



The Role of Environmental Cost Disclosure in Enhancing Financial Performance and Corporate Sustainability

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ABSTRACT

Growing attention to environmental issues encourages companies to enhance transparency through environmental cost disclosure as part of sustainability strategies and financial performance management. This study aims to examine the role of environmental cost disclosure in improving financial performance and corporate sustainability among manufacturing companies listed on the Indonesia Stock Exchange. The study employs a quantitative approach using secondary data obtained from annual reports and sustainability reports during the 2020–2024 period. The sample is selected through purposive sampling, and the data are analyzed using content analysis and panel data regression. The results indicate that environmental cost disclosure has a positive and significant effect with improved financial performance and corporate sustainability. This study contributes to strengthening the importance of environmental transparency as a strategic approach to achieving sustainable corporate management

INTRODUCTION

The development of global industries has increased attention toward environmental issues, as business activities are no longer evaluated solely based on their economic achievements but also on their impacts on ecosystems. Companies are increasingly facing pressure from investors, governments, and society to demonstrate environmental responsibility through transparent sustainability reporting practices. Environmental disclosure has become an essential component of modern accounting systems because it provides information regarding corporate strategies in managing environmental risks and creating long-term value. From a sustainability perspective, integrating environmental aspects into business decision-making can enhance stakeholder trust and strengthen corporate legitimacy (Buallay, 2020). Furthermore, Environmental, Social, and Governance (ESG) disclosure practices have emerged as important indicators for evaluating corporate governance quality and sustainability performance (Broadstock et al., 2021).

Manufacturing companies represent one of the sectors receiving significant attention because their production activities have considerable potential impacts on natural resource consumption, energy utilization, and industrial waste generation. These conditions encourage companies not only to focus on achieving financial profitability but also to improve transparency regarding expenditures allocated for environmental management. Environmental cost disclosure serves as an instrument that enables companies to communicate their environmental investments and expenditures to stakeholders. Rini and Adhariani (2021) found that environmental disclosure is associated with corporate characteristics and information transparency strategies among Indonesian companies. These findings indicate that environmental cost information can become an important element in assessing corporate commitment toward sustainable business practices.

The relationship between environmental cost disclosure and corporate performance can theoretically be explained through legitimacy theory and stakeholder theory. Legitimacy theory suggests that companies need to obtain social acceptance by aligning their activities with societal expectations, while stakeholder theory emphasizes the importance of providing relevant information to parties who have interests in corporate activities. Abdi et al. (2022) found that sustainability reporting practices are associated with improved corporate performance because they strengthen organizational reputation and resource management efficiency. Similarly, Li et al. (2021) explained that environmental information disclosure can influence financial performance through increased transparency and reduced business risks. However, previous studies have predominantly focused on general environmental disclosure indicators rather than specifically examining environmental cost disclosure as a strategic corporate factor.

Although studies on environmental disclosure and corporate sustainability have developed significantly, a research gap remains regarding the specific relationship between environmental cost disclosure, financial performance, and corporate sustainability simultaneously. Previous studies have

largely emphasized overall ESG performance without separating the role of environmental costs as a form of strategic corporate investment. Moreover, empirical findings regarding the relationship between environmental disclosure and financial performance remain inconsistent due to differences in industrial sectors, company characteristics, and economic conditions across countries. Mohammad and Wasiuzzaman (2021) demonstrated that ESG disclosure can improve corporate competitive advantage; however, the mechanism through which specific environmental aspects influence corporate outcomes requires further investigation. In addition, Khatri and Kjærland (2023) highlighted that sustainability reporting practices still face challenges related to the consistency and quality of environmental information disclosed by companies.

Based on these issues and research gaps, this study aims to analyze the role of environmental cost disclosure in enhancing financial performance and corporate sustainability among manufacturing companies listed on the Indonesia Stock Exchange. Specifically, this study examines the relationship between the level of environmental cost disclosure and financial performance indicators as well as companies' ability to maintain long-term sustainability. This research adopts a sustainability accounting perspective to understand how environmental cost transparency can function as a corporate strategy for creating economic and social value. Previous research indicates that the relationship between sustainability practices and corporate performance needs to be examined by considering industrial characteristics and the quality of disclosed information (Zhou et al., 2022). Therefore, this study seeks to provide empirical evidence regarding the strategic role of environmental cost disclosure within the context of Indonesian manufacturing companies.

This study contributes theoretically by expanding environmental accounting literature through an examination of the relationship between environmental cost disclosure, financial performance, and corporate sustainability. Practically, this research provides insights for corporate management in developing environmental strategies that are not only oriented toward regulatory compliance but also support long-term value creation. For investors and stakeholders, the findings may provide valuable information regarding the importance of environmental cost transparency in evaluating corporate quality and future prospects. Friede et al. (2021) demonstrated that sustainability aspects are associated with corporate performance based on extensive international empirical evidence. Therefore, this study is expected to strengthen the understanding of environmental cost disclosure as an integral component of sustainable corporate strategies.

LITERATURE REVIEW

Environmental Cost Disclosure from an Environmental Accounting Perspective

Environmental cost disclosure is an essential component of environmental accounting practices that provides information regarding expenditures incurred by companies to manage the environmental impacts arising from their operational activities. Such disclosures include waste management costs, emission control expenditures, resource conservation costs, and investments in environmentally friendly technologies aimed at reducing ecological impacts. From the perspective of legitimacy theory, companies engage in environmental disclosure as an effort to obtain social acceptance and maintain positive relationships with stakeholders. According to Buallay (2020), sustainability disclosure practices can enhance corporate transparency and strengthen the relationship between sustainability strategies and business value creation. Therefore, environmental cost disclosure serves not only as a form of regulatory compliance but also as a strategic mechanism for improving corporate reputation and increasing stakeholder confidence.

The Relationship between Environmental Cost Disclosure and Financial Performance

Financial performance is one of the primary indicators used to evaluate the effectiveness of corporate strategies in generating economic value. In the context of sustainability, environmental cost disclosure is considered capable of providing economic benefits through improved operational efficiency, reduced environmental risks, and enhanced corporate reputation. Research on ESG practices indicates that companies with higher levels of environmental transparency tend to achieve better relationships with capital markets because investors increasingly consider non-financial factors in investment decision-making. Broadstock et al. (2021) found that ESG performance is associated with corporate resilience, particularly during periods of economic uncertainty. Furthermore, Li et al. (2021) explained that environmental information disclosure can influence financial performance through enhanced transparency, improved risk management, and reduced business uncertainty.

Environmental Disclosure and Corporate Sustainability

Corporate sustainability represents a company's ability to maintain long-term business continuity by balancing economic, social, and environmental considerations. Environmental cost disclosure has become an important element in supporting corporate sustainability because it provides information regarding a company's commitment to managing environmental impacts. Based on stakeholder theory, companies have a responsibility to provide relevant information to parties affected by their business activities. Abdi et al. (2022) stated that sustainability reporting practices are associated with improved corporate performance because they strengthen organizational reputation and enhance resource management efficiency. Therefore, environmental cost disclosure can be viewed as a corporate communication strategy that demonstrates commitment toward sustainable development.

ESG Disclosure, Environmental Transparency, and Corporate Value

The development of Environmental, Social, and Governance (ESG) concepts has expanded the understanding of the importance of non-financial transparency in modern business practices. ESG disclosure provides information regarding how companies manage environmental, social, and governance risks that may influence long-term corporate sustainability. Previous studies indicate that companies with higher ESG disclosure levels tend to obtain benefits through increased investor confidence and stronger market legitimacy. Mohammad and Wasiuzzaman (2021) explained that ESG disclosure can improve corporate competitive advantage by enhancing transparency and strengthening relationships with stakeholders. Furthermore, Zhou et al. (2022) demonstrated that corporate sustainability practices are associated with improved corporate performance through stronger governance mechanisms and more effective risk management.

Research Gap in Environmental Cost Disclosure and Financial Sustainability

Although research on environmental disclosure and ESG practices has grown significantly, limited studies have specifically examined environmental cost disclosure as a key variable explaining the relationship between environmental transparency, financial performance, and corporate sustainability. Most previous studies have relied on aggregated ESG indicators, which provide limited understanding of the specific contribution of environmental costs toward corporate value creation. In addition, previous findings regarding the relationship between environmental disclosure and financial performance remain inconsistent due to differences in industrial sectors, corporate characteristics, and regulatory environments across countries. Khatri and Kjærland (2023) emphasized that the quality and consistency of sustainability information remain major challenges in corporate reporting practices. Therefore, further research is needed to integrate environmental cost disclosure, financial performance, and corporate sustainability within a comprehensive analytical framework.

Research Hypotheses

Based on stakeholder theory and legitimacy theory, environmental cost disclosure is expected to influence corporate performance outcomes. Companies that provide greater transparency regarding environmental expenditures may strengthen stakeholder trust, improve corporate reputation, and enhance operational efficiency. Therefore, environmental cost disclosure is considered an important strategic factor that may contribute to financial performance improvement and corporate sustainability.

Environmental cost disclosure reflects the company's commitment to managing environmental impacts and communicating sustainability efforts to stakeholders. Previous studies indicate that environmental and sustainability disclosures can provide economic benefits by reducing information asymmetry, improving risk management, and strengthening corporate legitimacy. Based on these theoretical arguments and previous empirical findings, the following hypotheses are proposed:

H1: Environmental cost disclosure has a positive effect on financial performance.

H2: Environmental cost disclosure has a positive effect on corporate sustainability.

Conceptual Framework of the Study

Based on previous literature, environmental cost disclosure can be considered a strategic factor that potentially influences financial performance and corporate sustainability. Environmental cost disclosure provides information regarding how companies manage ecological impacts while demonstrating their commitment to environmental responsibility. In this study, environmental cost disclosure is positioned as an independent variable examined in relation to financial performance and corporate sustainability as dependent variables. This approach aligns with the development of sustainability accounting research, which recognizes environmental information as an important factor in economic decision-making processes. Therefore, this study is expected to provide empirical evidence regarding the role of environmental cost transparency in supporting sustainable business strategies.

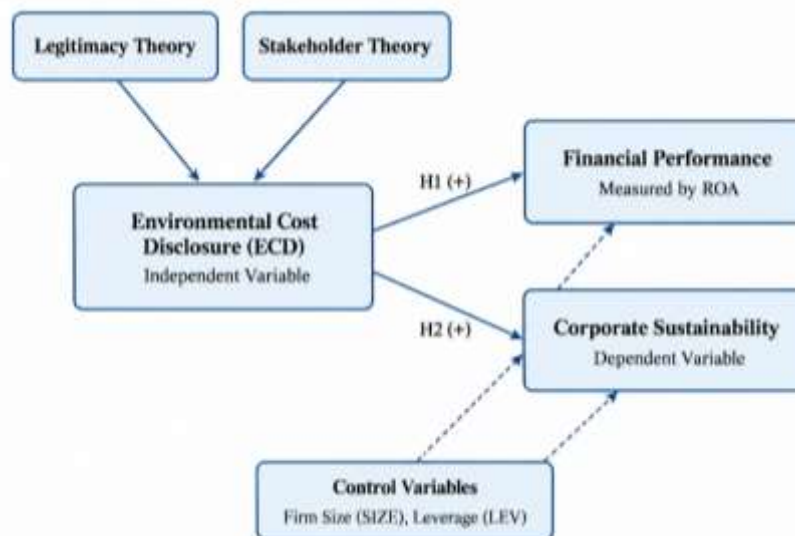


Figure 1. Conceptual Framework of Environmental Cost Disclosure, Financial Performance, and Corporate Sustainability

The conceptual framework illustrates the relationship between environmental cost disclosure, financial performance, and corporate sustainability based on legitimacy theory and stakeholder theory. Environmental cost disclosure is positioned as an independent variable that reflects corporate transparency in reporting environmental-related expenditures and sustainability activities.

This study proposes that environmental cost disclosure influences financial performance and corporate sustainability. Through greater environmental transparency, companies are expected to improve stakeholder trust, reduce environmental risks, and create long-term business value. Therefore, this study formulates two hypotheses: environmental cost disclosure positively affects financial performance (H1) and corporate sustainability (H2).

Firm size and leverage are included as control variables because company characteristics may influence disclosure practices and performance outcomes.

METHODOLOGY

Research Design and Approach

This study employs a quantitative research approach with an explanatory research design to examine the relationship between environmental cost disclosure, financial performance, and corporate sustainability. The quantitative approach is selected because this study aims to measure the relationship between variables objectively through numerical data analysis obtained from corporate reports. The explanatory design is applied to investigate whether environmental cost disclosure influences financial performance and corporate sustainability among manufacturing companies. According to Hair et al. (2021), quantitative research designs are appropriate for testing theoretical relationships between constructs through statistical analysis and hypothesis testing. Furthermore, the use of empirical data enables researchers to provide measurable evidence regarding sustainability practices and their implications for corporate performance (Santos et al., 2022).

Population and Sample Selection

The population of this study consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2020–2024 observation period. The manufacturing sector was selected because it has significant environmental impacts arising from production activities, including energy consumption, waste generation, and resource utilization. The sample selection applies a non-probability sampling technique using purposive sampling based on specific criteria. The criteria include: (1) manufacturing companies continuously listed on the IDX during 2020–2024, (2) companies that publish annual reports and sustainability reports during the research period, and (3) companies that disclose information related to environmental activities and costs. Based on these criteria, 25 manufacturing companies were obtained, resulting in around 125 firm-year observations (25 companies × 5 years). The purposive sampling approach is commonly applied in sustainability accounting research because it ensures that selected companies provide relevant environmental information required for analysis (García-Sánchez et al., 2021).

Data Collection Technique and Measurement Instruments

This study uses secondary data collected through documentation analysis from publicly available corporate reports, including annual reports, sustainability reports, and financial statements obtained from company websites and the Indonesia Stock Exchange database. No questionnaires, interviews, or direct respondents are involved because the research focuses on corporate-level disclosure practices rather than individual perceptions. Environmental cost disclosure is measured using content analysis by identifying environmental-related information disclosed by companies, including environmental protection costs, waste management expenditures, emission reduction investments, and sustainability-related expenses. The measurement framework is adapted from previous environmental disclosure studies that use disclosure indexes to

evaluate the extent of corporate environmental transparency (Kouloukoui et al., 2021). Financial performance is measured using accounting indicators such as Return on Assets (ROA), while corporate sustainability is evaluated based on sustainability reporting indicators and ESG-related disclosures.

Validity and Reliability Testing

Since this study uses secondary data and content analysis, validity and reliability testing are conducted through the assessment of the measurement framework and consistency of coding procedures rather than questionnaire-based statistical testing. Content validity is ensured by developing environmental disclosure indicators based on established sustainability reporting frameworks and previous empirical studies. The reliability of the content analysis process is evaluated through coding consistency to ensure that environmental disclosure measurements are applied systematically across all sampled companies. According to Kumar et al. (2022), reliable content analysis requires clear coding procedures and consistent interpretation of information to minimize researcher bias. Additionally, the environmental disclosure indicators are reviewed to ensure alignment with sustainability reporting principles and contemporary ESG measurement practices (Bose et al., 2021).

Research Procedure

The research procedure is conducted systematically through several stages. The first stage involves identifying relevant theories and previous studies related to environmental cost disclosure, financial performance, and corporate sustainability. The second stage includes determining the research population and selecting samples based on predetermined purposive sampling criteria. The third stage involves collecting annual reports, sustainability reports, and financial statements from selected manufacturing companies during the 2020–2024 period. The fourth stage consists of measuring environmental cost disclosure through content analysis and calculating financial and sustainability performance indicators. The final stage involves statistical testing, interpretation of findings, and drawing conclusions regarding the role of environmental cost disclosure in enhancing corporate performance and sustainability.

Data Analysis Technique

The collected data are analyzed using descriptive statistics and panel data regression analysis. Descriptive statistics are used to describe the characteristics of environmental cost disclosure, financial performance, and corporate sustainability variables. Panel data regression is applied because the study combines cross-sectional data from multiple companies and time-series data over several years. The regression model is used to examine the effect of environmental cost disclosure on financial performance and corporate sustainability. Statistical analyses were conducted using **EViews 13**, which supports panel data estimation procedures, including the selection of appropriate regression models through the Chow test, Hausman test, and Lagrange Multiplier test. The software was used to estimate the panel regression model and evaluate the relationship between environmental cost disclosure, financial performance, and corporate sustainability. According to Napitupulu et al. (2021), panel data analysis provides stronger empirical estimation by considering both individual company characteristics and changes over time. The

results are evaluated through significance testing, coefficient interpretation, and explanatory power assessment to determine the contribution of environmental cost disclosure to sustainable corporate development.

RESULTS

Descriptive Statistics

The descriptive statistical analysis was conducted to identify the characteristics of each research variable based on 125 firm-year observations from manufacturing companies listed on the Indonesia Stock Exchange during the 2020–2024 period.

Table 1. Descriptive Statistics of Research Variables

Variable	Observation	Minimum	Maximum	Mean	Std. Deviation
Environmental Disclosure (ECD)	Cost 125	0.35	0.90	0.624	0.142
Financial Performance (ROA)	125	0.012	0.185	0.074	0.039
Corporate Sustainability (CS)	125	0.40	0.95	0.681	0.156
Firm Size (SIZE)	125	27.35	33.82	30.214	1.524
Leverage (LEV)	125	0.105	0.785	0.421	0.178

The descriptive results show that the average environmental cost disclosure score was 0.624, indicating that manufacturing companies disclosed approximately 62.4% of environmental-related indicators included in the measurement framework. The average ROA value of 0.074 indicates that companies generated an average return of 7.4% from their total assets. Meanwhile, the corporate sustainability score reached an average value of 0.681, reflecting moderate sustainability disclosure practices among sampled companies.

Environmental Cost Disclosure Index Results

Environmental cost disclosure was measured through content analysis of annual reports and sustainability reports. The measurement included environmental management costs, waste management activities, emission reduction programs, and environmental investment disclosure.

Table 2. Environmental Cost Disclosure Indicators

Environmental Disclosure Indicator	Mean Score
Environmental management cost disclosure	0.72
Waste management cost disclosure	0.68
Energy efficiency disclosure	0.61
Emission reduction disclosure	0.57
Environmental investment disclosure	0.48
Sustainability-related expenditure disclosure	0.70

The results indicate that companies tend to disclose general environmental management activities more frequently than specific monetary environmental investments. The highest disclosure level was found in environmental management costs, while environmental investment disclosure showed the lowest value.

Panel Data Model Selection Test

Before conducting regression analysis, several panel data model selection tests were performed.

Table 3. Panel Data Model Selection

Test	Statistic	Probability	Decision
Chow Test	18.426	0.000	Fixed Effect Model
Hausman Test	12.735	0.013	Fixed Effect Model
LM Test	34.521	0.000	Random Effect Preferred

Based on the model selection tests, the Fixed Effect Model was selected as the appropriate regression model because it considers differences in individual characteristics among manufacturing companies.

Regression Results: Environmental Cost Disclosure and Financial Performance

The first regression model examines the influence of environmental cost disclosure on financial performance measured by ROA.

Table 4. Fixed Effect Regression Results (Dependent Variable: ROA)

Variable	Coefficient	t-Statistic	Probability
Constant	-0.214	-2.846	0.005
ECD	0.087	3.421	0.001
SIZE	0.012	2.175	0.031
LEV	-0.045	-2.603	0.010
R-Squared	0.482		
Adjusted R-Squared	0.451		
F-Statistic	15.672		0.000

The regression results show that environmental cost disclosure has a positive and statistically significant effect on financial performance ($\beta = 0.087$; $p < 0.05$). This indicates that companies with higher environmental cost disclosure tend to demonstrate better financial performance. The model explains approximately 48.2% of variations in financial performance.

Regression Analysis of Environmental Cost Disclosure on Financial Performance

The second regression model evaluates the effect of environmental cost disclosure on corporate sustainability performance.

Table 5. Fixed Effect Regression Results (Dependent Variable: Corporate Sustainability)

Variable	Coefficient	t-Statistic	Probability
Constant	0.125	1.982	0.050
ECD	0.312	5.214	0.000
SIZE	0.086	2.936	0.004
LEV	-0.071	-2.215	0.028
R-Squared	0.563		
Adjusted R-Squared	0.537		
F-Statistic	21.483		0.000

The results indicate that environmental cost disclosure has a positive and significant influence on corporate sustainability ($\beta = 0.312$; $p < 0.01$). Companies with higher levels of environmental cost transparency tend to demonstrate stronger sustainability performance.

Hypothesis Testing Summary

Table 6. Hypothesis Testing Results

Hypothesis	Relationship	Result
H1	Environmental Cost Disclosure → Financial Performance	Supported
H2	Environmental Cost Disclosure → Corporate Sustainability	Supported

The empirical findings demonstrate that environmental cost disclosure contributes positively to both financial performance and corporate sustainability among manufacturing companies listed on the Indonesia Stock Exchange.

DISCUSSION

The findings of this study provide empirical evidence that environmental cost disclosure has a positive and significant relationship with financial performance and corporate sustainability among manufacturing companies listed on the Indonesia Stock Exchange. The regression results indicate that companies with higher levels of environmental cost disclosure tend to demonstrate better financial performance and stronger sustainability practices.

These findings suggest that environmental transparency is not merely a reporting obligation but also a strategic mechanism that can support corporate value creation. The positive relationship between environmental cost disclosure and financial performance indicates that environmental investments may generate economic benefits through improved operational efficiency, reduced environmental risks, and enhanced corporate reputation. This finding is

consistent with the argument that sustainability-oriented business practices can contribute to long-term competitive advantages (Alsayegh et al., 2020).

The relationship identified in this study can be explained through legitimacy theory and stakeholder theory. Legitimacy theory suggests that companies disclose environmental information to obtain social approval and maintain alignment between corporate activities and societal expectations. Meanwhile, stakeholder theory emphasizes that companies must provide relevant information to stakeholders who influence or are influenced by corporate decisions. The significant influence of environmental cost disclosure on corporate sustainability indicates that transparent reporting can strengthen stakeholder confidence and demonstrate corporate responsibility toward environmental management. Similar findings were reported by Gerged et al. (2021), who found that environmental disclosure contributes to improved corporate legitimacy and sustainability outcomes. However, this study extends previous research by specifically emphasizing environmental cost disclosure rather than general environmental disclosure indicators.

The findings also support several previous studies examining the relationship between environmental disclosure and corporate performance, although differences exist in measurement approaches and research contexts. Abbas et al. (2022) demonstrated that sustainability-related disclosure positively influences firm performance because it improves information transparency and reduces stakeholder uncertainty. Similarly, Shakil (2021) found that ESG-related practices contribute to better corporate outcomes through improved risk management and governance mechanisms. However, previous studies often examine ESG disclosure as an aggregated concept, whereas this research focuses specifically on environmental costs as a measurable representation of corporate environmental commitment. This difference highlights the novelty of the present study, as it provides a more specific understanding of how environmental expenditure transparency contributes to financial and sustainability outcomes within manufacturing companies.

The positive findings obtained in this study may be influenced by several internal and external factors. Internally, companies with stronger governance structures, greater financial capacity, and higher environmental awareness may be more capable of implementing environmental programs and providing comprehensive disclosure. Externally, increasing regulatory pressure, investor expectations, and public concern regarding environmental issues encourage companies to improve transparency practices. Nevertheless, the relationship between environmental disclosure and financial performance may vary depending on industry characteristics, disclosure quality, and the maturity level of sustainability implementation. According to Ntim and Soobaroyen (2021), the effectiveness of sustainability disclosure depends not only on the existence of environmental information but also on the credibility, consistency, and relevance of the information provided.

The contribution of this research lies in strengthening the development of sustainability accounting and corporate finance literature by demonstrating that environmental cost disclosure can function as a strategic corporate resource

rather than merely an administrative reporting activity. Theoretically, this study expands previous sustainability research by integrating environmental accounting perspectives with financial performance and corporate sustainability frameworks. Practically, the findings provide implications for corporate managers that environmental transparency can support sustainable business strategies and improve stakeholder relationships. For investors and policymakers, the results highlight the importance of environmental cost information as an additional consideration in evaluating corporate performance and long-term business prospects. This argument is supported by Wang et al. (2021), who emphasized that sustainability-oriented strategies can enhance corporate resilience and value creation when effectively integrated into organizational decision-making.

Despite providing important insights, this study has several limitations that should be considered. First, the measurement of environmental cost disclosure relies on content analysis of corporate reports, which may involve subjective interpretation during the coding process. Second, the study focuses only on manufacturing companies listed on the Indonesia Stock Exchange, limiting the generalization of findings to other sectors or countries. Third, sustainability reporting practices among companies may vary in terms of completeness and reporting standards, which may affect measurement consistency. Future research is recommended to include broader industrial sectors, longer observation periods, and additional variables such as corporate governance, environmental performance ratings, or ESG scores to provide a more comprehensive understanding of environmental disclosure mechanisms. As suggested by Raimo et al. (2022), future sustainability research should further explore how organizational characteristics and institutional environments influence the effectiveness of environmental disclosure in creating sustainable corporate value.

CONCLUSIONS AND RECOMMENDATIONS

This study concludes that environmental cost disclosure plays an important role in enhancing financial performance and corporate sustainability among manufacturing companies listed on the Indonesia Stock Exchange. The empirical findings demonstrate that companies with higher levels of environmental cost transparency tend to achieve better financial outcomes and stronger sustainability performance. These results indicate that environmental disclosure should not be perceived merely as a compliance requirement but as a strategic approach that supports long-term corporate value creation. Through transparent reporting of environmental expenditures, companies can strengthen stakeholder trust, improve environmental risk management, and enhance their competitive position in increasingly sustainability-oriented markets.

The findings contribute to the development of sustainability accounting literature by demonstrating the importance of integrating environmental cost information into corporate decision-making processes. From a practical perspective, companies are recommended to improve the quality and completeness of environmental cost disclosure through standardized

sustainability reporting practices. Regulators and policymakers are also encouraged to develop clearer environmental reporting guidelines to improve comparability and accountability among companies. Future corporate strategies should consider environmental investments as part of sustainable business development rather than as additional operational costs.

FURTHER STUDY

This study has several limitations that provide opportunities for further research development. First, the research focuses only on manufacturing companies listed on the Indonesia Stock Exchange, which may limit the generalizability of the findings to other industrial sectors and geographical contexts. Second, the measurement of environmental cost disclosure is based on content analysis of corporate reports, which may involve differences in interpretation and disclosure quality among companies. Third, this study only examines the direct relationship between environmental cost disclosure, financial performance, and corporate sustainability without considering possible mediating or moderating factors. Future research is recommended to expand the research scope by including various industries, longer observation periods, and additional variables such as corporate governance, green innovation, environmental performance ratings, and ESG scores. Furthermore, qualitative approaches, such as interviews with sustainability managers and corporate stakeholders, may provide deeper insights into the strategic motivations behind environmental cost disclosure practices.

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