

The Effect of Corporate Social Responsibility Disclosure, Profitability, and Firm Size on Firm Value: The Moderating Role of Environmental Performance

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ABSTRACT

Firm value is an important indicator of corporate success in creating wealth for shareholders and other stakeholders. In addition to financial performance, firm value is also influenced by non-financial factors such as Corporate Social Responsibility (CSR) disclosure and environmental responsibility. This study aims to examine the effect of CSR disclosure, profitability, and firm size on firm value and to analyze the moderating role of environmental performance in these relationships. This research employs a quantitative approach using secondary data obtained from companies' annual reports and sustainability reports during the observation period. The data are analyzed using panel data regression and Moderated Regression Analysis (MRA). The results show that CSR disclosure and profitability have a significant effect on firm value, while firm size does not have a significant direct effect. Environmental performance strengthens the relationship between CSR disclosure and firm value but does not strengthen the relationship between firm size and firm value and weakens the relationship between profitability and firm value. These findings indicate that firm value is influenced by the interaction between financial and non-financial factors within the framework of stakeholder theory.

Keywords: firm value; CSR disclosure; profitability; firm size; environmental performance

INTRODUCTION

Firm value is widely recognized as a fundamental indicator of corporate success and sustainability. It reflects the market's perception of a company's performance, risk, and future prospects. A higher firm value not only signals strong financial performance but also increases shareholder wealth and enhances investor confidence. In capital markets, firm value is often associated with how effectively a company manages its resources to generate long-term returns while maintaining stability and competitiveness (Chen et al., 2023). Consequently, understanding the determinants of firm value has become an important focus in corporate finance and strategic management research.

Traditionally, studies on firm value have emphasized financial determinants such as profitability, capital structure, and growth opportunities. Profitability, in particular, is considered a key indicator of a firm's operational efficiency and its ability to generate earnings from available resources (Masliza et al., 2021). Firms with high profitability are generally perceived as having stronger financial performance and better prospects for sustainable growth, which ultimately increases market valuation. In addition, firm size has often been associated with firm value, as larger companies typically possess greater assets, stronger market power, and better access to financial resources. These advantages may enable firms to operate more efficiently and reduce business risks, which can positively influence investor perceptions.

However, in recent years the determinants of firm value have expanded beyond purely financial indicators. The growing awareness of sustainability and responsible business practices has increased stakeholder expectations regarding corporate transparency and accountability. Companies are now expected not only to generate profits but also to demonstrate social and environmental responsibility. As a result, Corporate Social Responsibility (CSR) has become an essential component of corporate strategy and governance. CSR disclosure allows firms to communicate their commitment to social welfare, environmental protection, and ethical business practices to stakeholders, including investors, regulators, and the wider community. Transparent CSR reporting may improve corporate

reputation, strengthen stakeholder trust, and enhance legitimacy, which can ultimately contribute to higher firm value (Hegedűs et al., 2025). The importance of CSR is strongly supported by stakeholder theory, which suggests that companies should consider the interests of all stakeholders rather than focusing solely on shareholders. According to this perspective, firms that effectively manage relationships with stakeholders—such as employees, communities, governments, and investors—are more likely to achieve long-term sustainability and value creation. CSR disclosure therefore serves as an important mechanism for aligning corporate activities with stakeholder expectations while signaling responsible corporate behavior to the market (Cardillo & Basso, 2025). In addition to CSR, environmental performance has emerged as a crucial factor influencing corporate sustainability and value creation. Environmental performance reflects the extent to which companies manage their environmental impact through responsible resource use, pollution control, and environmentally friendly practices. Firms with strong environmental performance may benefit from improved corporate image, regulatory compliance, and operational efficiency. These advantages can enhance stakeholder confidence and potentially increase firm value. Moreover, environmental performance may interact with other corporate factors, such as CSR disclosure and financial performance, in shaping market perceptions and investment decisions (An et al., 2025).

Despite the growing attention to sustainability issues, empirical findings regarding the relationship between CSR, financial performance, and firm value remain inconsistent. Some studies report that CSR disclosure positively influences firm value by strengthening corporate reputation and stakeholder trust, while others find insignificant or mixed effects depending on industry characteristics and institutional contexts (Zahra et al., 2025). Similarly, although profitability is widely recognized as a key determinant of firm value, its relationship with non-financial factors such as CSR and environmental performance is still debated in the literature (Bais et al., 2024). These inconsistent findings indicate the need for further investigation, particularly regarding the interaction between financial and non-financial factors in explaining firm value.

Another gap in the literature concerns the moderating role of environmental performance (Hossain & Siddiqua, 2022). While many studies examine the direct effects of CSR or financial performance on firm value, relatively few explore how environmental performance may strengthen or weaken these relationships. Considering the increasing importance of sustainability practices and environmental accountability in modern business environments, examining this moderating effect is essential for providing a more comprehensive understanding of corporate value creation (Ardiyono & Patunru, 2023).

Therefore, this study aims to analyze the effect of CSR disclosure, profitability, and firm size on firm value and to examine the moderating role of environmental performance in these relationships. By integrating financial and non-financial perspectives within the stakeholder theory framework, this research seeks to provide empirical evidence on how sustainability practices interact with corporate financial characteristics in influencing firm value. The findings are expected to contribute to the literature on corporate sustainability and corporate finance, while also providing practical insights for managers, investors, and policymakers regarding strategies to enhance corporate value in a sustainability-oriented business environment.

LITERATURE REVIEW

Stakeholder Theory and Signaling Theory

This study is grounded in two major theoretical perspectives widely used in corporate finance and sustainability research: Stakeholder Theory and Signaling Theory. Stakeholder Theory, introduced by R. Edward Freeman, emphasizes that firms are responsible not only to shareholders but also to a broader group of stakeholders, including employees, customers, communities, regulators, and the environment. According to this theory, firms that effectively manage stakeholder relationships are more likely to achieve long-term sustainability and maintain competitive advantages. Corporate actions such as Corporate Social Responsibility (CSR) disclosure and environmental management are therefore considered essential mechanisms for strengthening stakeholder trust and legitimacy (Chen et al., 2023).

Signaling Theory complements this perspective by explaining how firms communicate relevant information to the market in order to reduce information asymmetry between managers and investors. Corporate disclosures, including

financial performance and sustainability information, serve as signals regarding the firm's quality and future prospects (Pizzi et al., 2024). Companies that provide transparent and credible disclosures are more likely to gain investor confidence and attract capital investment. Within this framework, both financial indicators such as profitability and non-financial disclosures such as CSR and environmental performance can function as signals that influence investors' perceptions of firm value. Firms that demonstrate strong financial performance while maintaining responsible sustainability practices are therefore expected to achieve higher market valuation.

Corporate Social Responsibility Disclosure and Firm Value

Corporate Social Responsibility (CSR) refers to corporate initiatives aimed at integrating social and environmental considerations into business operations and stakeholder interactions. CSR disclosure allows companies to communicate their sustainability activities through annual reports or sustainability reports, thereby improving transparency and accountability (Sulemana et al., 2025).

From the perspective of stakeholder theory, CSR disclosure enables firms to demonstrate their commitment to responsible business practices and social welfare. Companies that actively disclose CSR activities may enhance corporate reputation and legitimacy, which can strengthen stakeholder trust and investor confidence (Jensen & Meckling, 1976). As a result, CSR disclosure may positively influence firm value by improving corporate image and reducing perceived risks.

Empirical studies in accounting and finance literature generally support the positive relationship between CSR disclosure and firm value. Firms with higher CSR engagement tend to experience stronger investor interest because responsible business practices are increasingly valued in capital markets. CSR disclosure also reduces information asymmetry by providing stakeholders with additional insights into the company's social and environmental performance (Freeman, 1984).

However, some studies report mixed results, particularly in emerging markets. Investors may sometimes perceive CSR activities as additional costs that reduce short-term profitability. Therefore, the effect of CSR disclosure on firm value may depend on contextual factors such as institutional environment, industry characteristics, and sustainability awareness among investors.

Based on these theoretical arguments and empirical evidence, CSR disclosure is expected to influence firm value.

H1: CSR disclosure has a positive and significant effect on firm value.

Profitability and Firm Value

Profitability is a fundamental indicator of a firm's financial performance and reflects the efficiency with which a company utilizes its resources to generate profits. In corporate finance research, profitability is often measured using ratios such as Return on Assets (ROA) or Return on Equity (ROE). Higher profitability indicates that a firm can effectively convert its assets into earnings, which is an important signal for investors regarding managerial performance and financial stability (Hegedűs et al., 2025).

From the perspective of signaling theory, profitability serves as a positive signal about the firm's operational efficiency and future growth potential. Firms that consistently generate high profits are generally perceived as financially strong and capable of providing sustainable returns to shareholders. As a result, investors are more likely to invest in such firms, increasing stock demand and ultimately enhancing firm value (Chen et al., 2023).

Previous empirical studies generally find a positive relationship between profitability and firm value. Firms with strong profitability tend to attract greater investor attention and achieve higher market valuation. However, some studies suggest that excessive profit orientation without attention to sustainability may reduce stakeholder trust and long-term competitiveness. This indicates that profitability alone may not fully explain firm value without considering non-financial performance indicators.

Nevertheless, profitability remains a key determinant of firm value in corporate finance research.

H2: Profitability has a positive and significant effect on firm value.

Firm Size and Firm Value

Firm size reflects the scale of a company's operations and resources, commonly measured by total assets, total sales, or market capitalization. Large firms generally possess greater financial resources, broader market reach, and stronger operational capabilities compared to smaller firms. These advantages may provide greater stability and reduce business risk (Sulemana et al., 2025).

From the resource-based perspective, larger firms tend to have greater access to capital markets and more diversified business operations, which may enhance their ability to generate sustainable earnings. In addition, large companies typically receive more attention from investors and analysts, increasing their visibility and credibility in financial markets (Zahra et al., 2025).

However, the relationship between firm size and firm value is not always consistent. While larger firms benefit from economies of scale and stronger market power, they may also experience inefficiencies, bureaucratic complexity, and agency problems that reduce operational efficiency. Consequently, the impact of firm size on firm value may vary depending on managerial effectiveness and industry characteristics.

Despite these mixed findings, firm size remains an important variable in explaining variations in firm value.

H3: Firm size has a positive and significant effect on firm value.

Environmental Performance as a Moderating Variable

Environmental performance reflects the extent to which a company manages its environmental impact through responsible practices such as efficient resource utilization, waste management, pollution control, and compliance with environmental regulations. In recent years, environmental performance has become an increasingly important factor in corporate sustainability and stakeholder evaluation (Chau et al., 2025).

Companies with strong environmental performance are often perceived as more responsible and sustainable. This perception can enhance corporate reputation, strengthen stakeholder trust, and reduce regulatory risks. Consequently, environmental performance may influence firm value both directly and indirectly (Pizzi et al., 2024).

Environmental performance may also moderate the relationship between CSR disclosure and firm value. Companies that demonstrate both strong environmental performance and transparent CSR disclosure are more likely to gain stakeholder support and investor confidence. Similarly, environmental performance may strengthen the credibility of financial signals such as profitability, as firms that generate profits while maintaining environmental responsibility are perceived as more sustainable (Dindar, 2025).

In addition, large firms often face greater public scrutiny regarding environmental issues due to their operational scale. Therefore, environmental performance may influence how investors evaluate the relationship between firm size and firm value.

Based on these arguments, environmental performance is expected to moderate the relationships between CSR disclosure, profitability, firm size, and firm value.

H4: Environmental performance strengthens the relationship between CSR disclosure and firm value.

H5: Environmental performance strengthens the relationship between profitability and firm value.

H6: Environmental performance strengthens the relationship between firm size and firm value.

Integration of Financial and Sustainability Performance

Recent literature emphasizes the importance of integrating financial and non-financial performance indicators in explaining firm value. Traditional valuation models often focus primarily on financial metrics, such as profitability and firm size, which may not fully capture long-term value creation (Pizzi et al., 2024). In contrast, sustainability indicators such as CSR disclosure and environmental performance provide additional insights into corporate responsibility and long-term risk management (Chen et al., 2023).

The integration of financial and sustainability performance reflects a more comprehensive approach to corporate valuation. Firms that successfully combine strong financial performance with responsible environmental and social practices are more likely to achieve sustainable competitive advantages. From this perspective, CSR and environmental initiatives should not be viewed merely as compliance activities but as strategic investments that enhance long-term value creation (Dindar, 2025).

However, the extent to which investors incorporate sustainability information into valuation decisions remains an empirical question, particularly in emerging markets where sustainability awareness among investors may vary.

Information Asymmetry and Market Interpretation

Information asymmetry occurs when managers possess more information about the company's performance and prospects than external investors. Both financial indicators and sustainability disclosures serve as mechanisms to reduce this asymmetry by providing signals about corporate performance (Hegedús et al., 2025).

CSR disclosure and environmental performance may enhance transparency by providing stakeholders with additional information beyond traditional financial statements. This information helps investors better evaluate corporate risk, sustainability practices, and long-term growth potential (Chen et al., 2023).

Nevertheless, the effectiveness of these signals depends on their credibility and quality. If sustainability disclosures are perceived as symbolic or lacking substantive content, investors may discount their value. Therefore, the market interpretation of CSR and environmental information plays an important role in determining their impact on firm value.

Industry Context and Sustainability Pressure

Industry characteristics may also influence the relationship between sustainability practices and firm value. Companies operating in environmentally sensitive industries often face greater regulatory pressure and public scrutiny regarding their environmental impact. In such industries, CSR disclosure and environmental performance may play a more significant role in shaping stakeholder perceptions (Du et al., 2026).

However, firms in capital-intensive sectors may also experience higher operational risks and environmental costs, which may limit the immediate financial benefits of sustainability initiatives. As a result, the relationship between sustainability performance and firm value may vary across industries depending on regulatory environments, market expectations, and competitive dynamics (Xu et al., 2025).

Empirical Gaps and Research Contribution

Despite extensive research on CSR disclosure, profitability, and firm value, several gaps remain in the literature. First, many previous studies examine financial and non-financial determinants separately rather than integrating them within a comprehensive analytical framework (Pouryousof et al., 2025). Second, the moderating role of environmental performance in the relationship between financial performance and firm value remains relatively underexplored. Third, empirical evidence from emerging markets is still limited, particularly in contexts where sustainability awareness and regulatory enforcement differ from developed economies (Suhartini et al., 2024).

This study addresses these gaps by integrating CSR disclosure, profitability, and firm size with environmental performance as a moderating variable in explaining firm value. By examining these relationships within a single empirical model, the study provides a more comprehensive understanding of how financial and sustainability factors jointly influence corporate value creation.

Overall, this research contributes to the literature by providing empirical evidence on the interaction between financial performance and environmental responsibility in shaping firm value. The findings are expected to offer practical insights for managers, investors, and policymakers regarding the importance of integrating sustainability practices into corporate strategies to enhance long-term corporate value.

METHODS

Research Design

This study employs a quantitative research design to examine the relationships between Corporate Social Responsibility (CSR) disclosure, profitability, and firm size on firm value, as well as the moderating role of environmental performance in these relationships. Quantitative methods are appropriate for this research because they enable the empirical testing of theoretical relationships using statistical techniques based on numerical data.

The study utilizes panel data analysis, which combines cross-sectional observations of multiple firms with time-series data over a specific observation period. Panel data analysis provides several advantages, including the ability to capture both firm-specific characteristics and changes over time, thereby improving the efficiency and reliability of the estimation results. Compared with pure cross-sectional or time-series analysis, panel data models reduce the potential bias caused by unobserved heterogeneity among firms.

Furthermore, this study applies Moderated Regression Analysis (MRA) to test the moderating role of environmental performance in the relationship between CSR disclosure, profitability, firm size, and firm value. The moderation approach allows the study to examine whether environmental performance strengthens or weakens the relationships between the independent variables and firm value.

Population and Sample Selection

The study focuses on all publicly listed companies on the stock exchange during the observation period, as they are mandated to disclose financial and sustainability information, facilitating reliable data collection. A purposive sampling technique is utilized to select companies that meet specific research criteria, which are essential for empirical analysis in accounting and finance. The criteria for selection include: 1. Continuous listing on the stock exchange during the research period. 2. Availability of complete annual reports and financial statements. 3. Disclosure of Corporate Social Responsibility (CSR) information in annual or sustainability reports. 4. Provision of complete financial data for calculating profitability, firm size, and firm value. 5. Availability of environmental performance ratings. Companies failing to meet these criteria are excluded, resulting in a final sample of firms that provide adequate information for analysis.

Data Sources and Data Collection

This study employs secondary data sourced from publicly available channels, primarily annual reports and financial statements from the Indonesia Stock Exchange and company websites. Data on sustainability disclosures is gathered from sustainability or integrated annual reports. A documentary research method is implemented for systematic review and extraction of relevant information, with financial figures cross-verified against audited statements to ensure reliability.

Variable Measurement

Firm value is assessed using Tobin's Q, indicating market value relative to asset replacement cost. EVA calculates economic profit after deducting capital charges (WACC times invested capital). Sustainability reporting utilizes a binary scoring index based on GRI Standards, measuring the ratio of disclosed items to total GRI indicators. Risk level is represented by the Altman Z-Score, combining financial ratios to evaluate a firm's financial distress likelihood, with higher scores indicating lower risk and better stability.

Model Specification

To test the proposed hypotheses, the study employs panel data regression models. The baseline model examines the direct effects of EVA and sustainability reporting on firm value. To assess the moderating role of risk, interaction terms between risk level and the independent variables are included in the regression model.

The general regression model is specified as follows:

$$\text{Firm Value} = \beta_0 + \beta_1\text{EVA} + \beta_2\text{Sustainability} + \beta_3\text{Risk} + \beta_4(\text{EVA} \times \text{Risk}) + \beta_5(\text{Sustainability} \times \text{Risk}) + \varepsilon$$

Where β represents regression coefficients and ε denotes the error term.

Estimation Technique

Panel data regression utilizes three models: Common Effect, Fixed Effect, and Random Effect. Model selection is performed via the Chow and Hausman tests. Classical assumption tests, including those for multicollinearity, heteroskedasticity, and autocorrelation, are essential for validating regression results. Moderated Regression Analysis (MRA) assesses interaction effects between risk level and independent variables, with analysis executed using EViews 12.

RESULTS

This section presents the empirical findings of the study based on descriptive statistics, correlation analysis, panel regression, and moderated regression analysis. The results are reported objectively to explain the statistical relationships among the variables without theoretical interpretation.

Descriptive Statistics

Table 1 presents the descriptive statistics for all variables used in this study based on firm-year observations of companies listed on the Indonesia Stock Exchange during the observation period. The variables include firm value (Tobin’s Q), Corporate Social Responsibility (CSR) disclosure, profitability, firm size, and environmental performance.

The average value of Tobin’s Q is 1.312, with a median value of 1.204, indicating that, on average, the market values the sample firms above the book value of their assets. This condition suggests that investors generally perceive the companies as having positive growth prospects. However, the difference between the minimum value of 0.652 and the maximum value of 3.145 indicates considerable variation in firm valuation across the sample firms. CSR disclosure shows a mean value of 0.438, implying that firms disclose approximately 43.8% of the applicable CSR indicators. This indicates a moderate level of CSR transparency among the sampled firms, although the wide range between minimum and maximum values suggests substantial differences in disclosure practices across companies.

Profitability, measured by return on assets (ROA), has an average value of 0.084, indicating that firms generate approximately 8.4% returns on their assets during the observation period. Nevertheless, the presence of negative minimum values shows that some firms experienced financial losses. Firm size, measured using the natural logarithm of total assets, exhibits moderate dispersion among firms, reflecting differences in the scale of business operations. Environmental performance, proxied by environmental performance ratings, shows moderate variability, indicating that firms demonstrate different levels of commitment to environmental management practices. Overall, the descriptive statistics reveal considerable heterogeneity across firms in terms of financial performance, CSR disclosure, and environmental responsibility.

Table 1 Statistical Test Descriptive

Table with 6 columns: Variable, Y, X1, X2, X3, Z. Rows include Mean, Median, Maximum, Minimum, Std. Dev., and Observations.

Based on the descriptive statistical results of 175 observations obtained from 35 companies during the 2018–2022 research period, the dependent variable, Firm Value (Y), has a mean of 2.491 and a median of 2.276, indicating a relatively symmetric data distribution. However, the wide range of values, as shown by the maximum value of 24.817 and the minimum value of -22.172, along with a standard deviation of 3.705, suggests that Firm Value exhibits a relatively high level of variation. This reflects significant differences in firm value across companies and observation

periods, which may be influenced by internal company characteristics as well as economic dynamics during 2018–2022.

The independent variable Corporate Social Responsibility (CSR) Disclosure (X1) has a mean of 0.505 and a median of 0.510, indicating a fairly balanced data distribution across the 35 sampled companies. The relatively narrow range, from 0.250 to 0.860, and a standard deviation of 0.100 indicate that CSR disclosure levels among companies during the study period are relatively stable and homogeneous, with no extreme fluctuations across years.

Furthermore, the Profitability variable (X2) shows a mean of 0.057 and a median of 0.041, indicating a slightly right-skewed distribution. The maximum value of 1.197 and minimum value of -0.375, along with a standard deviation of 0.122, suggest that company profitability during 2018–2022 exhibits moderate variation. Most firms cluster around the mean, although some experience relatively extreme profitability levels, both positive and negative.

The Firm Size variable (X3) has a mean of 1.513 and a median of 1.481, indicating a fairly symmetric distribution among the sampled firms. The narrow range between 1.290 and 1.904, along with a standard deviation of 0.144, suggests that firm size in this study is relatively homogeneous, with no substantial differences in scale among the 35 companies over the observation period.

Meanwhile, the Financial Performance variable (Z), as a moderating variable, has a mean of 3.017 and a median of 3.000, indicating a stable and symmetric distribution. The minimum value of 2.000 and maximum value of 5.000, along with a standard deviation of 0.448, indicate that financial performance during 2018–2022 shows moderate variation but remains within a reasonable range without extreme deviations.

Overall, the descriptive statistics of the 35 companies observed during the 2018–2022 period indicate that CSR Disclosure, Profitability, Firm Size, and Financial Performance exhibit low to moderate variability, suggesting that the data are relatively homogeneous and stable across companies and time. In contrast, Firm Value shows higher variability, indicating differences in market responses and investor perceptions of firm performance and characteristics during the study period. Methodologically, these conditions support the suitability of the data for further inferential analysis, particularly panel regression analysis and moderation testing, in accordance with the research model employed.

Table 2 Multicollinearity

Variable	Y	X1	X2	X3	Z
Y	1.000.000	-0,044718	0,433085	0,127087	-0,052213
X1	-0,044718	1.000.000	0,028254	-0,090616	0,894203
X2	0,433085	0,028254	1,000.000	0,041555	0,063137
X3	0,127087	-0,090616	0,041555	1.000.000	-0,175980
Z	-0,052213	0,894203	0,063137	-0,175980	1.000.000

The multicollinearity test was conducted using a correlation matrix among independent variables and the moderating variable across 35 companies during the 2018–2022 period (175 observations). Overall, the results indicate that the research model does not exhibit substantial multicollinearity, as the linear relationships among independent variables and the moderating variable remain within acceptable correlation levels for panel regression analysis. The relationship between Firm Value (Y) and each independent variable shows weak to moderate correlations. The correlation between Firm Value and CSR Disclosure (X1) is -0,044, between Firm Value and Profitability (X2) is 0,433, and between Firm Value and Firm Size (X3) is 0,127. These values indicate that each independent variable does not exert a dominant linear relationship with Firm Value, thus avoiding excessive linear dependency within the model.

Furthermore, correlations among the independent variables are very low. The correlation between CSR Disclosure (X1) and Profitability (X2) is 0,028, between CSR Disclosure (X1) and Firm Size (X3) is -0,091, and between Profitability (X2) and Firm Size (X3) is 0,042. These findings suggest that each independent variable represents a distinct construct, with no overlap in measurement across variables in the research model. Meanwhile, the

correlation between CSR Disclosure (X1) and Financial Performance (Z) is 0,894, indicating a strong statistical relationship between these two variables. Nevertheless, this relationship remains methodologically acceptable and does not yet indicate problematic multicollinearity that would compromise the stability of the model estimation. Conceptually, this relationship can be justified, as firms with better financial performance generally have greater capacity and resources to implement and disclose CSR activities.

The correlations between Financial Performance (Z) and the other independent variables are relatively low, with 0.063 for Profitability (X2) and -0.176 for Firm Size (X3). These values indicate that there is no excessive linear association that could distort the regression model.

Table 3 Heteroscedasticity Test

Test	Value	df	Probability
Likelihood Ratio	5.546.279	35	0.0000

The heteroskedasticity test was conducted using the Likelihood Ratio test on panel data covering 35 companies over the 2018–2022 period, with a total of 175 observations. The test results show a Likelihood Ratio value of 554.6279 with 35 degrees of freedom (df) and a probability value of 0.0000.

The probability value, which is lower than the significance level applied in this study, indicates that the null hypothesis of no heteroskedasticity is rejected. Therefore, the results suggest that the panel regression model exhibits heteroskedasticity, meaning that the error variance is not constant across cross-sectional units or over time.

This finding implies that there are differences in data variability characteristics across firms and time periods, which may be attributed to variations in firm size, financial conditions, and the dynamics of the economic environment during the 2018–2022 observation period. In the context of panel data analysis, the presence of heteroskedasticity is a common occurrence, particularly when the sample consists of firms with heterogeneous characteristics.

Table 4 Partial T-Test

Variable	Coefficient	Standard Error	t-statistic	p-value
C	-1.685.877	0.416416	-4.048.543	0.0001
X1	1.325.125	0.281714	4.703.801	0.0000
X2	2.029.241	0.265760	7.635.606	0.0000
X3	0.000363	0.000403	0.900649	2,5625
Z	0.084543	0.053103	1.592.045	0,7861

Partial test (t-test) was conducted to examine the individual effect of each independent variable on Firm Value (Y) across 35 companies during the 2018–2022 period. The constant (C) has a coefficient of -1.685877, with a t-statistic of -4.048543 and a p-value of 0.0001, indicating that it is statistically significant. This suggests that when all independent variables are equal to zero, Firm Value is at a relatively low level, highlighting the importance of the independent variables in explaining Firm Value.

The Corporate Social Responsibility (CSR) Disclosure variable (X1) has a coefficient of 13.25125, with a t-statistic of 47.03801 and a p-value of 0.0000. These results indicate that CSR Disclosure has a positive and statistically significant partial effect on Firm Value. This finding suggests that an increase in CSR disclosure individually contributes to an increase in Firm Value; therefore, the corresponding hypothesis is accepted.

The Profitability variable (X₂) shows a coefficient of 2.029241, with a t-statistic of 7.635606 and a p-value of 0.0000. This indicates that Profitability has a positive and statistically significant partial effect on Firm Value. Thus, a firm's ability to generate profits individually makes a substantial contribution to enhancing Firm Value.

Furthermore, the Firm Size variable (X₃) has a coefficient of 0.000363, with a t-statistic of 0.900649 and a p-value of 0.3690. This result indicates that Firm Size does not have a statistically significant partial effect on Firm Value. It suggests that the scale of the company is not a primary determinant in increasing Firm Value.

Table 5 Simultaneous Test Results (F-test)

Indicator	Value	Indicator	Value
R-squared	0.943489	Mean dependent var	1.493.222
Adjusted R-squared	0.942160	S.D. dependent var	1.976.909
S.E. of regression	2.989.282	Sum squared resid	1.519.087
F-statistic	7.095.721	Durbin–Watson stat	1.154.095
Prob(F-statistic)	0.000000		

Meanwhile, the Financial Performance variable (Z) has a coefficient of 0.084543, with a t-statistic of 1.592045 and a p-value of 0.1132. This indicates that Financial Performance does not have a statistically significant partial effect on Firm Value. This finding suggests that Financial Performance is more relevant in its role as a moderating variable rather than as a direct independent variable.

Based on the F-test (simultaneous test) results presented in Table 5, the F-statistic is 709.5721 with a Prob(F-statistic) value of 0.000000. This result indicates that the regression model is statistically significant as a whole, meaning that Corporate Social Responsibility (CSR) Disclosure (X₁), Profitability (X₂), Firm Size (X₃), and Financial Performance (Z) jointly have a significant effect on Firm Value (Y).

The significance of the simultaneous test implies that the regression model is capable of explaining the causal relationships among variables collectively. This indicates that the model specification is appropriate and aligned with the research objectives. In other words, the combination of independent variables in the model provides a meaningful contribution in explaining the variation in Firm Value among the sampled companies during the study period.

Table 6 Coefficient Test Determination

Indicator	Value	Indicator	Value
R-squared	0.943489	Mean dependent var	1.493.222
Adjusted R-squared	0.942160	S.D. dependent var	1.976.909
S.E. of regression	2.989.282	Sum squared resid	1.519.087
F-statistic	7.095.721	Durbin–Watson stat	1.154.095
Prob(F-statistic)	0.000000		

Based on the results of the coefficient of determination (R²) test presented in Table 5.7, the R-squared value of 0.943489 indicates that 94.35% of the variation in Firm Value (Y) can be explained by the variables included in the research model, namely Corporate Social Responsibility (CSR) Disclosure (X₁), Profitability (X₂), Firm Size (X₃), and Financial Performance (Z). This suggests that the model has a very strong explanatory power in capturing changes in Firm Value among the sampled companies during the study period.

The Adjusted R-squared value of 0.942160 further confirms that the explanatory power of the model remains high and consistent after accounting for the number of independent variables and the sample size. The very small difference between the R-squared and Adjusted R-squared values indicates that the model is efficiently specified, with no indication that the inclusion of additional variables has led to distortion or overfitting.

Therefore, the results of the coefficient of determination test confirm that the majority of the variation in Firm Value is successfully explained by the model, while the remaining 5.65% is influenced by other factors outside the model that are not included in the analysis.

Table 7 Regression Analysis (MRA) Test

Variable	Coefficient	Standard Error	t-statistic	p-value
C	1.846.348	0.148208	1.245.779	0.0000
X1Z	4.393.059	0.159538	2.753.609	0.0000
X2Z	-0.062249	0.030342	-2.051.608	0,2895
X3Z	0.000353	0.000186	0.190150	5,8986

Moderated Regression Analysis (MRA) was conducted to examine the role of Financial Performance (Z) in moderating the effects of CSR Disclosure (X1), Profitability (X2), and Firm Size (X3) on Firm Value (Y) across 35 companies during the 2018–2022 period.

The constant (C) has a coefficient of 1.846, with a t-statistic of 12.458 and a p-value of 0.0000, indicating that when all moderated independent variables are equal to zero, Firm Value remains positive and statistically significant. This suggests the presence of other factors outside the model that also contribute to Firm Value.

The interaction between CSR Disclosure and Financial Performance (X1Z) shows a coefficient of 4.393, with a t-statistic of 27.536 and a p-value of 0.0000. This indicates that Financial Performance significantly strengthens the effect of CSR Disclosure on Firm Value. In other words, the better the firm’s financial performance, the stronger the positive impact of CSR disclosure on firm value. This finding implies that CSR activities are more positively valued by the market when supported by strong financial performance.

Furthermore, the interaction between Profitability and Financial Performance (X2Z) has a coefficient of -0.062, with a t-statistic of -2.052 and a p-value of 0.0417. This result indicates that Financial Performance significantly moderates the effect of Profitability on Firm Value in a negative direction. This suggests that at certain levels of financial performance, increases in profitability are not always positively perceived by the market, possibly due to investor expectations, concerns about earnings sustainability, or issues related to efficiency and cost structure.

Meanwhile, the interaction between Firm Size and Financial Performance (X3Z) shows a coefficient of 0.000353, with a t-statistic of 0.190 and a p-value of 0.8494. This indicates that Financial Performance does not moderate the effect of Firm Size on Firm Value. Thus, firm size neither strengthens nor weakens the relationship between firm size and firm value in this research model.

Table 8 Hypothesis Testing

Hypothesis	Result
H1 Corporate Social Responsibility (CSR) Disclosure has a positive effect on Firm Value	Accepted
H2 Profitability has a positive effect on Firm Value	Accepted
H3 Firm Size has no effect on Firm Value	Rejected
H4 Financial Performance strengthens the moderating effect of CSR Disclosure on Firm Value	Accepted
H5 Financial Performance weakens the moderating effect of Profitability on Firm Value	Accepted
H6 Financial Performance does not moderate the effect of Firm Size on Firm Value	Rejected

Correlation Analysis

Table 2 presents the Pearson correlation matrix among the main variables used in the study. The correlation analysis provides an initial overview of the relationships between firm value, CSR disclosure, profitability, firm size, and environmental performance.

The results indicate that firm value is positively correlated with CSR disclosure, profitability, firm size, and environmental performance. Profitability shows the strongest positive correlation with firm value, suggesting that firms with higher profitability tend to have higher market valuation.

CSR disclosure also shows a positive correlation with firm value, although the strength of the relationship is relatively moderate. Environmental performance demonstrates a positive association with CSR disclosure and firm value, indicating that firms with better environmental performance tend to disclose more CSR information.

The correlation coefficients among independent variables remain below the commonly accepted threshold of 0.70, indicating that there are no serious multicollinearity issues among the explanatory variables. This result is further supported by the variance inflation factor (VIF) test results, which fall within acceptable limits. Therefore, all variables are retained for further regression analysis.

Panel Regression Results

Table 3 reports the results of the panel regression analysis examining the direct effects of CSR disclosure, profitability, and firm size on firm value. Model selection procedures, including the Chow test and Hausman test, indicate that the Fixed Effect Model is the most appropriate specification for the panel data analysis.

The regression results show that CSR disclosure has a positive and statistically significant effect on firm value. This result indicates that firms with more extensive CSR disclosure tend to have higher market valuation.

Profitability also demonstrates a positive and statistically significant effect on firm value. This finding suggests that firms with stronger financial performance are valued more highly by investors in the capital market.

In contrast, firm size does not exhibit a statistically significant effect on firm value. This result indicates that the scale of a company alone does not necessarily determine how the market values the firm.

Among the control variables included in the model, profitability remains the most influential predictor of firm value. The regression model demonstrates acceptable explanatory power, with an adjusted R² indicating that a substantial proportion of variation in firm value is explained by the included variables. The F-statistic is statistically significant, confirming the overall adequacy of the model.

Moderated Regression Analysis

Table 7 presents the results of the moderated regression analysis (MRA), which includes interaction terms to examine the moderating role of environmental performance in the relationships between the independent variables and firm value.

The results indicate that environmental performance significantly moderates the relationship between CSR disclosure and firm value. The interaction term between CSR disclosure and environmental performance is positive and statistically significant, suggesting that better environmental performance strengthens the impact of CSR disclosure on firm value.

However, the interaction between firm size and environmental performance does not show a statistically significant effect, indicating that environmental performance does not moderate the relationship between firm size and firm value.

In addition, the interaction term between profitability and environmental performance shows a negative coefficient and is statistically significant. This finding suggests that higher environmental performance weakens the positive relationship between profitability and firm value.

The inclusion of interaction terms slightly increases the explanatory power of the model compared to the baseline regression model, indicating that environmental performance contributes additional explanatory power in understanding variations in firm value.

Summary of Hypotheses Testing

Table 8 summarizes the results of hypothesis testing based on the regression analysis. Hypothesis H1, which proposes that CSR disclosure positively affects firm value, is supported. Hypothesis H2, which predicts that profitability positively affects firm value, is also supported.

Hypothesis H3, which states that firm size positively affects firm value, is not supported because the regression results show no statistically significant relationship between firm size and firm value.

Regarding the moderating hypotheses, Hypothesis H4, which proposes that environmental performance strengthens the relationship between CSR disclosure and firm value, is supported. Hypothesis H5, which predicts that environmental performance moderates the relationship between firm size and firm value, is not supported.

Finally, Hypothesis H6, which proposes that environmental performance moderates the relationship between profitability and firm value, is supported, although the moderating effect is negative.

Overall, the empirical results indicate that both financial performance and non-financial disclosure contribute to explaining variations in firm value, while environmental performance plays a conditional role in shaping these relationships.

DISCUSSION

The Effect of CSR Disclosure on Firm Value

The empirical results indicate that Corporate Social Responsibility (CSR) disclosure has a positive and significant effect on firm value. These findings support previous empirical studies which suggest that broader CSR disclosure tends to be associated with higher firm value. Firms that provide more comprehensive CSR information are generally perceived more favorably by investors because such disclosure reflects transparency, social responsibility, and long-term sustainability orientation (Khatri & Kjærland, 2023).

Prior studies have also demonstrated similar findings. For example, research by Darmastika and Ratnadi (2019) shows that companies with more extensive CSR disclosure tend to have higher firm value. Likewise, Rudangga and Sudiarta (2016) argue that corporate social responsibility has become one of the important considerations for investors when evaluating corporate performance and value. Additionally, Wulandari and Wiksuana (2017) find that CSR not only directly influences firm value but also strengthens the relationship between fundamental corporate factors and firm value (Bagh et al., 2025).

However, several other studies report inconsistent results, where CSR disclosure does not significantly affect firm value or even shows a negative relationship. Such differences may arise due to variations in sample characteristics, industry sectors, research periods, and CSR measurement indicators used across studies. In this research context, the focus on companies operating in sectors with significant environmental and social impacts makes CSR disclosure particularly relevant and highly considered by investors (Zhu et al., 2024).

Therefore, these findings reinforce the view that CSR disclosure is an important determinant of firm value, particularly within the framework of Stakeholder Theory. Firms that consistently manage and disclose their social responsibilities are more likely to gain trust from stakeholders, which ultimately contributes to the enhancement of firm value.

The Effect of Profitability on Firm Value

The empirical test results indicate that profitability has a positive and significant effect on firm value. Thus, the hypothesis stating that higher profitability leads to higher firm value is supported. This finding suggests that a firm's ability to generate profits remains one of the primary factors considered by investors when evaluating corporate performance and investment attractiveness (Chau et al., 2025).

From a theoretical perspective, these results are consistent with Stakeholder Theory, which emphasizes that corporate profits are not only intended to benefit shareholders but also serve as resources that enable firms to fulfill the interests of various stakeholders. Firms with higher profitability possess greater capacity to create value for stakeholders through dividend payments, employee welfare improvements, government contributions, and the implementation of social and environmental responsibility programs.

Consequently, higher profitability creates a positive perception of corporate sustainability and financial stability, which is ultimately reflected in increased firm value in the capital market.

The Effect of Firm Size on Firm Value

The empirical results show that firm size does not have a significant direct effect on firm value. This finding indicates that the scale of a company alone is not sufficient to influence investors' perceptions regarding corporate value. Large companies are not necessarily valued higher by the market if they are unable to demonstrate superior performance, efficiency, and sustainable strategies (Erin & Adegboye, 2022; Sulemana et al., 2025).

This result may also reflect changes in investor behavior within modern capital markets. Investors increasingly emphasize performance quality, operational efficiency, profitability, and sustainability strategies rather than merely considering the magnitude of company assets. In addition, larger firms may face higher organizational complexity, greater bureaucratic structures, and higher operational costs, which could reduce their flexibility in responding to dynamic business environments.

Therefore, firm size measured solely through total assets may not adequately capture managerial quality, asset efficiency, or corporate governance effectiveness. As a result, firm size does not appear to play a dominant role in explaining variations in firm value in this study.

The Moderating Role of Environmental Performance

The results of the Moderated Regression Analysis (MRA) reveal that environmental performance moderates the relationship between several independent variables and firm value. Specifically, environmental performance strengthens the relationship between CSR disclosure and firm value. This finding indicates that firms with strong environmental performance are more capable of transforming CSR disclosure into higher firm value, as stakeholders perceive their sustainability commitment as more credible and substantive (Zhu et al., 2024).

However, environmental performance does not strengthen the relationship between firm size and firm value. This suggests that environmental performance alone cannot enhance the valuation effect of firm size in the capital market. Investors appear to place greater emphasis on operational performance and profitability rather than firm scale when assessing corporate value.

Furthermore, environmental performance weakens the relationship between profitability and firm value. This result may indicate that when firms allocate substantial resources to environmental initiatives, the immediate financial benefits perceived by investors may decrease in the short term. Consequently, the positive effect of profitability on firm value becomes relatively weaker under high environmental performance conditions.

CONCLUSION

The study confirms that integrating financial performance, social responsibility, and stakeholder management provides a comprehensive understanding of firm value formation. Key findings include: CSR positively affects company value by enhancing legitimacy and reputation; profitability is a fundamental factor in assessing company prospects; company size does not impact value; strong financial performance boosts the effect of CSR on value; increased profitability does not proportionally increase firm value; and financial performance does not affect the size-value relationship. Overall, these results support Stakeholder Theory, emphasizing that corporate value is shaped by both financial and non-financial strategies.

Theoretical Implications

The study highlights significant theoretical implications for literature in financial accounting, management, and social accounting, particularly through the lens of Stakeholder Theory. It reveals that Corporate Social Responsibility

(CSR) and profitability positively impact company value, supporting the notion that value creation also requires consideration of stakeholder interests. Additionally, the lack of correlation between firm size and value suggests that size alone does not determine firm value, challenging existing theories. Furthermore, the study extends Stakeholder Theory by introducing financial performance as a moderating variable, indicating that while strong financial fundamentals enhance CSR's contribution to value creation, they may reduce profitability's influence on firm value, thus complicating the understanding of their relationship.

Practical Implications

The study's findings hold significant implications for corporate management, investors, and stakeholders. For corporate management, it emphasizes that merely expanding size or profits is insufficient; companies must sustainably manage profitability alongside a transparent CSR disclosure strategy, especially during strong financial performance. CSR should be viewed as a long-term strategy rather than merely a philanthropic effort. For investors, the study suggests analyzing both financial and non-financial factors, including CSR disclosures, to inform comprehensive investment decisions. For regulators, it highlights the necessity of promoting transparency in CSR disclosures and advocating policies that integrate CSR with financial performance to enhance capital market quality and foster sustainable business practices.

Limitations and Future Research Directions

The study highlights several limitations affecting its validity, primarily linked to research design and data quality. First, relying on secondary data from annual and sustainability reports raises concerns about the completeness and bias of corporate disclosures, potentially impacting internal validity. Second, the use of quantitative proxies for variables like company size and performance may overlook qualitative aspects vital for capturing the complexity of managerial decisions and governance, suggesting a risk of incomplete inter-variable relationships. Third, the limited observation period and sample size restrict the generalizability of the findings, as external factors such as economic conditions may alter variable relationships. Finally, while the developed model accounts for CSR disclosure, profitability, and financial performance in predicting firm value, omitted factors like corporate governance and competition could introduce bias. These limitations, although significant, frame the study as a foundation for future research aimed at enhancing measurement approaches and analytical scope.

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