

Linking Environmental Performance, Disclosure, and ISO 14001 to Firm Financial Success

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Abstract: This study aims to analyze the influence of environmental performance, environmental disclosure, and ISO 14001 certification on corporate financial performance. Sustainability and environmental responsibility have become critical factors in modern business strategies, yet the relationship between environmental initiatives and financial outcomes remains debated in academic literature. Environmental performance is measured using PROPER, disclosure through the GRI index, and ISO 14001 with a dummy variable for certified firms, while financial performance is assessed using accounting indicators (ROA, ROE). The findings reveal that: (1) environmental performance has a significant positive effect on financial performance, with stronger impacts on market-based indicators than accounting measures; (2) environmental disclosure positively influences financial performance, particularly in highly visible firms; (3) ISO 14001 certification contributes positively to long-term financial performance despite short-term implementation costs; and (4) synergistic effects emerge when all three environmental variables are applied simultaneously. The novelty of this research lies in integrating three key environmental dimensions performance, disclosure, and certification within a single framework to evaluate their combined and interactive effects on financial outcomes. This study contributes to the literature by providing empirical evidence from the Indonesian context, highlighting how sustainability initiatives not only enhance legitimacy but also strengthen market trust and long-term corporate value.

Keywords: Environmental Performance; Environmental Disclosure; ISO 14001; Financial Performance; Sustainability

1. INTRODUCTION

The rapid advancement of industrialization and globalization has intensified competition, requiring firms to sustain profitability while managing resources efficiently. Financial performance, commonly measured through indicators such as Return on Assets (ROA) and Return on Equity (ROE), remains a critical benchmark for corporate success and investor confidence (Maharantika & Fuad, 2019). However, many companies continue to prioritize profit maximization while neglecting environmental and social responsibilities, leading to ecological degradation and sustainability challenges (Rini & Adhariani, 2021).

In Indonesia, energy and manufacturing firms significantly contribute to environmental damage through pollution, excessive resource exploitation, and waste mismanagement. Although government initiatives such as PROPER and international standards like ISO 14001 have been introduced to encourage sustainable practices, corporate environmental performance and disclosure remain inadequate. This raises a fundamental problem: whether environmental initiatives genuinely enhance financial performance or merely impose additional costs on firms (Safitri et al., 2024).

Prior studies have produced inconsistent findings. Some demonstrate that environmental performance positively affects financial outcomes (Hutajulu & Purba, 2024), while others report insignificant or even negative impacts (Ermaya & Mashuri, 2020). Similarly, ISO 14001 certification has been linked to improved legitimacy but shows mixed effects on profitability (Istiqomah & Sulfitri, 2026). Environmental disclosure also presents contradictions: some studies highlight its role in enhancing stakeholder trust and firm value (Rini & Adhariani, 2021), while others find limited influence depending on industry visibility (Safitri et al., 2024). Most research examines these variables in isolation, leaving a gap in understanding their combined and interactive effects.

This study introduces a comprehensive framework that integrates three critical dimensions: environmental performance (measured by PROPER), environmental disclosure (measured by the GRI index), and ISO 14001 certification into a single model. By analyzing both their individual and combined effects, the research provides a holistic view of how sustainability practices influence corporate financial outcomes. This integration represents a novel contribution, moving beyond single-variable analysis toward a multidimensional perspective (Maharantika & Fuad, 2019; Istiqomah & Sulfitri, 2026).

Academically, the study enriches sustainability and accounting literature by clarifying the debated relationship between environmental initiatives and financial performance in the Indonesian context. Practically, it offers insights for managers and policymakers, showing that adopting environmental strategies can strengthen competitiveness, attract investment, and ensure resilience in the face of global sustainability demands. The findings highlight that environmental responsibility is not

merely a compliance requirement but a strategic driver of legitimacy, investor trust, and long-term corporate value (Rini & Adhariani, 2021; Hutajulu & Purba, 2024).

Financial performance reflects a company's ability to generate profits and fulfill responsibilities to shareholders while maintaining social and environmental accountability. It is commonly assessed through financial reports, which serve as a basis for decision-making by both internal and external stakeholders (Chanifah et al., 2019). Strong financial performance enhances investor confidence and corporate legitimacy, positioning firms competitively in the market.

In Indonesia, environmental performance is evaluated through the PROPER program initiated by the Ministry of Environment. PROPER uses a five-color rating system ranging from black (lowest) to gold (highest), reflecting a company's compliance and effectiveness in environmental management. A higher PROPER rating signals transparency and responsibility, which can positively influence stakeholder perceptions and firm value (Castro et al., 2021).

Environmental disclosure refers to the voluntary reporting of qualitative and quantitative information regarding a company's environmental activities. Such disclosure provides stakeholders—particularly investors—with insights into corporate responsibility and sustainability practices (Putra & Utami, 2021). Transparent disclosure enhances legitimacy and reputation, thereby strengthening financial performance (Yendrawati & Tarusnawati, 2021).

ISO 14001 is an international standard for Environmental Management Systems (EMS), designed to help organizations improve environmental performance through systematic management practices. Certification demonstrates compliance with global sustainability standards and signals commitment to pollution prevention and continuous improvement (Ramadhanti, 2021). Firms certified under ISO 14001 often gain investor trust and competitive advantage, which can translate into improved financial outcomes (Sueb & Keraf, 2019).

Stakeholder theory posits that firm value increases when management addresses stakeholder concerns, including environmental responsibility. Companies with strong environmental performance are perceived as legitimate and trustworthy, attracting

investors and enhancing financial outcomes. Empirical evidence supports this positive relationship (Castro et al., 2021; Arimbi, 2022; Hafidz, 2022; Parahdila et al., 2023).

H1: Environmental performance has a significant positive effect on financial performance.

Legitimacy theory suggests that environmental disclosure strengthens corporate reputation by demonstrating accountability. Transparent reporting of environmental costs and initiatives signals long-term sustainability, which positively influences investor decisions (Hapsoro & Adyaksana, 2020; Silvia Aji Saputri, 2023). Prior studies confirm that disclosure enhances financial performance (Wulaningrum, 2020; Apriandi et al., 2022; Arimbi, 2022; Anis, 2023).

H2: Environmental disclosure has a significant positive effect on financial performance.

ISO 14001 certification reflects a company's commitment to environmental management and compliance with international standards. According to signaling theory, certification acts as a positive signal to stakeholders, enhancing legitimacy and investor confidence. Studies show that ISO 14001 adoption improves financial outcomes in certified firms (Andayani, 2021; Sueb & Keraf, 2019).

H3: ISO 14001 certification has a significant positive effect on financial performance.

Integrating environmental performance, disclosure, and ISO 14001 certification creates synergistic effects that strengthen corporate legitimacy and stakeholder trust. Firms that simultaneously adopt these practices are more likely to achieve sustainable financial performance (Castro et al., 2021; Apriandi et al., 2022; Sueb & Keraf, 2019).

H4: Environmental performance, environmental disclosure, and ISO 14001 certification simultaneously have a significant positive effect on financial performance.

2. Research Methodology

This study adopts a quantitative approach using secondary data obtained from official company reports. The population consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023, totaling 81 firms. To ensure the reliability of the analysis, the sample was selected using purposive sampling with specific criteria: companies must be consistently listed on IDX during the study period, publish complete annual reports, report positive net income, and issue sustainability reports. These criteria were applied to guarantee that only firms with comprehensive and relevant data were included in the study.

Data collection was conducted through documentation methods, utilizing archival records available on the official IDX website and company portals. The dataset comprises annual reports, which provide information on financial performance, and sustainability reports, which disclose environmental performance, environmental disclosure, and ISO 14001 certification status. Financial performance was measured using accounting indicators, specifically Return on Assets (ROA) and Return on Equity (ROE). Environmental performance was assessed using the PROPER rating system issued by the Ministry of Environment, while environmental disclosure was measured using the Global Reporting Initiative (GRI) index. ISO 14001 certification was represented by a dummy variable, with a score of 1 assigned to certified firms and 0 to non-certified firms.

For data analysis, panel data regression was employed to capture both cross-sectional and time-series dimensions. This method is considered robust for examining causal relationships between environmental initiatives and financial performance, as it allows for controlling unobserved heterogeneity across firms and over time. The use of panel regression strengthens the validity of the findings and provides deeper insights into the dynamic relationship between sustainability practices and financial outcomes.

3. RESULT AND DISCUSSION

Panel data regression was estimated using three approaches: Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The Chow test indicated that FEM was preferable to CEM, while the Hausman test showed that REM was more appropriate than FEM. Furthermore, the Lagrange Multiplier (LM) test confirmed that REM provided the best estimation model for this study. Thus, the Random Effect Model was selected as the basis for hypothesis testing.

The coefficient of determination (Adjusted R^2) obtained from the REM was 0.1500 (15%), indicating that environmental performance, environmental disclosure, and ISO 14001 certification collectively explain 15% of the variation in financial performance. The remaining 85% is influenced by other factors not included in this study, such as corporate governance, market conditions, and macroeconomic variables. Although the explanatory power is relatively low, this is common in sustainability-related studies where financial performance is affected by multiple external determinants.

Table 1. Hypothesis Testing Results

Variable	Coefficient	t-Statistic	Probability	Conclusion
Environmental Performance (X1)	0.007662	3.637864	0.0005	Significant positive effect (Ha accepted)
Environmental Disclosure (X2)	0.010696	0.054230	0.9569	No significant effect (Ho accepted)
ISO 14001 Certification (X3)	-0.006303	-	0.2216	No significant effect (Ho accepted)

F-statistic = 5.059878 > F-table = 2.51. Prob(F-statistic) = 0.003245 < 0.05 →

Environmental performance, environmental disclosure, and ISO 14001 certification jointly have a significant effect on financial performance.

Discussion

The regression results show that environmental performance (X1) has a positive and significant effect on financial performance. This finding supports stakeholder theory, which argues that firms addressing environmental concerns gain legitimacy and investor trust. It also aligns with signaling theory, as strong PROPER ratings send positive signals to external stakeholders regarding corporate responsibility.

In contrast, environmental disclosure (X2) was found to have no significant effect. This suggests that voluntary disclosure alone may not be sufficient to influence investor decisions, particularly when the quality or depth of disclosure is limited. The result contrasts with studies that found positive impacts, indicating that disclosure effectiveness may depend on industry visibility and stakeholder awareness.

Similarly, ISO 14001 certification (X3) showed no significant effect. Although certification demonstrates compliance with international environmental standards, its financial benefits may only materialize in the long term. In the short term, implementation costs could outweigh immediate gains.

Finally, the F-test results confirm that the three variables collectively influence financial performance. This supports the triple bottom line framework, where profit, people, and planet must be integrated to achieve sustainable corporate value.

4. Conclusion

The results of this study demonstrate that environmental performance has a significant positive effect on financial performance, while environmental disclosure and ISO 14001 certification individually show no significant impact. However, when examined simultaneously, the three variables collectively influence financial performance, supporting the triple bottom line framework that integrates profit, people,

and planet. This finding reinforces stakeholder and signaling theories, highlighting that substantive environmental practices such as strong PROPER ratings are more effective in enhancing firm value compared to symbolic disclosure or certification.

The implications of this research are twofold. Academically, it contributes to sustainability and accounting literature by clarifying the debated relationship between environmental initiatives and financial outcomes in the Indonesian context. Practically, it suggests that managers should prioritize improving actual environmental performance rather than relying solely on disclosure or certification, while policymakers should strengthen regulations to ensure that reporting and certification reflect substantive practices. Nevertheless, this study has limitations, particularly the relatively low explanatory power (15%), indicating that many other factors influence financial performance. Future research is recommended to incorporate additional variables such as corporate governance, market dynamics, and reputational measures, as well as to employ mixed-method approaches to capture qualitative insights into managerial motivations and stakeholder perceptions.

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