arguing that CSR fosters goodwill with stakeholders, which can be drawn upon to reduce reputational and financial damage during adverse events. Transparent CSR disclosure further strengthens this buffer by signaling a firm's long-term ethical commitment, thus reinforcing stakeholder trust. Fombrun and Shanley (1990) and Roberts and Dowling (2002) similarly emphasize that CSR enhances corporate reputation—a valuable intangible that supports investor confidence, especially under stress.

Empirical research supports this view. Godfrey et al. (2009) distinguish between institutional CSR (broad societal focus) and technical CSR (partner-oriented), finding that only institutional CSR offers risk-reduction benefits. Lins et al. (2017) show that firms with strong CSR ratings outperformed their peers in stock returns and operations during the 2008–2009 financial crisis. Likewise, Poursoleyman et al. (2024) find that socially responsible firms fared better during COVID-19, with stronger resilience in firm value. Lo et al. (2018) observe similar outcomes in China, where firms with strong CSR reputations experienced less severe market penalties following environmental incidents. Overall, CSR disclosure acts like reputational insurance. It helps build social capital that protects firms against stakeholder backlash and cushions financial performance during shocks. In doing so, CSR strengthens long-term corporate sustainability and strategic positioning in an increasingly risk-sensitive business environment.

Hypothesis 2: *Firms with higher levels of CSR disclosure demonstrate greater financial resilience during the COVID-19 pandemic, due to enhanced stakeholder trust and reputational capital.*

3 Data and methodology

3.1 Research context

Over the past decade, Vietnam has made considerable progress in CSR disclosure, largely driven by regulatory initiatives and growing stakeholder pressure. A key milestone was Circular 155/2015/TT-BTC, issued by the Ministry of Finance, which came into effect in 2016 and required listed firms to report on environmental and social impacts. Initially, compliance was limited, with many companies providing minimal or generic information. However, by 2017, CSR reporting had become more widespread, with leading firms such as Vinamilk and Hoa Sen Group adopting international standards such as the GRI in their standalone sustainability reports.

Despite improvements, the quality of CSR disclosure remains uneven. While some firms show strategic commitment, many continue to offer vague, qualitative content lacking measurable or forward-looking data. The absence of penalties for noncompliance also weakens regulatory impact. Vietnam's stock exchanges have supported CSR adoption through market-based mechanisms. The Ho Chi Minh City Stock Exchange (HOSE) launched the Vietnam Sustainable Development Index (VNSI) in 2017, selecting 20 ESG-compliant firms to promote responsible investment. The Hanoi Stock Exchange (HNX) has also assessed corporate governance practices among smaller firms on the Unlisted Public Company Market (UPCoM).

Rapid economic growth has come with environmental and social costs. Between 2000 and 2015, per capita carbon emissions quadrupled, and in 2024, Vietnam ranked lowest globally in the Environmental Performance Index. These challenges have heightened public and investor demand for ethical corporate behavior. According to the KPMG (2022) survey, 80% of Vietnamese firms are currently engaging in or planning CSR activities. While Vietnam has made promising strides in CSR reporting, key challenges persist—especially in enforcement, data quality, and impact assessment. Continued regulatory support and stronger institutional oversight are essential for translating CSR efforts into meaningful and measurable outcomes.

3.2 Sample

Our empirical research focuses on analyzing publicly listed companies from the top 500 largest enterprises in Vietnam, according to the 2021 VNR500 ranking, based on the Fortune 500 model. These companies either had a sustainability report between 2014 and 2021 or included at least a chapter on social responsibility in their annual reports during this time. After excluding regulated financial and insurance companies, we narrowed the sample to 93 firms over an 8-year period, resulting in 744 balanced firm-year observations. Other data were extracted from the companies' financial reports, while nonfinancial and CSR-related data were manually gathered from annual reports available on the companies' websites.

The selected time frame, 2014–2021, encompasses both the pre- and postimplementation periods of Circular 155/2015/TT-BTC, introduced by Vietnam's Ministry of Finance. This regulation mandates that companies listed on the Vietnam Stock Exchange disclose their social and environmental activities. By examining data from both before and after the regulation's enforcement, we can evaluate the changes in the extent of social responsibility disclosures under voluntary and mandatory frameworks. Circular 155 requires listed companies to detail their commitment to sustainable development and their adherence to the GRI guidelines, as well as the impacts of their activities in their annual reports. Before Circular 155, CSR reporting in Vietnam was still developing, and between 2014 and 2021, compliance with GRI guidelines was voluntary (Chelli et al., 2018).

3.3 Dependent variable

To ensure a comprehensive evaluation of firm performance, this study adopts both accounting-based and market-based measures, in line with established literature. These metrics are widely recognized for their reliability and relative resistance to manipulation (Yoshikawa & Phan, 2003). Accounting-based indicators reflect a firm's historical profitability but may be influenced by managerial discretion and variations in accounting standards. In contrast, market-based measures incorporate forward-looking information and investor expectations, offering insights into a firm's future potential, although they can also be affected by investor sentiment rather than fundamental performance (Ullmann, 1985). Specifically, this study uses ROE—defined as net income after tax divided by average shareholders' equity—as the accounting-based measure.[1] Tobin's Q, calculated as the sum of market capitalization and the book value of debt divided by the book value of total assets, serves as the market-based indicator. For robustness checks, ROA and earnings per share (EPS) are also employed as alternative dependent variables.

3.4 Independent variable

Annual reports are widely recognized as a primary medium through which companies disclose information related to CSR to external stakeholders (Neu et al., 1998). Their structured and comprehensive nature makes them an essential source for conducting longitudinal research, providing access to time-specific and historical data across various firms and industries (Bansal, 2005). In this study, a CSR disclosure index was developed based on the 2016 GRI Standards. To evaluate the extent and quality of CSR disclosures, a content analysis methodology was applied, structured through five sequential steps.

Step 1: Identification of disclosure components

The disclosure index was constructed by selecting reporting items in accordance with the 2016 GRI Standards. The selected items were categorized into four main dimensions: (1) Governance Structure (GOV), (2) Vision and Strategic Commitment (VSTR), (3) Credibility of the Report (CRED), and (4) Economic, Environmental, and Social Indicators (ECEN). The fourth dimension was further disaggregated into six subcategories to reflect the diversity of CSR performance: economic outcomes, environmental impact, working environment and labor practices, human rights, community involvement, and product responsibility.

Step 2: Development of the scoring scheme

Based on the defined categories, a structured scoring framework was developed to assess CSR disclosures systematically. The GOV, VSTR, and CRED dimensions each comprised six binary items, where a score of 1 was assigned for each disclosed item and 0 for nondisclosure, yielding a maximum score of 6 per dimension. The ECEN dimension was assessed on an ordinal scale from 0 to 4, reflecting increasing depth of disclosure: 0 = no disclosure, 1 = basic mention, 2 = detailed description, 3 = comparative or evaluative discussion, and 4 = inclusion of future goals. The subcategory-specific maximum scores were as follows: ECENsub1 (3 items, 12 points), ECENsub2 (8 items, 32 points), ECENsub3 and ECENsub4 (5 items each, 20 points), ECENsub5 (6 items, 24 points), and ECENsub6 (4 items, 16 points). This scoring approach enabled a granular evaluation of CSR reporting practices across firms (Table 1).

Step 3: Assessment of scale reliability

To ensure the reliability of the constructed index, a test–retest method was adopted, consistent with the procedures outlined by Hassan and Marston (2019). Two independent coders collected data at separate times, and the results were compared to evaluate intercoder consistency. This method allowed for the verification of scoring stability and minimized the risk of subjectivity in the coding process.

Step 4: Validation of the index

The validity of the disclosure index was assessed by consulting a panel of practitioners, including auditors and corporate financial managers. This evaluation followed the approach proposed by Patelli and Prencipe (2007), with a specific focus on assessing the index's relevance and applicability within the Vietnamese corporate reporting context. Their feedback informed necessary adjustments to enhance the contextual suitability of the scale.

Step 5: Measurement of CSR disclosure

The final CSR Disclosure Index was calculated for each firm-year observation as the ratio of the total score obtained by the firm to the maximum achievable score of 142. The resulting value, CSRD_i, represents the relative extent of CSR disclosure by the i-th firm and ranges from 0 to 1:

$$CSRD_{\mathrm{i}} = (CSRD\ score\ of\ the\ \mathrm{i}\text{-}th\ company/142)$$

[1] ROE is often preferred over other accounting-based measures such as ROA and return on sales (ROS) due to its direct focus on shareholder profitability. ROE assesses how efficiently a firm uses shareholders' equity to generate net income, integrating both operational performance and financial leverage. Unlike ROA and ROS, which consider total assets or revenue without capturing capital structure, ROE offers a more comprehensive view of value creation for equity holders and is widely used in research and financial analysis.

Table 1. The corporate social responsibility (CSR) disclosure index.

Code	Content	Maximum score
GOV	Information about the governance structure	6
VSTR	Vision, strategic commitment of managers, and management mechanisms in the company	6
CRED	The information reliability	6
ECEN	Economic, environmental, and social outcomes	124
ECENsub1	The information on economic outcomes	12
ECENsub2	The information on environmental outcomes	32
ECENsub3	The information on working environment and professional practice outcomes	20
ECENsub4	The information on human rights outcomes	20
ECENsub5	The information on community responsibility outcomes	24
ECENsub6	The information on product development outcomes	16
Total of scores		142

Note. The table outlines the components of the CSR disclosure index, which was constructed using the 2016 Global Reporting Initiative (GRI) standards and content analysis. CSR disclosures are grouped into four main categories: governance structure (GOV), vision and strategic commitments (VSTR), report credibility (CRED), and economic, environmental, and social indicators (ECEN). Each of the first three categories includes six binary-scored items (1 if disclosed, 0 if not), yielding a maximum of 6 points per category. The ECEN category comprises six subcategories covering 31 items related to economic, environmental, labor, human rights, community, and product outcomes.

This normalized index enables comparative analysis of CSR reporting practices across firms and over time, offering a robust measure of both the scope and depth of CSR engagement as communicated through annual reports. Fig. 1 reports the CSR disclosure index from 2014 to 2021.

3.5 Model

The relationship between CSR disclosure and firm performance may be influenced by firm-specific characteristics that affect both accounting-based and market-based performance indicators, thereby introducing endogeneity concerns. These concerns primarily stem from potential reverse causality—where firm performance influences CSR disclosure—and omitted variable bias arising from unobserved factors affecting both variables. Supporting this, Wooldridge's (2002) test reveals serial correlation in both CSR disclosure and financial performance, underscoring the need for a robust estimation strategy. To address these issues, this study employs the

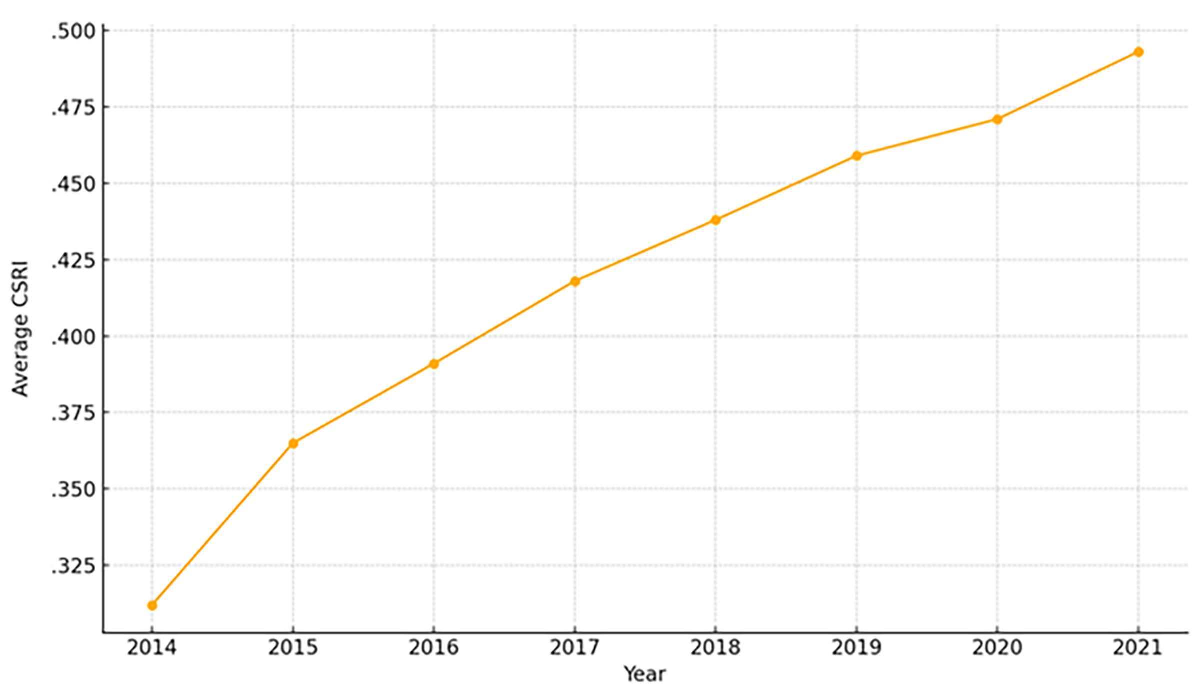

Fig. 1. Corporate social responsibility disclosure index (CSRI) over time (2014–2021).

system generalized method of moments (GMM) estimator, as proposed by Arellano and Bover (1995) and Blundell and Bond (1998). System GMM is chosen over conventional approaches such as ordinary least squares (OLS), fixed effects (FE), and difference GMM because of its capacity to address key econometric challenges in panel data analysis—namely, endogeneity, unobserved heterogeneity, and dynamic panel bias. In particular, the inclusion of lagged dependent variables in dynamic models leads to correlation with the error term, rendering OLS and FE estimators inconsistent. System GMM mitigates this issue by using internal instruments, specifically lagged levels and first differences of endogenous variables, which are assumed to be correlated with the regressors but uncorrelated with the error term. Additionally, it enhances estimation efficiency by combining the differenced and level equations, making it particularly effective in the presence of persistent variables and simultaneity. The validity of the model is assessed using the Arellano–Bond test for autocorrelation and the Sargan–Hansen test for overidentifying restrictions. In this study, lagged values of CSR disclosure and control variables, including leverage (LEV), firm size (SIZE), and firm age (AGE), are employed as instruments to ensure consistent and unbiased parameter estimates.

Specifically, we estimate a model to assess the effect of CSR disclosure on ROE and Tobin's *Q*, while accounting for the autocorrelation of the dependent variable.

$$CFP_{\mathrm{it}} = \beta_1 + \beta_2 * Lag(CFP_{\mathrm{it}}) + \beta_3 * CSRD_{\mathrm{it}} + \beta_{\mathrm{j}} * X_{\mathrm{it}} + \mu_{\mathrm{i}} + \varepsilon_{\mathrm{it}}\,(*) \ \text{ with j} > 3$$

where corporate financial performance (CFP) is evaluated using either ROE or Tobin's *Q*, while corporate social responsibility disclosure (CSRD) reflects the extent or various aspects of CSR reporting. Control variables (X) include leverage (LEV), firm size (SIZE), and firm age (AGE). The model also accounts for firm-specific fixed effects (μ) and an error term (ε). The subscripts i and t correspond to firm i at time t, respectively. To ensure the reliability of the GMM estimator, two key specification tests are performed. The first is a second-order autocorrelation test to detect serial correlation in the residuals. The second is the Sargan–Hansen test for overidentifying restrictions, which evaluates the overall appropriateness of the instruments applied in the model.

The connection between financial performance and CSR disclosure can be affected by various additional factors that require control. Research has frequently emphasized the role of firm-specific attributes in shaping CSR disclosure strategies. One key factor is firm leverage, which can affect decisions regarding CSR reporting (Khan et al., 2013). Highly leveraged firms may be more inclined to disclose CSR information in response to creditor expectations (Roberts, 1992). Additionally, larger firms face greater pressure to communicate with stakeholders, providing stronger incentives to adopt comprehensive CSR disclosure practices (Roberts, 1992; McWilliams & Siegel, 2000). Finally, firm age is commonly viewed as a crucial determinant in the adoption and reporting of CSR practices (Rashid et al., 2010).

3.6 Summary statistics

We begin by presenting the descriptive statistics. Table 2 outlines these results. On average, Tobin's *Q* is 1.026, with a standard deviation of 1.112. The average ROE is 0.155, with a standard deviation of 2.226. On average, the firms in our sample disclose 43.2% of the total CSR items, with the lowest disclosure level being 4.81%, and the highest 89.5%. The average leverage (LEV) of the sampled firms is 52.2%. Firm size averages 29.273, ranging from 25.812 to 33.764. Lastly, the average firm age is 3.013 years.

Fig. 2 displays the correlation matrix of all variables across the full sample period using a heatmap. Dark red areas indicate strong positive correlations, while dark blue areas reflect strong negative correlations between variable pairs. Additionally, unreported tests show that all variance inflation factors (VIFs) are below the critical threshold of 3, indicating that multicollinearity is not a concern in the multivariate analysis.

4 CSR disclosure and financial performance

4.1 The effects of CSR disclosure on firm performance

To evaluate the influence of CSR disclosure on corporate performance, our study examines 744 firm-year observations from 93 distinct companies spanning the years 2014 to 2021. The findings, outlined in Table 3, highlight the connection between CSR disclosure and two key variables: Tobin's *Q* and ROE.

In the first two columns, Tobin's *Q* serves as the dependent variable. Column 1 considers only CSR disclosure and the prior year's Tobin's *Q* as explanatory variables, while column 2 introduces additional control variables. The estimated coefficients for CSR disclosure (CSRD) are both positive and statistically significant in these models.

Columns 3 and 4 show the relationship between CSR disclosure and firm accounting value. ROE is the left-hand-side variable. The analysis reveals that

Table 2. Descriptive statistics for the full sample.

Variable	Mean	*SD*	P25	Median	P75	*N*
Financial performance						
Tobin's *Q*	1.026	1.112	1.001	1.108	1.186	744
ROE	0.155	2.226	0.015	1.101	1.283	744
Dependent variables						
CSR disclosure	0.432	4.172	0.076	0.395	1.127	744
GOV	0.021	2.215	0.004	0.012	0.185	744
VSTR	0.028	3.131	0.003	0.019	0.202	744
CRED	0.035	2.054	0.007	0.018	0.257	744
ECEN	0.768	4.003	0.266	0.531	1.044	744
ECENsub1	0.050	1.326	0.012	0.032	0.923	744
ECENsub2	0.185	2.007	0.034	0.082	0.217	744
ECENsub3	0.108	0.905	0.056	0.092	0.302	744
ECENsub4	0.101	1.407	0.040	0.087	0.279	744
ECENsub5	0.130	0.789	0.030	0.077	0.311	744
ECENsub6	0.093	1.003	0.014	0.065	0.258	744
Firm characteristics						
LEV	0.522	2.194	0.199	0.477	2.125	744
SIZE	29.273	1.308	15.211	28.732	35.362	744
AGE	3.013	3.227	2.311	2.994	3.951	744

Note. The table reports descriptive statistics at the firm level based on all firm-year observations. The sample consists of 744 firm-year observations for 93 unique firms during 2014–2021. All firm-level continuous variables are winsorized at the 1st and 99th percentiles. All variables are defined in the Appendix.

the coefficient estimates for CSRD remain positive and statistically significant in both columns. Additionally, Table 3 demonstrates that the control variables significantly and consistently affect firm performance, whether measured by market or accounting value. Notably, financial leverage (LEV) and firm size (SIZE) show significant positive coefficients, while years of operation (AGE) exhibit a significant negative relationship with firm performance across all columns.

The specification tests provide additional evidence supporting the causal relationship between CSR disclosure and firm performance, affirming the suitability of the system GMM (S-GMM) approach for this analysis. The validity of the instruments used is confirmed by the Arellano–Bond test for second-order autocorrelation and the Sargan–Hansen test for overidentifying restrictions. As anticipated, prior performance, reflected in the one-year lagged value, plays a crucial role in shaping the firm's current performance.

To strengthen the robustness of our findings, we conducted supplementary analyses using alternative measures of financial performance. In addition to Tobin's *Q* and ROE, we employed ROA and EPS as alternative dependent variables. ROA offers a comprehensive view of profitability relative to total assets, while EPS reflects the value created for shareholders.

	Tobin's *Q*	ROE	CSRD	LEV	SIZE	AGE
Tobin's *Q*	1.000	.172	.024	−.116	.027	−.009
ROE	.172	1.000	.107	−.060	−.240	−.130
CSRD	.024	.107	1.000	.115	.128	−.025
LEV	−.116	−.060	.115	1.000	.003	.148
SIZE	.027	−.240	.128	.003	1.000	.231
AGE	−.009	−.130	−.025	.148	.231	1.000

Fig. 2. Heatmap correlation between variables.

Table 3. The effects of corporate social responsibility disclosure on firm performance.

	Tobin's Q		ROE	
	(1)	(2)	(3)	(4)
CSRD	0.213*	0.390***	0.217**	0.284***
	(0.084)	(0.301)	(0.129)	(0.213)
Lag (Tobin's Q)	0.398**	0.582***		
	(0.231)	(0.414)		
Lag (ROE)			0.382**	0.432***
			(0.225)	(0.321)
LEV		0.230***		0.214**
		(0.173)		(0.120)
SIZE		0.112***		0.172*
		(0.081)		(0.022)
AGE		−0.084*		−0.304***
		(0.031)		(0.240)
Intercept	1.009**	1.232***	3.221**	4.154***
	(0.514)	(0.912)	(1.932)	(3.033)
No. of obs.	744	744	744	744
Adjusted R^2	.241	.322	.191	.208
N cross-sections	93	93	93	93
Wald test (P value)	.000	.000	.001	.002
Arrellano–Bond test AR(1) (P value)	.001	.002	.000	.001
Arrellano–Bond test AR(2) (P value)	.076	.088	.179	.211
Sargan test (P value)	.000	.000	.001	.000
Hansen test (P value)	.134	.105	.255	.431

Note. This table presents GMM regression results assessing the relationship between corporate social responsibility disclosure (CSRD) and firm performance, using 744 firm-year observations from 93 firms over 2004–2021. Tobin's Q is the dependent variable in columns 1–2, while ROE is used in columns 3–4. Variable definitions are detailed in the Appendix. Standard errors, clustered at the firm level and adjusted for heteroscedasticity, are shown in parentheses. Significance levels are denoted by ***, **, and * for 1%, 5%, and 10%, respectively.

The regression results based on ROA and EPS are consistent with those obtained using ROE and Tobin's Q, confirming the positive association between CSR disclosure and firm performance (see Table 4). These robustness tests enhance the credibility and generalizability of our results, underscoring the reliability of the observed link between CSR disclosure and financial outcomes.

4.2 *The effects of CSR categories and CSR subcategories on firm performance*

Table 5 displays the findings from our analysis, which categorizes CSR disclosure into four key areas: GOV, VSTR, CRED, and ECEN. In columns 1 through 5, Tobin's Q serves as the dependent variable. Columns 1 to 4 incorporate the CSR categories, the lagged value of Tobin's Q, and control variables as independent variables. Of these, only the coefficients for GOV and lagged Tobin's Q are both positive and statistically significant. In column 5, which includes all CSR categories alongside lagged Tobin's Q and control variables, GOV maintains a positive and statistically significant relationship with Tobin's Q, while VSTR exhibits a negative and statistically significant association.

In columns 6 to 10, the influence of CSR categories on firm accounting performance is analyzed, with ROE serving as the dependent variable. Columns 6 to 9 incorporate CSR categories, lagged Tobin's Q, and control variables. Among these, only VSTR and lagged Tobin's Q demonstrate statistical significance. Specifically, VSTR exhibits a negative coefficient in column 7, while the coefficient for lagged Tobin's Q is consistently positive across all four columns. Column 10 incorporates all CSR categories alongside lagged Tobin's Q and control variables. The findings reveal a positive and statistically significant relationship for ECEN, whereas VSTR maintains a negative and statistically significant association.

Table 6 delves into the connection between firm performance and CSR subcategory ratings, which include ECENsub1, ECENsub2, ECENsub3, ECENsub4, ECENsub5, and ECENsub6. Columns 1 to 7 utilize Tobin's Q as the dependent variable, while columns 8 to 14 employ ROE as the dependent variable. Columns 1 to 6 and 8 to 13 incorporate CSR subcategories, lagged Tobin's Q, and control variables.

Table 4. The effects of corporate social responsibility disclosure index on firm value—alternative measures.

	EPS		ROA	
	(1)	(2)	(3)	(4)
CSRD	0.247**	0.334***	0.216*	0.302**
	(0.052)	(0.044)	(0.068)	(0.084)
Lag (EPS)	0.299***	0.471*		
	(0.029)	(0.267)		
Lag (ROA)			0.328***	0.489**
			(0.041)	(0.197)
LEV		0.311*		0.282*
		(0.143)		(0.116)
SIZE		0.235**		0.219**
		(0.043)		(0.033)
AGE		−0.132**		−0.271*
		(0.024)		(0.114)
Intercept	1.316***	1.343***	1.422**	1.537***
	(0.466)	(0.377)	(0.764)	(0.079)
No. of obs.	336	336	336	336
Adjusted R^2	.311	.354	.421	.469
N cross-sections	42	42	42	42
Wald test (P value)	.000	.001	.000	.000
Arrellano–Bond test AR(1) (P value)	.000	.000	.001	.000
Arrellano–Bond test AR(2) (P value)	.102	.115	.193	.206
Sargan test (P value)	.001	.000	.000	.000
Hansen test (P value)	.150	.161	.234	.259

Note. This table reports GMM regression results on the relationship between corporate social responsibility disclosure (CSRD) and firm value, using earnings per share (EPS) and return on assets (ROA) as alternative performance measures. The analysis is based on 336 firm-year observations from 42 firms during 2016–2023. Columns 1–2 use EPS as the dependent variable, while columns 3–4 use ROA. Variable definitions are provided in the Appendix. Standard errors are heteroscedasticity-robust and clustered at the firm level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

In these models, the coefficients for ECENsub1, ECENsub2, and ECENsub6 are positive and statistically significant in columns 1, 9, and 13, respectively. Columns 7 and 14, which include all CSR subcategories, lagged Tobin's Q, and control variables, reveal that the coefficients for ECENsub1, ECENsub2, ECENsub4, and ECENsub5 are positive and statistically significant in column 7. Similarly, in column 14, ECENsub1, ECENsub2, and ECENsub4 display positive and statistically significant coefficients. In contrast, ECENsub3 shows a negative and statistically significant coefficient in column 7, while in column 14, both ECENsub3 and ECENsub6 exhibit negative and statistically significant coefficients.

Tables 5 and 6 reinforce the results in Table 3, confirming a positive link between CSR disclosure and firm performance. Both Tobin's Q and ROE increase with greater CSR transparency. Table 6 shows that the governance (GOV) dimension has a positive and significant effect on performance (columns 1 and 5), while the economic, environmental, and social outcomes (ECEN) dimension is also positively significant (column 10). Conversely, the vision and strategy (VSTR) dimension negatively affects performance in several specifications, suggesting that symbolic commitments may not translate into financial gains.

Further breakdown of CSR subcategories reveals that investments in infrastructure, environmental protection, human rights, and community initiatives enhance firm performance. In contrast, spending on workplace conditions, professional practices, and product development (e.g., labeling and marketing communications) is linked to lower profitability. These results suggest firms should prioritize outcome-driven CSR initiatives while being selective with resource allocation to symbolic or compliance-focused areas.

Overall, the findings align with prior research, highlighting the nuanced effects of different CSR components on financial performance.

5 CSR disclosure, COVID-19, and firm performance

In this section, we utilize the framework of Bae et al. (2021) to explore the relationship between CSR disclosure and firm performance in the context of the COVID-19 pandemic. The economic repercussions

Table 5. The effects of corporate social responsibility disclosure on firm performance (categories).

	Tobin's *Q*					ROE				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
GOV	0.025**				0.091*	0.177				0.124
	(0.012)				(0.023)	(0.162)				(1.143)
VSTR		−0.037			−0.070**		−0.082**			−0.064*
		(0.215)			(0.032)		(0.032)			(0.020)
CRED			0.110		0.034			−0.108		−0.024
			(0.427)		(0.571)			(0.192)		(0.211)
ECEN				−0.193	−0.262				0.108	0.274*
				(0.188)	(0.177)				(0.194)	(0.111)
Lag (Tobin's *Q*)	0.269*	0.318***	0.302**	0.332**	0.470***					
	(0.110)	(0.239)	(0.115)	(0.125)	(0.352)					
Lag (ROE)						0.234**	0.289*	0.233***	0.314**	0.514***
						(0.121)	(0.110)	(0.171)	(0.131)	(0.380)
LEV	0.413**	0.377*	0.292**	0.363*	0.201***	0.192*	0.172*	0.172*	0.132*	0.273**
	(0.244)	(0.112)	(0.126)	(0.142)	(0.092)	(0.016)	(0.051)	(0.016)	(0.051)	(0.113)
SIZE	0.217*	0.205***	0.203**	0.323*	0.151***	0.145*	0.154**	0.145*	0.154**	0.192*
	(0.092)	(0.128)	(1.074)	(0.129)	(0.093)	(0.018)	(0.084)	(0.015)	(0.084)	(0.074)
AGE	−0.119**	−0.121*	−0.108**	−0.182**	−0.074*	−0.162**	−0.154*	−0.184*	−0.144*	−0.281***
	(0.063)	(0.013)	(0.017)	(0.101)	(0.020)	(0.017)	(0.020)	(0.057)	(0.020)	(0.131)
Intercept	1.293**	1.307*	1.219*	1.285**	1.764***	2.817*	2.014*	1.717*	2.914*	3.901***
	(0.612)	(0.522)	(0.142)	(0.771)	(1.201)	(1.156)	(0.527)	(0.356)	(1.027)	(3.033)
No. of obs.	744	744	744	744	744	744	744	744	744	744
Adjusted R^2	.322	.277	.257	.337	.368	.276	.243	.222	.248	.316
N Cross-sections	93	93	93	93	93	93	93	93	93	93
Wald test (*P* value)	.000	.000	.000	.001	.000	.000	.002	.000	.001	.000
Arrellano–Bond test AR(1) (*P* value)	.000	.000	.001	.000	.000	.002	.001	.000	.000	.003
Arrellano–Bond test AR(2) (*P* value)	.165	.202	.194	.181	.191	.203	.192	.188	.175	.223
Sargan test (*P* value)	.001	.000	.000	.001	.002	.000	.002	.002	.000	.0001
Hansen test (*P* value)	.126	.150	.171	.184	.116	.283	.321	.296	.255	.442

Note. This table presents GMM regression results on the relationship between four types of corporate social responsibility disclosure (GOV, VSTR, CRED, and ECEN) and firm performance. The analysis uses 744 firm-year observations from 93 firms over 2004–2021. Tobin's *Q* is the dependent variable in columns 1–5, and ROE is used in columns 6–10. Variable definitions are detailed in the Appendix. Standard errors are heteroscedasticity-robust and clustered at the firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

of COVID-19 have significantly impacted firm performance, and CSR is hypothesized to offer insurancelike value by safeguarding shareholders' wealth (Zhai et al., 2022). Firms actively engaged in CSR initiatives may reduce their exposure to risks, which makes CSR as an important tool for crisis management. Moreover, the pandemic has intensified the emphasis on CSR among governments and market participants, with social and environmental issues becoming central components of recovery strategies in many countries. In response to the crisis, numerous corporations have strengthened their commitment to stakeholder interests, viewing it as a strategy for both generating and protecting shareholder value. The heightened focus on CSR, driven by the economic turmoil caused by the COVID-19 pandemic, presents a distinctive opportunity to empirically examine the hypothesis that CSR acts as a protective mechanism for firm performance during periods of crisis.

We estimate the following equation to analyze the connection between CSR reporting and financial variables in the context of the COVID-19 pandemic:

$$CFP_{\mathrm{it}} = \beta_1 + \beta_2 CSRD_{\mathrm{it}} + \beta_3 * CSRD_{\mathrm{it}} * COVID19 \\ + \beta_4 * COVID19 + \beta_j * \mathrm{X}_{\mathrm{it}} + \mu_{\mathrm{i}} + \varepsilon_{\mathrm{it}}$$

In this framework, the variable COVID19 is a binary indicator assigned a value of 1 for the years 2020 and 2021, and 0 for the period spanning 2004 to 2019. The dependent variable CFP_{it} signifies firm performance, while CFP_{it} reflects CSR disclosure. The interaction term CFP_{it} * COVID19 illustrates the moderating influence of the COVID-19 pandemic on the linkage between CSR disclosure and firm performance.

Table 7 reports the results. In specifications (1) and (4), we find that firms with higher levels of CSR disclosure performed significantly better during

Table 6. The effects of corporate social responsibility disclosure on firm performance (subcategories).

	Tobin's *Q*							ROE						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
ECENsub1	0.151*						0.204**	0.169						0.126*
	(0.002)						(0.213)	(0.202)						(0.034)
ECENsub2		−0.097					0.316*		0.173*					0.172*
		(0.143)					(0.042)		(0.070)					(0.063)
ECENsub3			0.223				−0.443*			−0.213				−0.502**
			(0.425)				(0.163)			(0.192)				(0.294)
ECENsub4				0.098			0.603*				−0.212			0.412*
				(0.273)			(0.115)				(0.164)			(0.154)
ECENsub5					0.064		0.280**					−0.215		0.115
					(0.135)		(0.165)					(0.185)		(0.294)
ECENsub6						−0.312	0.181						−0.218*	−0.271**
						(0.277)	(0.095)						(0.042)	(0.094)
Lag (Tobin's *Q*)	0.347*	0.490*	0.448***	0.382*	0.403**	0.399*	0.533**							
	(0.111)	(0.115)	(0.311)	(0.025)	(0.171)	(0.112)	(0.271)							
Lag (ROE)								0.193***	0.336**	0.433*	0.314**	0.307*	0.128*	0.314***
								(0.071)	(0.131)	(0.171)	(0.131)	(0.061)	(0.013)	(0.131)
LEV	0.175**	0.181*	0.355*	0.281**	0.292*	0.269**	0.402***	0.268***	0.232**	0.193*	0.132*	0.142*	0.134**	0.142*
	(0.027)	(0.072)	(0.127)	(0.150)	(0.116)	(0.011)	(0.216)	(0.112)	(0.051)	(0.016)	(0.051)	(0.042)	(0.004)	(0.051)
SIZE	0.079***	0.117**	0.129*	0.200*	0.145**	0.137*	0.345**	0.315*	0.154*	0.045*	0.054***	0.154**	0.069***	0.154**
	(0.052)	(0.043)	(0.044)	(0.070)	(0.018)	(0.034)	(0.115)	(0.115)	(0.054)	(0.015)	(0.024)	(0.084)	(0.023)	(0.074)
AGE	−0.142*	−0.124**	−0.136*	−0.128*	−0.191*	−0.203**	−0.151**	−0.172*	−0.074*	−0.182*	−0.144**	−0.152*	−0.126*	−0.154*
	(0.031)	(0.020)	(0.032)	(0.036)	(0.007)	(0.101)	(0.037)	(0.057)	(0.020)	(0.057)	(0.020)	(0.050)	(0.042)	(0.020)
Intercept	1.517*	1.451**	1.407*	1.405**	1.397*	1.335*	1.517***	1.318*	1.314*	1.117**	1.723*	1.714**	1.461**	1.514*
	(0.443)	(0.176)	(0.043)	(0.205)	(0.156)	(0.001)	(1.056)	(0.256)	(0.127)	(0.456)	(0.127)	(1.007)	(0.012)	(0.127)
No. of obs.	744	744	744	744	744	744	744	744	744	744	744	744	744	744
Adjusted R^2	.307	.371	.307	.389	.363	.387	.401	.372	.318	.307	.350	.342	.331	.448
Wald test (*P* value)	.000	.001	.000	.002	.001	.001	.003	.000	.000	.000	.000	.001	.000	.000
Arellano–Bond test AR(1) (*P* value)	.000	.000	.001	.000	.000	.000	.001	.000	.000	.000	.002	.000	.001	.000
Arellano–Bond test AR(2) (*P* value)	.188	.214	.195	.192	.207	.203	.308	.209	.283	.274	.125	.275	.192	.283
Sargan test (*P* value)	.000	.001	.000	.000	.002	.000	.000	.000	.000	.000	.000	.000	.000	.002
Hansen test (*P* value)	.114	.160	.152	.121	.126	.132	.282	.162	.125	.132	.155	.175	.132	.196

Note. This table presents GMM regression results on the relationship between six subcategories of corporate social responsibility disclosure (ECENsub1–sub6) and firm performance, using 744 firm-year observations from 93 firms during 2004–2021. Tobin's *Q* is the dependent variable in columns 1–7, and ROE is used in columns 8–14. Variable definitions are provided in the Appendix. Standard errors are heteroscedasticity-robust and clustered at the firm level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

Table 7. Corporate social responsibility disclosure, COVID-19, and firm performance.

	Tobin's Q		ROE	
	(1)	(2)	(3)	(4)
CSRD	0.136**	0.296***	0.243***	0.302***
	(0.005)	(0.021)	(0.133)	(0.212)
CSRD * COVID19	0.287***	0.496***	0.321***	0.516***
	(0.031)	(0.214)	(0.217)	(0.243)
COVID19	−0.288***	−0.613***	−0.375***	−0.548***
	(0.126)	(0.302)	(0.198)	(0.351)
Lag (Tobin's Q)	0.305**	0.377**		
	(0.161)	(0.106)		
Lag (ROE)			0.401***	0.467**
			(0.229)	(0.263)
LEV		0.314*		0.362*
		(0.025)		(0.044)
SIZE		0.143***		0.127**
		(0.023)		(0.041)
AGE		−0.179**		−0.116**
		(1.103)		(0.064)
Intercept	2.187***	2.307***	2.409***	2.965***
	(1.062)	(1.316)	(1.392)	(2.152)
No. of obs.	744	744	744	744
Adjusted R^2	.267	.319	.203	.278
N Cross-sections	93	93	93	93
Wald test (P value)	.001	.000	.003	.000
Arrellano–Bond test AR(1) (P value)	.000	.001	.001	.001
Arrellano–Bond test AR(2) (P value)	.132	.171	.206	.231
Sargan test (P value)	.000	.000	.000	.002
Hansen test (P value)	.143	.119	.208	.192

Note. This table reports GMM regression results on the relationship between corporate social responsibility disclosure and firm performance, accounting for the COVID-19 pandemic. The analysis uses 744 firm-year observations from 93 firms during 2004–2021. A COVID-19 dummy equals 1 for 2020–2021 and 0 otherwise. Tobin's Q is the dependent variable in columns 1–2, and ROE is used in columns 3–4. Variable definitions are in the Appendix. Standard errors are heteroscedasticity-robust and clustered at the firm level. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.

the COVID-19 pandemic. The interaction between CSR disclosure and the COVID-19 variable is positively associated with firm performance, with significance levels better than 1% across all four specifications. This evidence offers initial insights into the mechanism driving the positive relationship between CSR disclosure and firm performance during the pandemic.

This study further explores how specific CSR dimensions influenced firm performance during the COVID-19 pandemic. Table 8 reports interaction effects between CSR components and the pandemic indicator. Results show that the interaction between governance-related CSR (GOV) and the COVID-19 dummy is consistently positive and significant at the 1% level for both Tobin's Q (0.177 and 0.285) and ROE (0.269 and 0.313). These findings suggest that firms with strong governance structures were better equipped to manage disruptions, likely due to more effective decision making and stakeholder communication. The interaction terms for economic, environmental, and social outcomes (ECEN) are also significantly positive across models, with coefficients ranging from 0.257 to 0.334. This indicates that firms engaging in substantive CSR activities, such as environmental initiatives or community support programs, were more resilient and maintained stronger performance during the pandemic.

Conversely, the interaction effects for CSR vision and strategy (VSTR) and credibility of reporting (CRED) are not statistically significant. This implies that while long-term strategic CSR orientation and transparent reporting are important, they did not translate into immediate financial advantages in times of crisis. Overall, the evidence emphasizes the critical role of operational CSR activities in supporting firm resilience, particularly under conditions of external shocks such as COVID-19.

Table 8. Interactive effects of corporate social responsibility dimensions and COVID-19 on firm performance.

	Tobin's *Q*		ROE	
	(1)	(2)	(3)	(4)
GOV * COVID19	0.177***	0.285***	0.269***	0.313***
	(0.061)	(0.023)	(0.056)	(0.035)
VSTR * COVID19	0.224	0.143	0.281	0.294
	(0.271)	(0.211)	(0.319)	(0.323)
CRED * COVID19	0.129	0.233	0.311	0.346
	(0.201)	(0.282)	(0.343)	(0.366)
ECEN * COVID19	0.257***	0.289***	0.310***	0.334***
	(0.015)	(0.114)	(0.033)	(0.044)
Lag (Tobin's *Q*)	0.245*	0.297*		
	(0.091)	(0.132)		
Lag (ROE)			0.367**	0.388***
			(0.123)	(0.067)
LEV		0.173*		0.284*
		(0.035)		(0.122)
SIZE		0.129**		0.135**
		(0.048)		(0.026)
AGE		−0.143**		−0.155**
		(0.069)		(0.045)
Intercept	2.173**	2.247*	2.358***	2.399**
	(1.209)	(1.527)	(1.003)	(1.358)
No. of obs.	744	744	744	744
Adjusted R^2	.289	.327	.304	.323
N Cross-sections	93	93	93	93
Wald test (*P* value)	.000	.000	.001	.000
Arrellano–Bond test AR(1) (*P* value)	.000	.000	.002	.000
Arrellano–Bond test AR(2) (*P* value)	.141	.165	.217	.229
Sargan test (*P* value)	.000	.000	.000	.000
Hansen test (*P* value)	.151	.123	.215	.208

Note. This table presents GMM regression results on the interactive effects of corporate social responsibility dimensions and COVID-19 on firm performance, based on 744 firm-year observations from 93 firms during 2004–2021. The COVID-19 dummy equals 1 for 2020–2021 and 0 otherwise. Tobin's *Q* is the dependent variable in columns 1–2, and ROE is used in columns 3–4. Variable definitions are provided in the Appendix. Standard errors are heteroscedasticity-robust and clustered at the firm level. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

6 Conclusion

This study explores the relationship between CSR disclosure and firm performance, with particular attention to CSR's potential role as a mitigating mechanism during periods of economic crisis, notably the COVID-19 pandemic. Drawing on a unique hand-collected dataset of CSR disclosures from Vietnamese publicly listed firms included in the VNR500 from 2014 to 2021, the analysis assesses firm performance using both accounting-based (ROE) and market-based (Tobin's *Q*) measures. The empirical results reveal a positive association between CSR disclosure and firm performance across both dimensions. In addition, the study investigates the differential impact of specific CSR components. From a market-based perspective, governance-related disclosures exert a consistently positive and statistically significant influence on Tobin's *Q*. In contrast, the accounting-based analysis indicates that firms with a well-defined CSR vision and strategic commitments tend to achieve higher ROE. The findings suggest that investments in sound governance structures, environmental compliance, and socially responsible product development contribute to improved market valuation and profitability. Furthermore, the study provides empirical support for the hypothesis that CSR may function as an insurancelike mechanism, mitigating the adverse effects of external shocks such as the COVID-19 pandemic by preserving firm value and protecting shareholders' interests.

This study makes important theoretical contributions to the literature on CSR disclosure and firm performance, particularly in the underresearched context of transitional economies such as Vietnam. First, it advances theoretical understanding of the CSR–performance relationship by applying established international perspectives to a developing market characterized by institutional transformation and regulatory evolution. While prior studies have reported inconsistent findings regarding the impact of CSR on firm performance—such as Cho et al. (2015), who challenge the assumption that broader disclosure leads to greater value, and Cahan et al. (2015), who find that unexpected CSR disclosure can enhance firm value in weak institutional environments—this study confirms that both the extent and substance of CSR disclosure can positively influence performance in such contexts. These findings reinforce contingency theory, which posits that CSR outcomes are shaped by institutional and cultural conditions. Second, the study contributes to theory by illuminating the institutional constraints and structural limitations that firms face in emerging economies. Unlike their counterparts in developed markets, firms in transitional settings often engage in CSR primarily to comply with regulations, given limited resources and stakeholder engagement. This underscores the need for theoretical models that incorporate legitimacy-seeking behavior and institutional voids (e.g., Baughn et al., 2007; Bhatia & Makkar, 2019). Third, the study supports the conceptualization of CSR as an insurancelike mechanism. It demonstrates that, during the COVID-19 crisis, CSR helped mitigate reputational and financial risks, thereby supporting the view of CSR as a strategic tool for risk management and organizational resilience in uncertain environments.

The findings of this study offer several practical implications for corporate managers, policymakers, and stakeholders, particularly within transitional and emerging economies such as Vietnam. First, for corporate decision makers, the positive association between CSR disclosure and firm performance highlights the strategic relevance of CSR beyond regulatory compliance. Firms are encouraged to adopt a proactive and substantive approach to CSR, emphasizing not only the quantity but also the quality of disclosures, particularly in the domains of corporate governance, environmental stewardship, and responsible product practices. Strategic investments in these areas can contribute to enhanced market valuation, improved operational outcomes, and long-term competitiveness. Second, the study underscores the importance of aligning CSR initiatives with broader business objectives. The observed positive relationship between CSR-oriented vision, strategic integration, and firm profitability suggests that embedding CSR within core corporate strategies—rather than treating it as a symbolic or peripheral activity—can yield tangible financial benefits. This insight is particularly relevant for firms operating under resource constraints, where investments must demonstrate clear value. Third, the study provides actionable guidance for policymakers seeking to foster more robust CSR practices in developing economies. The findings point to the necessity of institutional support mechanisms, including incentives for voluntary disclosure, the development of standardized reporting frameworks, and capacity-building programs aimed at strengthening CSR capabilities within firms. Finally, the evidence of CSR's mitigating role during periods of crisis—such as the COVID-19 pandemic—suggests that consistent CSR engagement enhances organizational resilience. Stakeholders, including investors and consumers, should recognize and support firms that demonstrate sustained CSR commitment, as these firms are better positioned to navigate economic shocks and uncertainties.

While this study contributes valuable insights into the CSR–performance nexus within a transitional economy, several limitations warrant consideration and suggest directions for future research. First, the analysis is based on a sample of publicly listed Vietnamese firms, primarily those included in the VNR500 index. This sampling frame may limit the generalizability of the findings to smaller enterprises or firms operating in other sectors or institutional settings. Future research should consider expanding the scope to include nonlisted firms, small and medium-sized enterprises (SMEs), or undertake cross-country analyses to investigate how institutional variations shape CSR outcomes. Second, the reliance on hand-collected CSR disclosure data, while detailed, introduces inherent limitations associated with content analysis. Disclosure practices may not fully reflect actual CSR performance, and firms may engage in symbolic actions or "greenwashing." Subsequent studies could incorporate third-party CSR ratings, ESG performance metrics, or stakeholder perception surveys to triangulate and strengthen the robustness of empirical findings. Third, although the study covers the period from 2014 to 2021 and captures the initial impact of the COVID-19 pandemic, this timeframe remains relatively short for evaluating the long-term effects of CSR engagement. Future longitudinal research spanning multiple economic cycles would be instrumental in assessing the durability of the CSR–performance relationship over time. Lastly, further inquiry is needed into the mediating and moderating mechanisms that influence this relationship. Variables such as corporate governance quality, stakeholder engagement intensity, and industry-specific characteristics may shape the strength and direction of CSR's impact on firm performance, particularly within emerging market contexts.

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Appendix: Variable definition

Variable	Measure
Dependent variables: Financial performance	
Return on Equity (ROE)	Earnings after tax as the average equity
Tobin's *Q*	Stock market capitalization plus book value of liabilities as a ratio of total assets
Independent variable: Corporate social responsibility disclosure	
Corporate social responsibility disclosure (CSRD)	This composite index captures the overall extent and quality of a firm's CSR disclosures. It aggregates scores from four dimensions: Governance structure (GOV), Vision and strategic commitments (VSTR), Credibility of disclosures (CRED), and Environmental and social content (ECEN). The CSRD index is computed as the ratio of the total score assigned across all items to the maximum possible score, enabling cross-firm comparison of CSR reporting practices.
Information about the governance structure (GOV)	This index captures the extent to which firms disclose governance-related information concerning the oversight of sustainability issues, including environmental, economic, and social aspects. It is constructed based on six binary items (scored 1 if disclosed, 0 otherwise), yielding a maximum score of 6. The normalized GOV index is calculated as the ratio of the firm's total score to the maximum possible score.
Vision, strategic commitment of managers, and management mechanisms (VSTR)	This index reflects the extent to which firms disclose information regarding management's long-term vision and strategic commitments related to environmental, economic, and social responsibilities. It is based on six binary disclosure items, with one point awarded for each disclosed item. The index is computed as the total score obtained divided by the maximum score of 6.
Information reliability (CRED)	This index assesses the reliability and credibility of firms' environmental, economic, and social disclosures. It is based on six binary items, each scored 1 if disclosed and 0 otherwise. The index is computed as the firm's total score divided by the maximum score of 6.
Economic, environmental and social outcomes (ECEN)	This index evaluates the depth and comprehensiveness of firms' disclosures regarding environmental and social activities. Unlike the GOV, VSTR, and CRED indices, ECEN is assessed using an ordinal scale (from 0 to 4) across multiple subcategories. The final score is computed as the ratio of the total points assigned across all ECEN items to the maximum possible score, which varies by subcategory.
Control variables	
Financial leverage (LEV)	Ratio of total financial debt to total value of assets.
Firm size (SIZE)	Natural logarithm of the total assets.
Years of operation (AGE)	Natural logarithm of (the researching year minus the year of business establishment).