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Green Accounting and Corporate Governance Effects on Mining Financial Performance

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Abstract

This study investigates how green accounting practices and good corporate governance mechanisms affect financial outcomes in Indonesian mining corporations listed on the Indonesia Stock Exchange in 2021–2023. Employing quantitative methodology, we analyzed secondary data from 19 purposively selected companies' annual reports using SPSS version 26 path analysis. Results demonstrate that green accounting negatively but insignificantly influences financial performance (p=0.805), while good corporate governance shows significant positive effects (p=0.013). Combined, both variables significantly impact financial outcomes (p=0.030). These findings suggest integrating green accounting with robust governance frameworks enhances organizational performance. Mining companies should strengthen governance implementation and incorporate environmental accounting into strategic sustainability planning.

Keywords: *Green Accounting, Corporate Governance, Financial Performance, Mining Companies, Sustainability*

Introduction

Financial performance constitutes a fundamental determinant of mining company success, influencing stakeholders including shareholders, management teams, and workforce. Contemporary research characterizes financial performance as organizational financial condition within specific periods, particularly regarding capital acquisition and allocation, measured through adequacy, liquidity, and profitability indicators (Thompson & Anderson, 2020). Organizations employ financial ratios to evaluate resource management effectiveness and efficiency. Profitability ratios assess profit generation capacity, liquidity measures short-term obligation fulfillment capability, while solvency indicates long-term debt servicing ability. These analytical tools enable management to identify financial strengths and weaknesses for strategic decision-making.

Mining corporations' inherent relationship with natural resource extraction necessitates heightened attention to environmental and social considerations throughout operational processes. Consequently, Green Accounting implementation becomes essential for minimizing ecological impacts. This approach reduces negative environmental consequences from corporate activities (Martinez & Rodriguez, 2021). Green Accounting represents an integrated accounting framework incorporating social and environmental costs into financial statements, revealing actual environmental impacts from business operations (Chen & Liu, 2022).

Recent studies present conflicting evidence regarding Green Accounting's influence on financial performance. Research indicates positive effects on Return on Assets (Johnson & Lee, 2023), while alternative findings suggest insignificant financial impact (Kim et al., 2021). However, environmental cost documentation reflects corporate sustainability commitment, representing crucial considerations for investor decision-making processes.

The Indonesian government promotes corporate environmental compliance through the PROPER (Public Disclosure Program for Environmental Compliance) initiative administered by the Ministry of Environment and Forestry. PROPER evaluates corporate environmental performance across five color categories: Black, Red,

Blue, Green, and Gold. Published through annual reports, these assessments encourage performance improvements, potentially enhancing corporate reputation and long-term financial outcomes.
PROPER functions as both monitoring mechanism and motivational instrument, encouraging enhanced environmental stewardship and community engagement. This transparent evaluation system incentivizes companies to improve rankings and demonstrate social responsibility. Further investigation is required to understand factors causing divergent research results regarding Green Accounting's financial performance effects and analyze corporate motivations for PROPER participation. Findings can inform governmental policy improvements in environmental management and corporate sustainability domains.

Literature Review

Legitimacy Theory

Corporate legitimacy represents a critical aspect of business operations, providing legal protection and public recognition (Davis & Brown, 2020). Organizational legitimacy serves as an essential resource for corporate survival and sustained operations (Garcia & Smith, 2021). Social legitimacy is achieved when corporate activities align with prevailing societal values and norms (Wilson & Taylor, 2022). Establishing legitimacy requires building strong community relationships and implementing corporate governance principles including transparency, accountability, and responsibility (White & Green, 2023).

Financial Performance

Financial performance reflects comprehensive internal organizational functioning, observable through financial positioning at specific time points, particularly regarding financing and fund allocation aspects, measured via capital adequacy, liquidity, and profitability indicators (Anderson et al., 2020). Superior financial performance quality is essential for supporting corporate operations. Assessment employs dual approaches: financial performance indicators and non-financial performance metrics (Harris & Nelson, 2021).

Green Accounting

Green Accounting represents a contemporary accounting approach integrating environmental considerations into corporate financial recording and reporting processes (Miller & Cooper, 2022). This concept emphasizes efficient and effective sustainable resource utilization throughout business activities, enabling organizations to balance economic growth with environmental conservation while delivering enhanced stakeholder and societal value (Turner & Evans, 2023). PROPER evaluates corporate environmental management performance based on established parameters, assigning Gold, Green, Blue, Red, or Black ratings reflecting environmental compliance levels.

Good Corporate Governance Mechanism

Good Corporate Governance (GCG) constitutes systematic structures implemented by corporations to enhance accountability and achieve long-term success while addressing stakeholder interests comprehensively (Parker & Adams, 2024). Applying GCG principles—transparency, accountability, responsibility, independence, and fairness—proves essential for resolving internal organizational conflicts (Morgan & Clark, 2020).

Hypotheses Development

The Effect of Green Accounting on Financial Performance

Green Accounting represents an integrated framework incorporating environmental costs and benefits into corporate financial reporting systems. Companies implementing comprehensive environmental accounting

practices demonstrate enhanced sustainability performance, potentially translating into improved financial outcomes through operational efficiencies and enhanced stakeholder confidence. Environmental accounting enables organizations to identify cost-saving opportunities through waste reduction, energy efficiency improvements, and resource optimization. Research demonstrates that environmental accounting practices positively influence financial performance by improving corporate reputation and reducing regulatory compliance costs (Johnson & Lee, 2023; Martinez & Rodriguez, 2021).

H_1: Green Accounting has a positive effect on financial performance.

The Effect of Good Corporate Governance on Financial Performance

Good Corporate Governance mechanisms establish systematic frameworks ensuring accountability, transparency, and effective oversight in corporate decision-making processes. Strong governance structures reduce agency costs by aligning managerial incentives with shareholder interests, promoting value-maximizing strategies. Enhanced governance quality signals superior management capability to external stakeholders, reducing information asymmetry and lowering capital costs. Institutional ownership concentration strengthens monitoring effectiveness, encouraging efficient resource allocation and strategic planning. Studies confirm that robust governance mechanisms significantly enhance financial performance through improved operational efficiency and stakeholder confidence (Turner & Cooper, 2021; Patel & Singh, 2022).

H_2: Good Corporate Governance has a positive effect on financial performance.

Simultaneous Effects

Financial performance results from complex interactions among multiple organizational factors rather than isolated individual influences. Green Accounting and Good Corporate Governance represent complementary mechanisms that jointly shape corporate outcomes. Environmental accounting practices embedded within strong governance frameworks create synergistic effects, transforming sustainability initiatives from compliance activities into strategic value drivers. Effective governance ensures environmental investments align with long-term strategic objectives, while environmental accounting provides transparent performance metrics for stakeholder evaluation. Research demonstrates that Green Accounting and Good Corporate Governance simultaneously influence financial performance, supporting the hypothesis that combined implementation yields superior outcomes (Morgan & Clark, 2022; White & Green, 2023).

H_3: Green Accounting and Good Corporate Governance simultaneously have a positive effect on financial performance.

Research Design

This study employs a quantitative research approach utilizing a causality design to examine relationships between independent variables (Green Accounting and Good Corporate Governance) and the dependent variable (Financial Performance). The research adopts a positivist paradigm, emphasizing objective measurement and statistical analysis of relationships among variables.

Data Types and Sources

This research utilizes secondary data obtained from publicly available corporate disclosures. Secondary data comprises historical information previously collected and published by organizations for various purposes. Data sources include:

1. PROPER Rating Data: Environmental performance ratings accessed through the Ministry of Environment and Forestry website (https://proper.menlhk.go.id/proper/) for the period 2021-2023.
2. Financial Statement Data: Audited annual financial reports of mining companies accessed through:
    - Indonesia Stock Exchange official website (www.idx.co.id)
    - Financial Services Authority portal (www.ojk.go.id)
3. Corporate Governance Data: Institutional ownership information obtained from annual reports and corporate governance disclosures published on company and regulatory websites.

Population and Sample

Population

The research population consists of all mining sector companies listed on the Indonesia Stock Exchange (IDX) during the observation period 2021-2023. The mining sector was selected due to its significant environmental impact and regulatory requirements for environmental management disclosure.

Sample

Sample selection employs purposive sampling technique based on predetermined criteria ensuring data completeness and relevance. The sampling criteria include:

1. Mining companies consistently listed on the Indonesia Stock Exchange throughout 2021-2023 without delisting or suspension periods
2. Companies publishing complete annual financial reports and sustainability disclosures for all observation years (2021-2023)
3. Companies participating in the PROPER program and receiving environmental performance ratings during the observation period
4. Companies reporting positive net income (profitability) during 2021-2023
5. Companies providing complete institutional ownership information in annual reports

Based on these criteria, 19 mining companies qualified as research samples, generating 57 observations over the three-year period (19 companies × 3 years).

Data Processing

Data analysis employs IBM SPSS Statistics Version 26, a comprehensive statistical software package enabling regression analysis, and hypothesis testing. The software ensures computational accuracy and provides detailed statistical output for interpretation.

Results and Discussion

Table 1. Test Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.083	8.758		.580	.564
	Green Accounting	-.612	2.460	-.036	-.249	.805
	Good Corporate Governance	.188	.073	.375	2.589	.013

Source: SPSS 26 Data Processing, 2025

Based on regression analysis results, the multiple linear regression model between independent and dependent variables is expressed as:

Financial Performance = 5.083 - 0.612 GA + 0.188 GCG + ε

Interpretation of regression coefficients:

1. The constant value of 5.083 indicates that when Green Accounting and Good Corporate Governance values remain unchanged (constant), Financial Performance equals 5.083.
2. The Green Accounting coefficient (β_1) of -0.612 demonstrates that each one-unit (1%) decrease in Green Accounting value results in a 0.612 decrease in Financial Performance, assuming other independent variables remain constant.
3. The Good Corporate Governance coefficient (β_2) of 0.188 indicates that each one-unit (1%) increase in GCG value results in a 0.188 increase in Financial Performance, assuming other independent variables remain constant.

Table 2. Test Coefficient Determination (R^2)

Model	R	R Square	Adjusted R Square
1	.362[a]	.131	.096

Source: SPSS 26 Data Processing, 2025

The determination coefficient (Adjusted R Square) value is 0.096 or 9.6%, indicating that Green Accounting and Good Corporate Governance variables explain 9.6% of Financial Performance variation, while the remaining 90.4% is influenced by other variables not included in this regression model.

Discussion

Green Accounting Effect on Financial Performance

Empirical findings demonstrate that Green Accounting exerts negative and insignificant influence on mining company financial performance (t = -0.249, p = 0.805). This result indicates environmental accounting practices do not directly translate into immediate financial returns. Green Accounting implementation requires substantial initial investments in environmental management systems, monitoring technologies, and compliance documentation without generating immediate revenue streams (Ahmed & Hassan, 2023). Mining companies face short-term cost increases from environmental protection measures, including pollution control equipment, waste treatment facilities, and ecological restoration programs. These expenditures reduce immediate profitability metrics, explaining the negative coefficient observed.

However, environmental accounting's insignificance suggests investors may not fully value sustainability practices in current market conditions. The Indonesian mining sector operates in contexts where environmental regulations remain developing, potentially limiting market rewards for proactive environmental management (Jackson & Wright, 2022). Long-term benefits from enhanced reputation, regulatory compliance, and stakeholder trust may not materialize within the three-year study period.

Good Corporate Governance Effect on Financial Performance

Good Corporate Governance demonstrates significant positive influence on financial performance (t = 2.589, p = 0.013), confirming robust governance frameworks enhance organizational outcomes. Strong governance

mechanisms reduce agency costs through improved monitoring and alignment of managerial incentives with shareholder interests (Turner & Cooper, 2021). Institutional ownership concentration promotes effective oversight, encouraging management to pursue value-maximizing strategies rather than self-interested behaviors. Transparent governance structures enhance investor confidence, reducing information asymmetry and lowering capital costs. Companies with superior governance practices attract institutional investors seeking stable, well-managed investments, improving market valuations (Patel & Singh, 2022). Enhanced accountability mechanisms ensure resources are allocated efficiently, improving operational performance and profitability. The positive GCG effect underscores governance quality as fundamental for sustainable financial success in mining sectors.

Simultaneous Effect Analysis

Combined analysis reveals Green Accounting and Good Corporate Governance simultaneously significantly influence financial performance ($p = 0.030$), indicating complementary relationships between environmental accounting and governance mechanisms. While Green Accounting alone shows limited impact, its integration within strong governance frameworks creates synergistic effects. Effective governance ensures environmental initiatives align with strategic objectives, transforming sustainability practices from cost centers into value-creating activities (Morgan & Clark, 2022).

The simultaneous significance suggests comprehensive management approaches yield superior outcomes compared to isolated interventions. Companies implementing both environmental accounting and governance improvements signal commitment to stakeholder interests beyond short-term profit maximization, potentially attracting socially responsible investors and enhancing long-term competitive positioning (White & Green, 2023).

Conclusion

1. Green Accounting partially exerts negative and insignificant effects on mining company financial performance listed on the Indonesia Stock Exchange. Therefore, the first hypothesis is rejected.
2. Good Corporate Governance partially demonstrates positive and significant effects on mining company financial performance listed on the Indonesia Stock Exchange. Therefore, the second hypothesis is accepted.
3. Green Accounting and Good Corporate Governance simultaneously significantly influence mining company financial performance listed on the Indonesia Stock Exchange. Therefore, the third hypothesis is accepted.
4. Green Accounting and Good Corporate Governance explain 9.6% of financial performance variation, with the remaining 90.4% influenced by other variables not included in this regression model.

Recommendations

For Management:

1. Strengthen Good Corporate Governance implementation through enhanced institutional ownership and board independence
2. Integrate Green Accounting practices into long-term strategic planning rather than isolated compliance activities
3. Develop comprehensive sustainability frameworks combining environmental management with governance excellence

4. Communicate environmental initiatives effectively to investors, emphasizing long-term value creation potential

For Future Research:

1. Extend observation periods beyond three years to capture long-term effects of environmental accounting practices
2. Incorporate additional variables including firm size, leverage, and market conditions
3. Examine moderating effects of regulatory stringency on Green Accounting-performance relationships
4. Conduct cross-sectional comparisons across different mining sub-sectors

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