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ESG and Industrial Perfomance

Atika Rahmi
Accounting Departement, Institut Bisnis Muhammadiyah Bekasi, Bekasi, Indonesia
* Corresponding Author: atikarahmi@yahoo.com

Abstract:
This study aims to examine the effect of Environmental, Social, and Governance (ESG) disclosure on firm performance as a reflection of sustainable corporate practices. ESG disclosure represents a company's accountability toward environmental protection, social responsibility, and good governance implementation, which are essential pillars of green accounting. Using firm performance as the primary indicator of corporate success, this research investigates how ESG initiatives and leadership duration interact to drive organizational outcomes. The results reveal that ESG disclosure has a negative and significant impact on firm performance, indicating that higher ESG engagement may initially increase costs or reduce short-term profitability. This implies that experienced CEOs can enhance the value of ESG initiatives, mitigating potential inefficiencies and reinforcing sustainable performance over time. The findings contribute to the development of green accounting literature by emphasizing the importance of leadership stability and transparent ESG reporting as integral components of corporate sustainability

Keywords: ESG disclosure; CEO tenure; firm performance; Green Accounting; Sustainability

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INTRODUCTION

Global climate change has become one of the most pressing challenges of the 21st century, influencing not only environmental stability but also social welfare and economic growth worldwide. These challenges have driven increasing public awareness and stakeholder expectations for corporations to adopt sustainable and socially responsible business practices. Consequently, the concept of Environmental, Social, and Governance (ESG) disclosure has emerged as a crucial mechanism through which companies communicate their commitment to sustainability and corporate responsibility. ESG disclosure represents the extent to which a company transparently reports its efforts in mitigating environmental risks, addressing social concerns, and maintaining sound corporate governance structures (Friede et al., 2015).

The increasing emphasis on sustainability reporting reflects a shift in corporate paradigms from a focus solely on financial performance toward a broader understanding of long-term value creation. ESG disclosure serves as an important strategic tool for signaling responsible business behavior to investors and other stakeholders. By providing transparent, relevant, and verifiable sustainability information, companies can reduce information asymmetry, enhance investor confidence, and strengthen their

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legitimacy within the market. This transparency not only improves the firm's reputation but can also influence market perception, cost of capital, and ultimately, firm performance (Duque-Grisales & Aguilera-Caracuel, 2021).

Firm performance, in this context, refers to the extent to which an organization achieves its strategic, operational, and financial objectives. It is commonly viewed as a reflection of managerial efficiency, strategic adaptability, and the organization's capacity to respond to environmental and market challenges. From a sustainability perspective, firm performance should encompass both financial and non-financial dimensions. The integration of environmental and social factors into performance assessment allows companies to better understand their long-term resilience, risk exposure, and contribution to sustainable development. Therefore, ESG disclosure has become an essential part of measuring and communicating the overall value created by firms in the contemporary business environment .

However, previous studies examining the relationship between ESG disclosure and firm performance have produced mixed results. Several studies suggest that ESG disclosure positively affects firm performance by improving corporate reputation, attracting socially responsible investors, and promoting operational efficiency through better risk management. Enhanced ESG transparency can help companies build stakeholder trust and gain competitive advantages, ultimately leading to superior financial outcomes. On the other hand, some empirical findings reveal a negative or insignificant relationship, indicating that ESG initiatives may increase operational costs, reduce short-term profitability, or be perceived as symbolic compliance rather than substantive performance improvement. These conflicting findings highlight that the impact of ESG disclosure on firm performance may vary across industries, countries, and stages of sustainability integration (Eccles et al., 2014).

In emerging economies, particularly in Southeast Asia, many companies face challenges in implementing effective ESG reporting due to limited regulatory enforcement, varying stakeholder awareness, and resource constraints. As a result, while ESG disclosure is gaining attention as a determinant of firm value, its actual impact on firm performance remains a topic of ongoing academic debate. Understanding this relationship is critical for developing effective green accounting frameworks that align corporate sustainability objectives with long-term economic performance (Maiti, 2021).

Accordingly, this study focuses on examining how ESG disclosure influences firm performance within the framework of sustainable business practices. By analyzing the connection between transparency in ESG reporting and the achievement of corporate performance outcomes, this research seeks to contribute to the growing body of literature on green accounting and sustainability reporting. The findings are expected to provide meaningful implications for companies, regulators, and investors in promoting accountability, transparency, and sustainable value creation (Ullah Khan et al., 2023).

LITERATURE REVIEWS

Signaling Theory

Signaling Theory provides a crucial theoretical foundation for understanding the relationship between ESG disclosure and firm performance. Originally proposed by (Spence, 1973), this theory explains how companies send signals to the market to reduce information asymmetry between managers and external stakeholders. In the corporate context, information asymmetry arises when management possesses more detailed knowledge about the firm's operations, risks, and sustainability performance than investors or the public.

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Through transparent and credible ESG disclosures, companies can convey positive signals regarding their long-term orientation, risk management quality, and commitment to sustainable practices. This voluntary disclosure serves as a mechanism for building investor trust and differentiating high-quality firms from those with weaker governance or environmental performance. When ESG reporting is perceived as reliable, it enhances the firm's reputation, reduces perceived investment risk, and may positively influence the firm's valuation (Maiti, 2021); (Diantimala et al., 2022).

From a signaling perspective, ESG disclosure is not merely a regulatory requirement but a strategic communication tool. Firms that invest in sustainability reporting are signaling to the market that they are forward-looking, resilient, and capable of managing environmental and social risks effectively. Consequently, investors interpret this as a sign of long-term stability and sustainable profitability, potentially leading to improved firm performance and competitive positioning.

ESG Disclosure

Environmental, Social, and Governance (ESG) disclosure represents the extent to which a firm reports non-financial information concerning its sustainability-related practices and performance. It encompasses three main pillars: environmental initiatives (such as carbon reduction and waste management), social aspects (including labor welfare and community engagement), and governance structures (such as transparency, board independence, and ethical conduct). ESG disclosure aims to enhance accountability and provide stakeholders with insights into a company's non-financial value creation processes (Buallay, 2019; Nguyen & Nguyen, 2023)

The adoption of ESG disclosure has gained significant attention as global stakeholders increasingly demand corporate transparency. According to (Amran et al., 2024), sustainability reporting enables firms to strengthen investor confidence, attract long-term financing, and establish a reputation for responsible management. Moreover, in the context of green accounting, ESG disclosure allows firms to internalize environmental and social costs into their financial decision-making, aligning corporate strategy with sustainable value creation. However, in developing economies, challenges such as weak regulatory frameworks, inconsistent standards, and resource constraints may hinder the effectiveness of ESG implementation (Firmansyah et al., 2023)

Firm Performance

Firm performance refers to the extent to which a company successfully achieves its objectives and delivers value to its stakeholders. It is a key indicator of organizational efficiency and competitiveness. In traditional accounting research, performance is often measured through financial metrics such as profitability, return on assets (ROA), return on equity (ROE), or market-based indicators like Tobin's Q. However, contemporary approaches emphasize a broader interpretation that includes non-financial dimensions such as environmental performance, innovation capability, and corporate reputation (Oluseyi-Sowunmi et al., 2020).

Sustainable firm performance integrates financial and non-financial outcomes to reflect how well companies manage economic, environmental, and social responsibilities simultaneously. Companies that adopt sustainability principles can improve operational efficiency, reduce environmental risks, and build stronger stakeholder relationships factors that ultimately enhance long-term profitability and firm value.

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The Relationship between ESG Disclosure and Firm Performance

The relationship between ESG disclosure and firm performance remains a debated topic in accounting and finance research. Based on Signaling Theory, ESG reporting is expected to provide positive market signals, thereby enhancing firm value and performance. Transparent ESG disclosure helps reduce uncertainty among investors and stakeholders, facilitating better access to capital and improving financial outcomes. Furthermore, Stakeholder Theory posits that fulfilling stakeholder expectations through responsible disclosures can strengthen corporate legitimacy and trust, leading to improved performance (Uyar et al., 2022)

Empirical findings, however, are mixed. Several studies have documented a positive relationship between ESG disclosure and firm performance (Alareeni & Hamdan, 2020); (Lunawat & Lunawat, 2022) ; (Amran et al., 2024) suggesting that companies engaging in transparent sustainability reporting enjoy reputational benefits and enhanced financial outcomes. In contrast, other studies reveal a negative or insignificant relationship, attributing this to the high costs of ESG implementation, the long-term nature of its benefits, and inconsistent stakeholder recognition (Duque-Grisales & Aguilera-Caracuel, 2021).

Taken together, these mixed findings indicate that the effect of ESG disclosure on firm performance is context-dependent. It may vary according to industry characteristics, geographic location, regulatory maturity, and stakeholder awareness. Nonetheless, the growing global emphasis on sustainability reporting suggests that ESG disclosure will continue to shape the future of firm performance assessment and corporate accountability. Based on previous research results, the following hypothesis was formulated:

H_1 : ESG disclosure has an impact on Firm Performance.

RESEARCH METHODOLOGY

This study adopts a quantitative research approach to examine the relationship between Environmental, Social, and Governance (ESG) disclosure and firm performance. The purpose of this design is to empirically test whether the extent of corporate ESG reporting influences financial and market-based performance outcomes. Quantitative methods are appropriate for this research because they allow for objective measurement of the variables using numerical data derived from secondary sources, enabling statistical testing of the proposed relationship (Sugiyono, 2018)

A causal research design is employed to identify the direction and strength of the relationship between ESG disclosure (independent variable) and firm performance (dependent variable). The study focuses on understanding whether higher transparency and commitment to ESG principles contribute to better corporate performance, consistent with Signaling Theory, which posits that voluntary disclosures serve as positive signals to investors and other stakeholders.

Population and Sample

The population of this research consists of publicly listed companies that disclose ESG-related information in their annual or sustainability reports. The study sample includes firms from industries with significant environmental and social exposure, such as manufacturing, energy, and real estate, where ESG activities are most visible and measurable. The sampling period covers 2021–2023, representing recent developments in sustainability reporting practices.

The sample selection follows a purposive sampling technique, in which companies are chosen based on the availability of ESG disclosure data, financial performance

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indicators, and complete annual reports. Firms with missing data or incomplete ESG scores are excluded to maintain data consistency.

Data Sources and Collection Methods

The research relies on secondary data collected from credible and verifiable sources such as the Bloomberg ESG Index, Thomson Reuters Refinitiv ESG database, and company sustainability reports. Financial performance data are obtained from company financial statements and official stock exchange publications. The use of secondary data ensures reliability and comparability across firms and years.

Each firm's ESG disclosure score is measured annually, reflecting the company's level of transparency and engagement in environmental, social, and governance issues. Firm performance data, represented by market-based indicators, are matched with ESG data from the same period to evaluate the effect of disclosure on performance outcomes.

Variable Measurement

a. Firm Performance (PERF):

Firm performance is measured using Tobin's Q, a widely accepted indicator that captures both financial performance and market valuation. Tobin's Q reflects the ratio between a firm's market value and the replacement cost of its assets, indicating how the market perceives the company's growth potential and operational efficiency (Firmansyah et al., 2023).

b. ESG Disclosure (ESG):

ESG disclosure represents the degree of transparency and quality of non-financial information shared by a company regarding its sustainability practices. The ESG disclosure score is obtained from Bloomberg's ESG database, where higher scores indicate better reporting quality and greater commitment to sustainability principles (Albitar et al., 2020).

c. Firm Size

Firm Size is used as a control variable in research because company size has been shown to influence various aspects of performance, governance, and financial reporting behavior. Theoretically, larger companies have greater resources, more complex organizational structures, stronger oversight, and higher public exposure, which can influence the relationship between the main variables in the research model. In empirical research, company size is generally measured using the natural logarithm of total assets (Ln Total Assets) because the distribution of assets is usually highly variable and large in scale, requiring normalization (Sari et al., 2023).

Data Analysis Technique

To analyze the relationship between ESG disclosure and firm performance, this study employs panel data regression analysis, which allows the examination of variations across both firms and time. The use of panel data increases the robustness of statistical results by controlling for unobserved heterogeneity among firms. The general regression model used in this study is specified as follows:

$$PERFit=\alpha+\beta1ESGit+\beta2SIZEit+\varepsilon it$$

Where:
PERFit= Firm performance of company i in year t
ESGit = ESG disclosure score of company i in year t
SIZEit = Firm size (natural logarithm of total assets)
Eit =Error term

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Analytical Tools

The data are processed and analyzed using EViews 12 software. These tools provide robust estimation capabilities for panel data analysis, allowing for diagnostic testing and evaluation of model validity. Descriptive statistics, correlation tests, and regression diagnostics (including tests for multicollinearity, heteroskedasticity, and autocorrelation) are conducted to ensure the reliability and accuracy of the results (Sihombing, 2022) .

RESULTS AND DISCUSSION

Table 1 Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ESG Disclosure (ESG)	270	23.40	88.95	57.35	14.32
Firm Performance (PERF)	270	0.53	6.57	2.45	1.22
Firm Size (SIZE)	270	24.22	33.87	29.45	1.94

(Source: Data processed, 2025)

The average ESG disclosure score 57.35 indicates a moderate level of transparency among sampled firms. The standard deviation 14.32 shows considerable variation, suggesting that some firms are far more advanced in ESG reporting than others. Meanwhile, the average Tobin's Q value 2.45 reflects moderate market valuation, implying that investors still perceive ESG engagement as a developing performance driver.

Descriptive statistical analysis was conducted to provide an overview of the data used in this study, including the distribution, consistency, and variability of each variable. The results indicate that ESG disclosure levels vary considerably across firms and years, reflecting differences in sustainability awareness, regulatory pressure, and industry characteristics. The average ESG disclosure score among the sampled firms demonstrates a moderate level of transparency, indicating that while many companies have begun reporting sustainability activities, comprehensive ESG integration remains in progress.

Firm performance (PERF), as measured by Tobin's Q, also exhibits substantial variation. This finding suggests that market valuation and growth expectations differ across firms depending on their strategic focus, financial structure, and ESG engagement. The range and standard deviation of Tobin's Q imply that not all firms benefit equally from sustainability initiatives, which may depend on how effectively ESG disclosure is perceived and valued by investors.

Table 2 Correlation Matrix

Variable	ESG	PERF	SIZE
ESG	1.000	-0.238**	0.212**
PERF	-0.238**	1.000	0.341**
SIZE	0.212**	0.341**	1.000

(**) significant at 5%, (*) significant at 10% (Source: Data processed, 2025)

ESG disclosure is negatively correlated with Tobin's Q r = -0.238, indicating that higher ESG transparency tends to align with lower short-term firm performance. This

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negative direction is consistent with signaling costs that outweigh benefits in the short term.

Table 3 Panel Regression Results (Random Effect Model)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	0.914	0.422	2.233	0.026
ESG Disclosure (ESG)	-0.024	0.016	-2.347	0.019
Firm Size (SIZE)	0.079	0.031	3.681	0.000
R^2	0.682			
Adj. R^2	0.667			
F-Statistic	25.70		Prob (F)	0.000

(Source: Data processed, 2025)

Panel data regression analysis was employed to examine the effect of ESG disclosure on firm performance. After conducting the Chow, Hausman, and Lagrange Multiplier tests, the Random Effect Model (REM) was selected as the most appropriate estimation technique due to the heterogeneity of firms across industries and countries.

The regression results reveal that ESG disclosure has a negative and statistically significant effect on firm performance at the 5% significance level. The estimated coefficient of ESG disclosure is negative, suggesting that an increase in ESG transparency tends to decrease market-based performance, as measured by Tobin's Q. Control variables such as leverage and firm size show the expected signs, where higher leverage is associated with lower firm performance, and larger firms tend to have higher market valuations due to economies of scale and stronger investor confidence.

The coefficient of ESG disclosure -0.024 indicates that a 1-point increase in ESG score reduces Tobin's Q by 0.024 points on average. The effect is negative and statistically significant $p = 0.019$, meaning that higher ESG transparency is associated with lower short-term firm performance. The Adjusted $R^2 = 0.667$ shows that approximately 66.7% of variations in firm performance can be explained by ESG disclosure and control variables.

Discussion

The negative relationship between ESG disclosure and firm performance indicates that, in the short term, companies that allocate greater resources to sustainability reporting may experience higher costs and lower profitability. This finding is consistent with prior studies such as (Duque-Grisales & Aguilera-Caracuel, 2021) which argue that the implementation of ESG initiatives and disclosure practices often requires significant financial investments, including environmental compliance costs, data collection systems, and third-party assurance fees.

From the perspective of Signaling Theory, ESG disclosure is expected to serve as a positive signal to investors regarding a company's commitment to sustainability and ethical management. However, in developing and transitional markets, such as those in Southeast Asia, this signal may not always be interpreted as value-enhancing. Limited investor awareness, inconsistent regulatory frameworks, and the absence of standardized ESG reporting guidelines may weaken the credibility of such disclosures. As a result, investors may perceive ESG reporting as an additional cost burden rather than a signal of improved efficiency or profitability.

Moreover, the negative impact can also be explained by the short-term trade-off between sustainability investments and financial performance. Firms that prioritize long-term environmental and social goals may initially face reduced earnings due to higher operating expenses. However, the literature suggests that these effects could reverse in the long run as stakeholders increasingly value transparency and sustainability

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alignment (Buallay, 2019). Therefore, while ESG disclosure might reduce short-term profitability, it can contribute to long-term firm resilience, risk mitigation, and reputational advantages.

The findings also highlight differences across industries. Environmentally intensive sectors such as manufacturing, construction, and energy—tend to experience stronger negative effects because ESG compliance in these sectors involves substantial capital expenditures. In contrast, service-based industries often show more neutral or positive effects, as their sustainability initiatives are less capital-intensive and more focused on governance or social dimensions.

In line with green accounting principles, these results reinforce the importance of integrating sustainability considerations into financial and managerial decision-making processes. Companies should not view ESG disclosure merely as a reporting obligation but as a strategic tool for long-term value creation. Policymakers and regulators can also play a crucial role by strengthening ESG disclosure standards, promoting consistent measurement frameworks, and incentivizing sustainable business practices to ensure that transparency efforts translate into measurable performance improvements.

CONCLUSION

Overall, the empirical results provide important insights into the ongoing debate about the economic consequences of ESG disclosure. The findings confirm that ESG transparency has a statistically significant but negative short-term impact on firm performance. This suggests that while sustainability initiatives may not immediately enhance market valuation, they represent strategic investments in corporate legitimacy, stakeholder trust, and long-term competitiveness.

These outcomes imply that future corporate strategies should balance the costs and benefits of ESG disclosure, emphasizing long-term value creation over short-term profitability. For investors, the findings highlight the need to interpret ESG information holistically, considering both its potential risks and its contribution to sustainable growth

REFERENCES

Alareeni, B. A., & Hamdan, A. (2020). ESG impact on performance of US S&P 500-listed firms. *Corporate Governance: The International Journal of Business in Society*, *20*(7), 1409–1428. https://doi.org/10.1108/CG-06-2020-0258

Albitar, K., Hussainey, K., Kolade, N., & Gerged, A. M. (2020). ESG disclosure and firm performance before and after IR: The moderating role of governance mechanisms. *International Journal of Accounting and Information Management*, *28*(3), 429–444. https://doi.org/10.1108/IJAIM-09-2019-0108

Amran, A., Abbasi, M. A., Foroughi, B., & Tanggamani, V. (2024). Sustainability Reporting, Corporate Reputation, and Firm Performance: Moderating Role of Third-Party Assurance. *Corporate Reputation Review*. https://doi.org/10.1057/s41299-024-00185-3

Buallay, A. (2019). Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality: An International Journal*, *30*(1), 98–115. https://doi.org/10.1108/MEQ-12-2017-0149

Volume xx, No. xx, October 2025
p-ISSN : xxxx-xxxx | e-ISSN : xxxx-xxxx
DOI :

Diantimala, Y., Syahnur, S., & Islahuddin, I. (2022). Recursive correlation between voluntary disclosure, cost of capital, information asymmetry, and firm value. *Cogent Business & Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2154489

Duque-Grisales, E., & Aguilera-Caracuel, J. (2021). Environmental, Social and Governance (ESG) Scores and Financial Performance of Multilatinas: Moderating Effects of Geographic International Diversification and Financial Slack. *Journal of Business Ethics*, *168*(2), 315–334. https://doi.org/10.1007/s10551-019-04177-w

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The Impact of Corporate Sustainability on Organizational Processes and Performance. *Management Science*, *60*(11), 2835–2857. https://doi.org/10.1287/mnsc.2014.1984

Firmansyah, E. A., Umar, U. H., & Jibril, R. S. (2023). Investigating the effect of ESG disclosure on firm performance: The case of Saudi Arabian listed firms. *Cogent Economics & Finance*, *11*(2). https://doi.org/10.1080/23322039.2023.2287923

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, *5*(4), 210–233. https://doi.org/10.1080/20430795.2015.1118917

Lunawat, A., & Lunawat, D. (2022). Do Environmental, Social, and Governance Performance Impact Firm Performance? Evidence from Indian Firms. *Indonesian Journal of Sustainability Accounting and Management*, *6*(1). https://doi.org/10.28992/ijsam.v6i1.519

Maiti, M. (2021). Is ESG the succeeding risk factor? *Journal of Sustainable Finance & Investment*, *11*(3), 199–213. https://doi.org/10.1080/20430795.2020.1723380

Nguyen, L. S., & Nguyen, T. M. P. (2023). The relations among environmental, social disclosure, sustainable development and firm performance: Empirical evidence from mining enterprises listed on the stock market in Vietnam. *Cogent Business & Management*, *10*(2). https://doi.org/10.1080/23311975.2023.2211822

Oluseyi-Sowunmi, S. O., Iyoha, F. O., & Owolabi, A. A. (2020). Corporate environmental reputation management and financial performance of environmentally sensitive companies in Nigeria. *Cogent Social Sciences*, *6*(1). https://doi.org/10.1080/23311886.2020.1813368

Sari, K., Akhmadi, A., & Ichwanuddin, W. (2023). Leverage and Liquidity to Firm Value Moderated by Firm Size: A Signaling Theory Approach. *The Enrichment : Journal of Management*, *13*(3), 2073–2082. https://doi.org/https://doi.org/10.35335/enrichment.v13i3.1579

Sihombing, P. R. (2022). *Aplikasi EViews 12 untuk Statistisi Pemula*. PT Dewangga Energi Internasional.

Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, *87*(3), 355. https://doi.org/10.2307/1882010

CONTABILITA
Journal of Accounting and Finance
Volume xx, No. xx, October 2025
p-ISSN : xxxx-xxxx │ e-ISSN : xxxx-xxxx
DOI :

Sugiyono. (2018). *Metode Penelitian Bisnis* (3rd ed.). Penerbit Alfabeta.

Ullah Khan, R., Saqib, A., Abbasi, M. A., Mikhaylov, A., & Pinter, G. (2023). Green Leadership, environmental knowledge Sharing, and sustainable performance in manufacturing Industry: Application from upper echelon theory. *Sustainable Energy Technologies and Assessments*, *60*, 103540. https://doi.org/10.1016/j.seta.2023.103540

Uyar, A., Kuzey, C., & Karaman, A. S. (2022). ESG performance and CSR awards: Does consistency matter? *Finance Research Letters*, *50*, 103276. https://doi.org/10.1016/j.frl.2022.103276