



The influence of ESG disclosure on corporate financial performance: Empirical evidence from manufacturing companies in Indonesia

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Abstract

This study aims to analyse the impact of environmental, social, and governance (ESG) disclosures on the financial performance of companies in the manufacturing sector listed on the Indonesia Stock Exchange for the period 2020-2022. With increasing attention to sustainability issues, this research explores how ESG elements affect the financial performance of companies as measured by Return on Asset (ROA). The research methodology employed is multiple linear regression analysis using IBM SPSS 26 software. Secondary data were obtained from the Bloomberg database and official company websites. The study sample consists of 99 manufacturing companies selected using purposive sampling. Financial performance was measured using the ROA indicator, while ESG disclosure was assessed using ESG disclosure scores sourced from the Bloomberg database. The results indicate a varied impact of ESG disclosures on the financial performance of companies. Environmental disclosure is found to significantly contribute to an increase in ROA, whereas social and governance disclosures do not show a significant impact. These findings suggest that environmental aspects play an important role in enhancing a company's financial performance, while social and governance aspects may require more time to manifest their tangible effects.

Keywords: Environmental disclosure, social disclosure, governance disclosure, financial performance

Introduction

In the midst of business competitiveness, companies must deliver products that excel in three key areas: quality, speed, and cost-efficiency. This trifecta of demands pushes businesses to optimize their processes, maintain robust management practices, and prioritize innovation, all in the pursuit of superior financial performance. Financial performance serves as a critical indicator of a company's efficiency in resource utilization, offering a snapshot of its financial health, operational outcomes, and strategic decisions (Ngatno, 2021) ^[12].

While traditional financial metrics remain vital, the approach to evaluate business success has evolved. Stakeholders increasingly assess a company's financial performance through detailed financial statements, with financial ratios being a particularly popular tool for analysis. These assessments are essential for external stakeholders, who rely on them to make informed decisions about capital allocation, investments, and credit provision (Kieso *et al.*, 2014) ^[8]. Thus, financial performance remains a crucial metric for a company's future viability.

However, as the global business environment shifts, financial performance is no longer the sole criterion for success. In recent years, environmental, social, and governance (ESG) factors have emerged as critical measures of a company's sustainability and ethical conduct. ESG criteria, which encompass environmental stewardship, social responsibility, and sound governance, have gained prominence as companies strive to meet the expectations of a more conscientious and socially aware public. The rising importance of ESG is reflected in its endorsement by international institutions like the United Nations, G20, and the growing number of regulations—over 500 globally—that support its implementation (Mandiri Institute, 2022) ^[11]. The increasing emphasis on ESG is not merely theoretical; it is influencing real-world investment and transaction

decisions. For example, in a 2021 survey by Macquarie Asset Management, 85% of investors reported an increased focus on ESG factors compared to two years prior (Macquarie Asset Management, 2022) ^[9]. Similarly, a PricewaterhouseCoopers (PwC) report indicated that more than 60% of people make transactions based on sustainability and ethics, with this trend growing by 10% annually (PwC, 2023) ^[13].

Despite this global momentum, the adoption of ESG practices in Indonesia presents unique challenges. The concept of ESG is still relatively new in the Indonesian market, and its adoption has been slower compared to more mature economies. For instance, local investment managers face significant barriers, including low investor demands for ESG-compliant products, which remains a substantial obstacle in promoting these initiatives domestically (Mandiri Institute, 2022) ^[11]. However, there are positive signs of change, as awareness and adoption of ESG principles are gradually increasing among regulators, investors, and businesses in Indonesia.

Within Indonesia, the manufacturing sector plays a pivotal role in the economy, contributing significantly to GDP and employment. However, this sector is also a major source of environmental challenges, particularly in terms of carbon emissions. The manufacturing sector accounts for 15%-20% of Indonesia's greenhouse gas emissions, which has led the government to set ambitious targets for reducing these emissions and achieving net zero emissions by 2060 (Andi, 2023) ^[2]. These developments underscore the need for the manufacturing sector to integrate ESG principles, despite the associated short-term costs.

Literature review

This section explains the relationships among the variables under this study. Financial performance is used as the dependent variable in this research. The disclosure of ESG practices by companies serve as the independent variable.

To enhance the accuracy of the analysis, control variables such as firm size, leverage, and firm age are also included. Based on the previously discussed relationships between these variables, the conceptual framework can be illustrated in the following Figure.

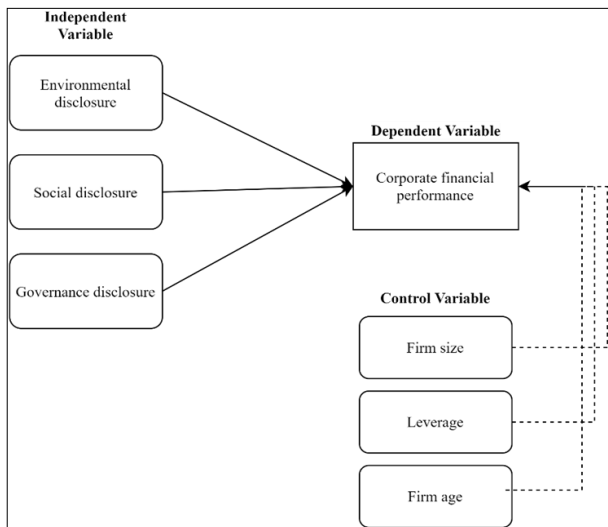


Fig 1: Research framework

Environmental disclosure on corporate financial performance

Retail investors often prioritize environmental factors when making investment decisions, with 52% focusing on climate change, air pollution, and waste management (Mandiri Institute, 2022) [11]. This highlights that environmental responsibility is not just a moral duty but also a key factor in influencing market perception and investment choices.

Stakeholder theory emphasizes that companies should meet the expectations of all stakeholders. Businesses that are transparent and responsible in environmental matters gain public trust, which can enhance their reputation, customer loyalty, and ultimately, financial performance. Research by Chininga *et al.*, (2023) [5] and Chung *et al.*, (2024) [6], found that environmental disclosure positively affects financial performance, as measured by return on asset (ROA).

H1: Environmental disclosure positively affects corporate financial performance

Social disclosure on corporate financial performance

Stakeholder theory emphasizes the significance of meeting the needs of all stakeholders, such as customers, investors, and the community. Being transparent about social responsibility builds trust, enhances a company's reputation, and attracts investors who value social responsibility. This support can lead to better financial performance.

Research by Chung *et al.*, (2024) [6] and Khanchel *et al.*, (2023) [7], show that social disclosure positively impacts financial performance, with higher transparency in social activities leading to the improvement of company outcomes. Companies that actively disclose social information often enjoy better financial results due to enhanced reputation and investor interest.

H2: Social disclosure positively affects corporate financial performance

Governance disclosure on corporate financial performance

Governance is fundamental in ESG investment, serving as the foundation for the "E" (Environmental) and "S" (Social) aspects. Effective governance ensures professional and ethical management, fostering stakeholder trust, which positively impacts financial performance. A Mandiri Institute, (2022) [11] survey reveals that 73% of investment managers prioritize governance, with 86% viewing it as a key focus over the next 3-5 years.

According to stakeholder theory, transparent governance disclosure enhances financial performance by building stakeholder trust, improving operational efficiency, and reducing legal and reputational risks. Transparent and responsible companies tend to comply with regulations and are seen as more reliable.

Research by Khanchel *et al.*, (2023) [7] and Makridou *et al.*, (2023) [10] confirms that strong governance positively impacts financial performance, as measured by ROA. This highlights that companies with good governance practices often achieve better financial outcomes.

H3: Governance disclosure positively affects corporate financial performance

Research method

The research variables in this study are categorized into three types: dependent variables, independent variables, and control variables. The dependent variable in this research is financial performance. Environmental, social, and governance (ESG) disclosures are the independent variables used. The control variables used in this study are leverage, firm size, and firm age. This research uses secondary data from the Bloomberg database and the company's official websites. Purposive sampling is the sampling method used in this research with the criteria being basic material, consumer cyclical, consumer non-cyclical, and industrial sector companies listed on the Indonesia Stock Exchange (IDX) in 2020-2022, and have ESG disclosure score available in the Bloomberg database. A total of 138 companies were obtained, which was then reduced by 39 outliers, leaving 99 samples.

Table 1: Operational Definition of Variables

No.	Variables	Formula	Authors
1	Corporate Financial Performance (ROA)	Net Profit/Total Asset	(Chen <i>et al.</i> , 2023) [4]
2	Environmental Disclosure	$\sum (\text{Field Weight} \times \text{Field with Values}) / \sum (\text{All Field Weight})$	(Bloomberg L.P., 2024) [3]
3	Social Disclosure	$\sum (\text{Field Weight} \times \text{Field with Values}) / \sum (\text{All Field Weight})$	(Bloomberg L.P., 2024) [3]
4	Governance Disclosure	$\sum (\text{Field Weight} \times \text{Field with Values}) / \sum (\text{All Field Weight})$	(Bloomberg L.P., 2024) [3]
5	Firm Size	Ln(Total Asset)	(Treepongkaruna & Suttipun, 2024) [15]
6	Leverage	Total Debt/Total Asset	(Chen <i>et al.</i> , 2023) [4]
7	Firm Age	(Year of obtaining data – Year of establishing firm) + 1	(Ruan & Liu, 2021) [14]

Source: Compiled by Authors (2024)

This research employs the multiple regression analysis method to carry out empirical analysis, which consists of descriptive statistics analysis, classical assumption tests, and hypothesis testing. To test the hypotheses proposed earlier, the following equation is formulated

$$ROA = \alpha + \beta_1 EDS + \beta_2 SDS + \beta_3 GDS + \beta_4 LEV + \beta_5 SIZE + \beta_6 AGE + \epsilon$$

Results and discussion

This analysis in the following Table 2 provides an initial overview of the data characteristics in this study, focusing on the distribution and variation of the research variables. The findings from this analysis offer a preliminary understanding of general patterns in the data, serving as a foundation for further analysis.

Table 2: Descriptive statistics

	N	Min	Max	Mean	Std. Dev
ROA	99	-.07	.13	.05	.04
EDS	99	.00	63.18	31.43	18.52
SDS	99	12.70	54.87	29.94	11.12
GDS	99	55.18	98.62	76.73	8.92
LEV	99	.11	.92	.44	.20
SIZE	99	29.26	33.66	31.15	.98
AGE	99	9.00	81.00	44.97	14.21

Source: SPSS 26 computation output (2024)

The descriptive statistics reveal that the Return on Assets (ROA) for 99 companies ranges from a minimum of -0.07 to a maximum of 0.13, with an average of 0.047 and a standard deviation of 0.038. This suggests that, on average, companies have a return on assets of approximately 4.74%, with relatively small variation. The Environmental Disclosure Score (EDS) ranges from 0 to 63.18, with an average of 31.43 and a standard deviation of 18.52, indicating considerable variation in environmental disclosure among the companies. The Social Disclosure Score (SDS) varies between 12.70 and 54.87, with an average of 29.94 and a standard deviation of 11.12, reflecting diversity in social disclosure. In contrast, the Governance Disclosure Score (GDS) ranges from 55.18 to 98.62, with an average of 76.73 and a standard deviation of 8.91608, showing that governance disclosure tends to be more consistent compared to EDS and SDS.

The average leverage (LEV) of the companies is 0.4364, with a minimum of 0.11, a maximum of 0.92, and a standard deviation of 0.19618, indicating that the average debt-to-asset ratio is approximately 43.64%, with significant variation. Firm size (SIZE) has an average of 31.15, ranging from 29.26 to 33.66, with a standard deviation of 0.98397, showing relatively consistent firm size within the sample. Lastly, firm age (AGE) ranges from 9 to 81 years, with an average of 44.97 and a standard deviation of 14.21, indicating substantial variation in firm age among the sample.

The normality test, conducted using the Kolmogorov-Smirnov method, yielded a significance value of 0.122, indicating that the data is normally distributed since the value exceeds 0.05. To ensure there was no multicollinearity, tolerance and VIF values were examined, with all independent variables showing tolerance values above 0.10 and VIF values below 10, confirming the absence of multicollinearity. Additionally, the

heteroskedasticity test using the Glejser method revealed significance values greater than 0.05 for all variables, demonstrating that heteroskedasticity was not present in the data. The autocorrelation test, performed using the run test, produced a significance value of 0.55, further indicating no autocorrelation issues.

The classical assumption tests have confirmed the validity of the data, ensuring it is now appropriate for hypothesis testing which includes coefficient of determination (R²) test, F-test, and t-test.

Table 3: Coefficient of Determination (R²) Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.591 ^a	.349	.307	.03180

Source: SPSS 26 computation output (2024)

An adjusted R-squared value of 0.307 shows that the independent variables (environmental disclosure, social disclosure, governance disclosure, leverage, company size, and company age) explain 30.7% of the variance in the dependent variable (financial performance). The remaining 69.3% is influenced by factors outside the scope of this study.

Table 4: F-Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.050	6	.008	8.222	.000 ^b
Residual	.093	92	.001		
Total	.143	98			

Source: SPSS 26 computation output (2024)

Referring on the Table 8, the F value is 8.2 with a significance value of 0.00, which is below 0.5. This indicates that at least one variable in the model affects the dependent variable, leading to conclusion that the regression model is fit.

Table 5: t-Test

Model	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
(Constant)	.110	.108	1.022	.309
EDS	.001	.000	3.323	.001
SDS	-.001	.000	-1.251	.214
GDS	.000	.000	-.579	.564
LEV	-.086	.018	-4.810	.000
SIZE	.000	.003	-.055	.957
AGE	.000	.000	-.705	.482

Source: SPSS 26 computation output (2024)

Based on the results of the t-test in Table 9, the model equation can be formulated as follows

$$ROA = 0.110 + 0.001 EDS + -0.001 SDS + 0.000 GDS + -0.086 LEV + 0.000 SIZE + 0.000 AGE + \epsilon$$

It was found that the EDS has a significant positive impact on ROA with a coefficient of 0.001. However, SDS and GDS has no significant impact on ROA with a coefficient of -0.001 and 0.00. Additionally, it was found that the control variable SIZE and AGE does not have significant impact on ROA, while LEV has a significant negative impact on ROA.

Environmental disclosure positively affects corporate financial performance

Based on multiple linear regression analysis, the Environmental Disclosure Score (EDS) has a regression coefficient of 0.001 with a significance value of 0.001, indicating a significant positive impact of environmental disclosure on financial performance. This supports the acceptance of the first hypothesis (H1). The findings align with stakeholder theory, which posits that companies must consider the interests of various stakeholders. Effective environmental disclosure can enhance trust and support from stakeholders, such as customers, investors, and the public, thereby positively contributing to financial performance.

The growing awareness and prioritization of environmental issues among retail and institutional investors, as highlighted by the 2022 Mandiri Institute survey, further explain this positive impact. The survey revealed that climate change and air pollution are top concerns for retail investors, while most institutional investors prioritize environmental aspects within ESG factors.

These findings are consistent with previous studies, such as Chininga *et al.*, (2023) ^[5], who found that companies with strong environmental performance tend to have better financial outcomes due to increased stakeholder appeal. Similarly, Chung *et al.*, (2024) ^[6] reported that higher environmental disclosure correlates with improved ROA. However, contrasting studies, like Makridou *et al.*, (2023) ^[10], found that in the energy sector, environmental responsibility negatively impacts profitability due to the high investment costs associated with green technologies and waste management, which can burden financial performance in the short term.

Social disclosure does not affect corporate financial performance

Based on the multiple regression analysis shows a coefficient of -0.001 with a significance of 0.214. This indicates a negative but insignificant effect of social disclosure on financial performance. Despite stakeholder theory suggesting that social responsibility commitments gain stakeholder support, the results imply that the benefits of social disclosure may not be immediately reflected in short-term financial performance. The relatively low average social disclosure score suggests that social responsibility aspects are not yet ideal, potentially limiting the effectiveness of such disclosures. This is further supported by a 2022 Mandiri Institute survey, which found that institutional investors in Indonesia place the lowest priority on social aspects compared to environmental and governance factors.

These findings align with prior research, such as Chininga *et al.*, (2023) ^[5] and Alareeni & Hamdan, (2020) ^[11], which also found an insignificant or negative impact of social disclosure on financial performance, likely due to the high costs of social practices. However, other studies, like Chung *et al.*, (2024) ^[6], reported a positive correlation between social disclosure and financial performance in Hong Kong, suggesting that transparent social activities can enhance stakeholder support and resource access. Additionally, Makridou *et al.*, (2023) ^[10] found that, despite the negative environmental impact on financial performance in the energy sector, social responsibility had a positive correlation. These discrepancies highlight that the impact of

social disclosure on financial performance is highly contextual, varying by industry, culture, and market perception.

Governance disclosure does not affect corporate financial performance

Based on the multiple regression analysis reveals a coefficient of 0.000 with a significance of 0.564, leading to the rejection of H3. This suggests that governance disclosure does not significantly impact financial performance. According to stakeholder theory, good governance is crucial for building trust and credibility with stakeholders, including investors, customers, employees, and the broader community. While good governance should promote transparency, accountability, and ethical decision-making, which could enhance financial performance, this study's findings indicate that the effects may not be immediately apparent or could be influenced by factors outside the model. The descriptive statistics discussed earlier show that governance disclosure has a higher average value compared to environmental and social disclosures, suggesting a higher investment in governance that might hinder short-term financial performance.

These findings align with prior research indicating that the impact of governance disclosure on financial performance is often insignificant or negative. For instance, Chininga *et al.*, (2023) ^[5] found no significant relationship between corporate governance and financial performance, and (Waris & Din, 2024) ^[16] reported a negative impact of governance on ROA. However, this study contrasts with other research that has found positive effects of governance disclosure on financial performance. For example, Makridou *et al.*, (2023) ^[10] found a positive correlation between corporate governance and financial performance in the European energy sector, and Khanchel *et al.*, (2023) ^[7] also reported that good governance disclosure contributes positively to a firm's financial performance. These differences might be attributed to varying industry and geographic factors.

Conclusion

This study examines the impact of Environmental, Social, and Governance (ESG) disclosures on the financial performance of manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2022. Key findings reveal that environmental disclosure has a significant positive effect on financial performance, indicating that companies with greater transparency in environmental reporting tend to perform better financially. This supports the notion that investing in strong environmental practices can enhance a company's image and investor confidence, thereby increasing its value. Conversely, social disclosure shows a negative but not significant impact on financial performance, suggesting that while there may be a slight indication of a negative effect, it is not strong enough to be considered statistically significant. Governance disclosure, meanwhile, does not significantly affect financial performance, implying that the benefits of good governance may not be immediately reflected in short-term financial outcomes or could be influenced by factors outside the study's model.

The study has several limitations. First, it acknowledges that Bloomberg does not cover all companies in its ESG disclosure scores, affecting the representativeness of the data. External factors such as macroeconomic conditions,

regulatory changes, and global events like the COVID-19 pandemic may also influence financial performance and ESG disclosures, potentially affecting the analysis. Additionally, the varying quality of ESG reporting across companies could impact the validity and reliability of the data used, as well as the results.

Based on these conclusions and limitations, the study suggests that future research should conduct comparative studies across countries to understand how regulatory contexts and cultural factors influence ESG disclosures and perceptions. Long-term impacts of ESG on financial performance and sustainability should also be evaluated through longitudinal studies spanning several decades. Expanding the sample to include companies from diverse industries and longer time periods would help achieve a more comprehensive and generalizable understanding of ESG's impact across different market conditions and sectors. For manufacturing companies, increasing transparency in ESG reporting using recognized national and international standards is recommended to allow stakeholders to assess ESG performance more accurately. Regulators are encouraged to continue developing progressive ESG policies in response to global dynamics and emerging sustainability challenges.

References

- Alareeni BA, Hamdan A. ESG impact on performance of US S&P 500-listed firms. *Corporate Governance (Bingley)*,2020:20(7):1409–1428. <https://doi.org/10.1108/CG-06-2020-0258>
- Andi D. Kemenperin Terus Mendorong Dekarbonisasi Sektor Industri, 2023. Available from: <https://industri.kontan.co.id/news/kemenperin-terus-mendorong-dekarbonisasi-sektor-industri>
- Bloomberg LP. ESG Disclosure Score methodology, 2024.
- Chen S, Song Y, Gao P. Environmental, social, and governance (ESG) performance and financial outcomes: Analyzing the impact of ESG on financial performance. *Journal of Environmental Management*, 2023, 345. <https://doi.org/10.1016/j.jenvman.2023.118829>
- Chininga E, Alhassan AL, Zeka B. ESG ratings and corporate financial performance in South Africa. *Journal of Accounting in Emerging Economies*, 2023. <https://doi.org/10.1108/JAEE-03-2023-0072>
- Chung R, Bayne L, Birt J. The impact of environmental, social and governance (ESG) disclosure on firm financial performance: evidence from Hong Kong. *Asian Review of Accounting*,2024:32(1):136–165. <https://doi.org/10.1108/ARA-07-2022-0165>
- Khanchel I, Lassoued N, Baccar I. Sustainability and firm performance: the role of environmental, social and governance disclosure and green innovation. *Management Decision*,2023:61(9):2720–2739. <https://doi.org/10.1108/MD-09-2021-1252>
- Kieso DE, Weygandt JJ, Warfield TD. *Intermediate Accounting, 2nd Edition, IFRS Edition*,2014. Available from: www.wileyplus.com
- Macquarie Asset Management. Macquarie Asset Management's 2021 ESG survey report: Key insights from our investors, 2022. Available from: <https://www.macquarie.com/ch/en/about/company/macquarie-asset-management/institutional-investor/sustainability/macquarie-asset-management-2021-esg-survey.html>
- Makridou G, Doumpos M, Lemonakis C. Relationship between ESG and corporate financial performance in the energy sector: empirical evidence from European companies. *International Journal of Energy Sector Management*, 2023. <https://doi.org/10.1108/IJESM-01-2023-0012>
- Mandiri Institute. *Industry for tomorrow: Towards ESG Implementation in Indonesia - ESG Report 2022*, 2022. Available from: <https://bankmandiri.co.id/documents/20143/45659490/ESG+Book+Report++Mandiri+Institute.pdf/ca9a1803-b7aa-86be-5dec-c7f64a329245?t=1667449544435>
- Ngatno. *Buku monograf analisis kinerja keuangan perusahaan*, 2021. Available from: <https://doc-pak.undip.ac.id/id/eprint/5614/1/BUKU%20MONOGR AF%20ANALISIS%20KINERJA%20KEUANGAN%20OPERUSAHAAN%20pak%20Ngatno%20ISBN.pdf>
- PwC. ESG trends in 2023, 2023. Available from: https://www.pwc.com/kz/en/publications/new_publication_assets/esg-trends-in-2023-eng.pdf
- Ruan L, Liu H. Environmental, social, governance activities and firm performance: evidence from China. *Sustainability (Switzerland)*,2021:13(2):1–16. <https://doi.org/10.3390/su13020767>
- Treepongkaruna S, Suttipun M. The impact of environmental, social and governance (ESG) reporting on corporate profitability: evidence from Thailand. *Journal of Financial Reporting and Accounting*, 2024. <https://doi.org/10.1108/JFRA-09-2023-0555>
- Waris M, Din BH. Nexus of the CSR disclosures and corporate financial performance: evidence from Asian countries climate policy uncertainty. *Environmental Science and Pollution Research International*,2024:31(2):1995–2008. <https://doi.org/10.1007/s11356-023-31307-9>