The Influence of Environmental, Social, and Governance Factors on Financial Performance: A Comprehensive Study on Corporate Diversity, Board Structure, and Transparency

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Abstract. This research investigates how environmental, social, and governance (ESG) dimensions influence corporate financial performance, with particular emphasis on Return on Assets (ROA). Utilizing data from 190 publicly traded firms, the analysis examines the effects of environmental performance, board diversity, board size, and social disclosure on ROA. The results indicate a positive link between environmental performance and financial performance, whereas social disclosure and board size show limited impact. By contributing to the literature on ESG integration and corporate outcomes, the study provides actionable insights for executives and policymakers aiming to improve corporate governance. It further addresses potential directions for governance reforms, including optimizing board structures and reinforcing environmental oversight practices.

Keywords: ESG, ROA, Environmental Performance, Board Diversity, Board Size, Social Disclosures

1 Introduction

1.1 Background

In recent years, corporate governance has increasingly incorporated environmental, social, and governance (ESG) factors, driven by investor demand and regulatory pressure [1], [2][3]. ESG-related governance practices, such as board diversity and environmental performance, are often linked to financial outcomes such as profitability and firm value [4][5][6]. Incorporating these factors into corporate strategy is viewed as essential for effective risk management, ensuring long-term sustainability, and strengthening corporate reputation.

Although the body of research on ESG factors is expanding, the precise influence of governance elements—such as board size, diversity, and social disclosure—on financial performance is still not

ICWSDGs 2024, September 09-10, Banjarmasin, Indonesia

DOI 10.4108/eai.9-9-2024.2359094

clearly defined. This study aims to add to the ongoing discussion by investigating how corporate governance variables relate to ROA, a widely recognized indicator of financial achievement.

1.2 Research Questions

This investigation is framed around the following key questions:
a. In what ways does environmental performance affect ROA?
b. How do board size and board diversity contribute to financial performance?
c. To what extent does social disclosure shape financial performance?

1.3 Objectives

The objectives of this research are to:

a. Assess the impact of environmental performance on financial success.
b. Investigate the relationship between board diversity, board size, and ROA.
c. Determine the role of social disclosure in corporate profitability.

2 Literature Review

2.1 Environmental Performance

Research has demonstrated that strong environmental governance is positively associated with firm financial performance. Firms with proactive environmental strategies tend to experience better financial outcomes, particularly in industries with high environmental risks, such as energy and manufacturing [7], [8]. Environmental performance also mitigates risk and promotes innovation, enhancing competitive advantage[9], [10].

2.2 Board Diversity and Financial Performance

A substantial body of research demonstrates that board diversity—particularly gender diversity—can enhance a company's performance [11]. Gender-diverse boards bring a wider range of viewpoints to the decision-making process, promoting innovation and reinforcing the effectiveness of governance practices.Such diversity also enhances social capital, which subsequently boosts financial performance [12], [13], [14]. Furthermore, research points to diversity's role in mitigating risk and enhancing organizational resilience [12], [15], [16].

2.3 Social Disclosure and Financial Outcomes

Social disclosure, which includes transparency about a firm's social responsibility initiatives, can influence a company's reputation and investor confidence [17]. However, the direct impact on financial outcomes remains debated. While social disclosures can enhance firm valuation through reduced information asymmetry, the financial gains are often long-term and indirect [18], [19], [20]. Additionally, firms that disclose more social responsibility initiatives are often better positioned to build trust with stakeholders, which could lead to improved financial outcomes in the future [15], [19], [21] [22], [23].

3 Research Methodology

3.1 Data and Sample

This study utilizes a dataset of 190 publicly listed firms, examining governance-related factors—environmental performance, board size, diversity, and social disclosure—alongside financial performance measured through ROA. The information was sourced from annual reports and ESG disclosures over a five-year period spanning 2019 to 2023.

3.2 Variables

Dependent Variable:
Return on Assets (ROA), representing the measure used to assess financial performance.
Independent Variables:

a. Environmental Performance (X1): A rating indicating the extent of environmental sustainability efforts undertaken by the company.
b. Board Size (X5): The total count of directors serving on the company's board.
c. Gender Diversity (X3): The ratio of female members to the total board composition.
d. Social Disclosure (X2): The proportion of CSR-related information disclosed within the firm's annual reports.

3.3 Statistical Methods

This study applies multiple linear regression to investigate the relationships between the independent variables—environmental performance, board diversity, board size, and social disclosure—and the dependent variable, ROA. In addition, descriptive statistical analysis and correlation testing are carried out to assess the interrelationships among these factors.

4 Results

4.1 Descriptive Statistics

Table 1. presents the descriptive statistics for the variables examined in this study.

Variable	Mean	Std. Dev	Min	Max
Environmental Performance	75.21	15.34	30	100
Social Disclosure	56.43	12.89	30	85
Board Size	5.21	2.45	3	12
Gender Diversity (%)	18.7	10.42	0	50
ROA (%)	12.47	6.23	-3	28

The average ROA for the companies in the sample is 12.47%, with environmental performance scores averaging 75.21. Gender diversity, on average, represents 18.7% of board members, indicating room for improvement in gender representation.

4.2 Correlation Analysis

Table 2. Displays the correlation matrix illustrating the relationships among the variables.

Variable	ROA	Env. Performance	Social Disclosure	Board Size	Gender Diversity
ROA	1.000	0.350	0.017	-0.004	0.210
Environmental Performance	0.350	1.000	0.111	0.258	0.050
Social Disclosure	0.017	0.111	1.000	0.016	0.170
Board Size	-0.004	0.258	0.016	1.000	0.042
Gender Diversity	0.210	0.050	0.170	0.042	1.000

The correlation results indicate a strong positive link between environmental performance and ROA ($r = 0.35$), implying that organizations demonstrating stronger environmental practices often report higher financial returns. In addition, gender diversity shows a positive association with ROA ($r = 0.21$), underscoring the role of varied board composition in enhancing profitability.

4.3 Regression Analysis

Table 3. Shows the results of the multiple regression model, detailing the influence of each independent variable on ROA.

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Constant	-0.0317	0.053	-0.597	0.551
Environmental Performance	0.0523	0.010	5.334	0.000**
Social Disclosure	-0.0001	0.000	-0.344	0.731
Board Size	-0.0029	0.002	-1.436	0.153
Gender Diversity	0.0251	0.012	2.092	0.038*

The regression analysis reveals that environmental performance exerts a significant positive influence on ROA ($p < 0.01$). Gender diversity also emerges as a significant determinant of financial performance ($p < 0.05$). In contrast, social disclosure and board size exhibit no significant impact on ROA.

5 Discussion

5.1 Interpretation of Results

The study's findings offer compelling evidence that environmental performance is a key driver of financial success. Firms that focus on environmental initiatives generally attain greater profitability, aligning with prior research. This supports the view that sustainability serves not only as an ethical obligation but also as a strategic advantage for financial performance.

Gender diversity on corporate boards also has a positive impact on financial performance, aligning with the growing body of literature that emphasizes the benefits of diverse decision-making bodies. These results suggest that companies with more gender-diverse boards are better equipped to navigate complex business environments and capitalize on opportunities.

Social disclosure and board size, however, do not significantly impact ROA in this study. This may suggest that transparency alone, as measured by social disclosure, is insufficient to drive immediate financial gains. These findings align with studies suggesting that while social disclosures are valuable for long-term trust and stakeholder engagement, they may not result in short-term profitability improvements. Board size, similarly, does not show a significant relationship with financial performance, which could be due to the complexities introduced by larger boards, including slower decision-making processes and coordination issues.

5.2 Practical Implications

For corporate managers, these results highlight the value of embedding environmental sustainability into business strategies. The strong positive link between environmental performance and ROA indicates that companies placing sustainability at the forefront are more likely to enjoy financial benefits. Likewise, policymakers and regulators should persist in promoting and requiring environmental initiatives, strengthening the business rationale for sustainability.

The finding that gender diversity enhances financial performance underscores the importance of fostering diverse leadership teams. Companies should actively work to increase the representation of women and other underrepresented groups on their boards. Diversity brings varied perspectives that can improve decision-making and enhance overall performance, as supported by recent research.

On the other hand, companies should approach social disclosure strategically, recognizing that the financial benefits may take time to materialize. While increased transparency can improve reputation and stakeholder trust, its immediate impact on profitability may be limited. Thus, firms should balance their investment in social reporting with a long-term perspective.

6 Conclusion

This research offers empirical proof that environmental governance and gender diversity significantly influence corporate financial performance. Organizations that emphasize sustainability and promote diverse leadership tend to achieve higher profitability. These results add to the expanding literature supporting the integration of ESG principles into corporate governance.

However, the results also show that not all aspects of governance equally impact financial performance. Social disclosure, while important for building long-term trust, does not have an immediate effect on ROA. Similarly, board size shows no significant relationship with profitability, suggesting that larger boards may not necessarily provide better governance outcomes.

This research has important implications for both corporate managers and policymakers. Companies should prioritize environmental sustainability and diversity as part of their core governance strategies, while policymakers should continue promoting ESG reporting standards and encouraging diversity in corporate leadership.

This study contains several limitations that open avenues for future research:

a. Sample Size and Scope: With its focus on 190 companies, the study's findings may have limited generalizability. Future research should expand to a larger, more diverse sample encompassing a wider range of industries and regions.
b. Time Frame: The analysis covers a five-year period, which may limit insights into long-term trends. Extending the study over a longer timeframe could provide a deeper understanding of how the links between ESG factors and financial performance develop over time
c. Other Governance Factors: This study did not explore other dimensions of governance, such as leadership styles, board independence, or ownership structure. Future studies could

investigate these factors further to offer a more holistic view of the relationship between governance and performance.

d. Qualitative Governance Factors: Future studies could incorporate qualitative assessments of governance practices, such as leadership effectiveness or decision-making processes, to capture the nuances of how governance influences financial outcomes.

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