



THE UNEQUAL IMPACT OF ESG DIMENSIONS ON FIRM PROFITABILITY: A STUDY FROM THE NGO INDEPENDENT DATABASE

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ABSTRACT

This study examines the effect of Environmental, Social, and Governance (ESG) practices on firm financial performance, in companies listed within the NGO Independent Database during the 2021–2023 period. Using panel regression analysis, the results reveal an asymmetric influence of ESG components. The environmental dimension shows no significant impact on ROA, indicating that environmental investments yield benefits primarily in the long term and are not yet reflected in short-term profitability. The social dimension demonstrates a negative and significant effect, suggesting that expenditures on social initiatives may suppress profits in the short run despite their reputational and relational importance. Conversely, the governance dimension exerts a positive and significant effect on profitability, underscoring that strong governance practices enhance efficiency, transparency, and financial outcomes. These findings contribute to ESG scholarship in emerging markets by highlighting the trade-offs between short-term financial performance and long-term sustainability. The results also offer practical implications for corporate managers, investors, and policymakers to strategically balance sustainability goals with profitability.

Keywords: ESG, profitability, environmental performance, social responsibility, corporate governance, NGO Independent Database, emerging markets

1. Introduction

Over the past two decades, global economic development has shifted its focus toward sustainability, driven by the COVID-19 pandemic, energy crises, and climate change, which have accelerated the transformation of the economic and corporate sectors. Companies are increasingly required to report non-financial aspects such as environmental, social, and governance (ESG), represented by ESG indicators and green finance as key factors in company performance (Aydognmus et al., 2022). The Triple Bottom Line concept encourages companies to balance economic, social, and environmental performance simultaneously. ESG implementation is a growing trend that attracts both domestic and international investors (Limijaya, 2014).

Return on Assets (ROA) is often used to measure a company's effectiveness in generating profits from its assets, where a higher ROA indicates better performance and investor prospects (Adyani and Sampurno, 2011). This study analyzes the influence of ESG on ROA in companies listed under the BGK Foundation for the 2021–2023 period, a time when regulatory implementation related to sustainability was actively strengthened. The study aims to contribute both academically and practically by providing insights for companies in designing strategies to integrate sustainability to enhance profitability and long-term competitiveness.

2. Literature Review

This section reviews theories and previous studies related to Environmental, Social, and Governance (ESG) practices and their relationship with company profitability, particularly Return on Assets (ROA). The literature review provides the conceptual basis for hypothesis development and highlights relevant frameworks such as legitimacy theory, agency theory, and ESG reporting practices.

2.1. *Legitimacy Theory*

Legitimacy theory is used to understand how companies disclose social and environmental information, such as corporate social responsibility (CSR) reports or sustainability reports. This theory suggests that companies operate within societal norms and expectations, which influence their behavior. Sustainability reporting serves as a tool to gain legitimacy from stakeholders by demonstrating accountability for environmental, social, and governance performance (Arisanty et al., 2024). The theory emphasizes the importance of transparency and stakeholder engagement, reinforcing the view that ESG practices are essential for long-term business growth.

2.2. *Agency Theory*

Stakeholder theory emphasizes that a company's success depends not only on maximizing shareholder wealth but also on meeting the needs and expectations of various stakeholders, including employees, customers, suppliers, regulators, and the wider community (Freeman, 1984). This theory suggests that companies should actively engage with stakeholders to build trust, enhance reputation, and create long-term value.

3. **Research Methods**

This study employs a quantitative approach by analyzing numerical data measured statistically. The data used in this research are secondary data obtained from annual reports and sustainability reports of banking companies. The use of secondary data improves research efficiency while still requiring thorough verification to ensure validity and relevance (Wahidmurni, 2017).

3.1. *Research Design*

This research applies a quantitative design aimed at testing hypotheses and analyzing relationships between variables based on statistical methods. By focusing on numerical data, the study ensures objectivity and reliability in examining the influence of Environmental, Social, and Governance (ESG) practices on Return on Assets (ROA).

3.2. *Sample*

The sample represents a subset of the population used to collect data and serves as the foundation for making generalizations about the entire population (Fadilah et al., 2023). Proper sample selection is crucial to ensure validity and representativeness of the findings. Therefore, the sampling technique was carefully designed to ensure that each selected member accurately reflects the characteristics of the population.

3.3. *Research Variables*

3.3.1. *Dependent Variable*

According to Marlina Susianti (2024), a dependent variable is one that is assumed to be influenced by other variables. In this study, Return on Assets (ROA) is used as the dependent variable, measured by dividing net income by total assets. Companies with ROA below 0% are excluded from the analysis.

3.3.2. *Independent Variables*

Independent variables are variables assumed to influence the dependent variable, either positively or negatively. This study uses Environmental, Social, and Governance (ESG) as independent variables, with each component evaluated separately to examine their individual effects on ROA.

3.4. *Table*

3.4.1. *Normality Test (Kolmogorov–Smirnov Test)*

The normality test aims to determine whether the residuals in the regression model are normally distributed. One method used is the One-Sample Kolmogorov–Smirnov Test. Based on Table 4.3, the significance value (Asymp. Sig. 2-tailed) is 0.002, which is lower than $\alpha = 0.05$, indicating that the residuals are not normally distributed. However, the Monte Carlo Sig. (2-tailed) value is 0.113, which exceeds 0.05, suggesting that the residuals are normally distributed. The Monte Carlo result is considered more robust for large sample sizes ($N = 186$); thus, it is concluded that the residuals are normally distributed and the regression model meets the normality assumption.

Table 3.4.1

One-Sample Kolmogorov-Smirnov Test			
			Unstandardiz ed Residual
N			186
Normal Parameters^{a,b}	Mean		.0000000
	Std. Deviation		.04730731
Most Extreme Differences	Absolute		.087
	Positive		.087
	Negative		-.052
Test Statistic			.087
Asymp. Sig. (2-tailed)			.002 ^c
Monte Carlo Sig. (2-tailed)	Sig.		.113 ^d
	99% Confidence Interval	Lower Bound	.104
		Upper Bound	.121
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			
d. Based on 10000 sampled tables with starting seed 2000000.			

3.4.2. Heteroscedasticity Test

Based on the test results presented in the table, heteroscedasticity testing was conducted using the Glejser regression test. If the significance value (Sig.) > 0.05, no heteroscedasticity is present; otherwise, if Sig. < 0.05, heteroscedasticity is present. The results indicate no heteroscedasticity in the regression model, as all significance values for the independent variables (X1, X2, X3) exceed 0.05, with Environmental at 0.184, Social at 0.105, and Governance at 0.053. Therefore, it can be concluded that the dataset does not exhibit heteroscedasticity.

Table 3.4.2

<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>t</i>	<i>Sig.</i>
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>		
1	<i>(Constant)</i>	.036	.005		7.482	.000
	<i>X1</i>	-.017	.013	-.190	-1.333	.184
	<i>X2</i>	-.025	.015	-.269	-1.629	.105
	<i>X3</i>	.041	.021	.350	1.952	.053
a. Dependent Variable: ABS_RES1						

3.4.3. Multicollinearity Test

According to Ghozali (2018), the multicollinearity test aims to detect high correlations among independent variables that may interfere with estimation accuracy. In this study, all Tolerance values exceed 0.1, and all VIF values are below 10, indicating that no multicollinearity exists in the regression model.

Table 3.4.3

<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>	<i>Collinearity Statistics</i>	
		<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>Tolerance</i>	<i>VIF</i>
1	<i>(Constant)</i>	-.022	.025			
	<i>X1</i>	-.005	.020	-.032	.281	3.556
	<i>X2</i>	-.078	.024	-.498	.214	4.672
	<i>X3</i>	.115	.034	.528	.214	4.670

3.4.4. Coefficient of Determination

The R Square value of 0.036 indicates that the independent variables Environmental (X1), Social (X2), and Governance (X3) explain 3.6% of the variation in the dependent variable, while the remaining

96.4% is influenced by factors outside the model. The Adjusted R Square value of 0.020 reflects adjustments based on the number of independent variables included in the model.

Table 3.4.4

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.190 ^a	.036	.020	.10096
a. Predictors: (Constant), X1, X2, X3				
b. Dependent Variable: Y				

3.4.5. Multiple Linear Regression Test

The multiple linear regression test was conducted to examine the partial effects of each independent variable on the dependent variable. The results show that the Environmental variable (X1) has no significant effect on Y, as its significance value exceeds 0.05. In contrast, the Social variable (X2) has a negative and significant effect, indicating that an increase in social value reduces Y. Meanwhile, the Governance variable (X3) has a positive and significant effect, showing that good governance can enhance Y.

Table 3.4.5

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1	(Constant)	-.022	.025		-.893
	X1	-.005	.020	-.032	-.238
	X2	-.078	.024	-.498	-3.222
	X3	.115	.034	.528	3.419
a. Dependent Variable: Y					

3.4.6. Simultaneous Test (F-Test)

The F-test result of 4.636 with a significance level of 0.004 indicates that the variables Environmental, Social, and Governance collectively have a significant effect on Return on Assets (ROA). This suggests that the regression model used is appropriate for further analysis as it meets the significance criteria.

Table 3.4.6

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.032	3	.011	4.636	.004 ^b
	Residual	.414	182	.002		
	Total	.446	185			
a. Dependent Variable: Y						
b. Predictors: (Constant), X1, X2, X3						

3.4.7. Partial Test (t-Test)

Based on the partial t-test results presented in Table 4.9, the following conclusions are drawn:

a. Environmental (X1)

The coefficient is -0.005, with a t-value of -0.238 and a significance level of 0.812. As the significance value is greater than 0.05, it has no significant effect on ROA.

b. Social (X2)

The coefficient is -0.078, with a t-value of -3.222 and a significance level of 0.002. As the significance value is less than 0.05, it has a negative and significant effect on ROA.

c. Governance (X3)

The coefficient is 0.115, with a t-value of 3.419 and a significance level of 0.001. As the significance value is less than 0.05, it has a positive and significant effect on ROA.

Table 3.4.7
Coefficients^a

	Model	t	Sig.
1	(Constant)	-.893	.373
	X1	-.238	.812
	X2	-3.222	.002
	X3	3.419	.001
a. Dependent Variable: Y			

4. Research Findings and Discussion

4.1. *The Effect Environmental on ROA*

Based on the findings, environmental performance has no significant effect on ROA. This is consistent with Annisawanti et al. (2024), who state that environmental investments require large upfront costs, leading to decreased short-term profitability. According to agency theory, management and investors tend to prioritize short-term financial results, perceiving environmental initiatives as expenses. However, from a legitimacy theory perspective, environmental performance remains crucial for maintaining corporate reputation and sustainability (Setyaningsih, 2016). During the observation period, the positive impact of environmental initiatives was not yet evident because their benefits are long-term in nature and not reflected in short-term financial performance such as ROA.

4.2. *The Effect of Social on ROA*

Social disclosure has a negative and significant effect on ROA (coefficient = -0.078; $t = -3.222$; sig. = 0.002), supporting the hypothesis that social investments can reduce a company's financial performance. This is due to high costs and potential inefficiencies during the initial implementation of social programs. While these programs are important for meeting stakeholder expectations and enhancing transparency, they require substantial funding. Therefore, management should carefully balance social investments with their financial impacts through cost-benefit analysis, operational efficiency, and integration into core business strategies (Rohman et al., 2024).

4.3. *The Effect of Governance on ROA*

Governance has a positive and significant effect on ROA (coefficient = 0.115; $t = 3.419$; sig. = 0.001), demonstrating that good corporate governance enhances financial performance. Governance practices that emphasize transparency, accountability, and effective risk management promote efficiency, strengthen stakeholder trust, and improve financial reporting (Rohman et al., 2024). Furthermore, robust governance reduces financial, operational, legal, and reputational risks, thereby supporting long-term profitability and sustainability (Annisawanti et al., 2024).

5. Conclusion

Based on the analysis of companies listed in the BGK Foundation during the 2021–2023 period, this study concludes that Environmental initiatives have no significant effect on ROA, as their benefits are long-term and not yet reflected in short-term profitability. Social programs have a negative and significant impact on ROA due to high implementation costs and inefficiencies that reduce short-term earnings. In contrast, Governance demonstrates a positive and significant effect on ROA, emphasizing that strong governance practices such as transparency, accountability, and effective risk management—can enhance stakeholder trust and support financial performance.

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