SIMBA

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The Effect of Environmental, Social and Governance (ESG) on Financial Performance with Company Size as a Moderating Variable

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Abstrak

Penelitian ini bertujuan untuk menganalisis pengaruh Environmental, Social, and Governance (ESG) terhadap kinerja keuangan perusahaan dengan ukuran perusahaan sebagai variabel moderasi. Penelitian menggunakan pendekatan kuantitatif dengan sampel perusahaan yang terdaftar di Bursa Efek Indonesia selama periode observasi tertentu. Data diperoleh melalui laporan tahunan dan laporan keberlanjutan yang kemudian dianalisis menggunakan regresi berganda dengan uji interaksi. Hasil penelitian menunjukkan bahwa ESG memiliki pengaruh positif terhadap kinerja keuangan, yang tercermin dari rasio profitabilitas perusahaan. Namun, peran ukuran perusahaan sebagai variabel moderasi memperlihatkan bahwa hanya perusahaan dengan ukuran besar yang mampu memaksimalkan penerapan ESG untuk meningkatkan kinerja keuangan. Temuan ini mengindikasikan bahwa semakin besar perusahaan, semakin efektif ESG diterapkan dalam meningkatkan nilai dan daya saing. Penelitian ini memberikan saran agar perusahaan, khususnya yang berskala kecil dan menengah, mulai memperhatikan penerapan ESG secara berkelanjutan sehingga dapat meningkatkan kinerja keuangan sekaligus memberikan manfaat bagi pemangku kepentingan dalam jangka panjang.
Kata Kunci: ESG, kinerja keuangan, ukuran perusahaan, moderasi, profitabilitas

Abstract

This study aims to analyze the effect of Environmental, Social, and Governance (ESG) on firm financial performance with firm size as a moderating variable. A quantitative approach was employed using a sample of companies listed on the Indonesia Stock Exchange during the observation period. Data were collected from annual and sustainability reports and analyzed through multiple regression with an interaction test. The findings reveal that ESG has a positive impact on financial performance, as reflected in profitability ratios. However, firm size as a

moderating variable indicates that only large firms are able to optimize ESG implementation to improve financial outcomes. These results suggest that the larger the firm, the more effective ESG practices are in enhancing corporate value and competitiveness. This study suggests that small and medium-sized firms should also adopt sustainable ESG practices to improve financial performance while providing long-term benefits for stakeholders.
***Keywords**:ESG, financial performance, firm size, moderation, profitability*

A. INTRODUCTION

In the era of globalization and competitive markets, companies are required to sustain their business while improving their competitiveness. Financial performance serves as a key indicator of success because it reflects the effectiveness of management in utilizing assets, sales, and capital to generate profits. One of the most widely used measurements of financial performance is Return on Assets (ROA), which shows how efficiently firms convert their resources into earnings. A higher ROA reflects stronger managerial ability to create value for stakeholders. Thus, identifying the factors that influence financial performance is an important issue for corporate survival (Sidarta *et al*., 2023).

The adoption of Environmental, Social, and Governance (ESG) practices has become central to corporate strategy in recent years (Suhendry, 2021). Although ESG is designed to support long-term growth, it often requires substantial financial investments that may reduce short-term profitability(Kuswanto et al., 2025). Companies face pressure in balancing sustainability initiatives with financial results, particularly when stakeholders expect rapid improvements in both (Kusuma, 2021). This paradox raises the question of whether ESG truly contributes to enhanced financial performance or merely increases operating costs. Such contradictions highlight the need for further research on the relationship between ESG and profitability(Pramadhia & Nainggolan, 2025).

The urgency of this research is emphasized by the regulatory environment in Indonesia, where sustainability reporting is mandated under OJK Regulation No. 51/2017. Basic materials companies, which are highly resource-intensive, are particularly exposed to environmental and

social risks, making ESG adoption crucial. Stakeholders demand greater accountability from these firms in demonstrating both responsibility and efficiency. However, whether ESG adoption actually strengthens financial performance in this sector remains unclear. Therefore, empirical testing in the Indonesian context is both timely and necessary (Agustini, 2024).

Previous studies provide mixed evidence on the link between ESG and financial outcomes. Some researchers find that environmental and social efforts improve profitability by enhancing reputation and efficiency (Rojaba et al., 2025). Others suggest that ESG adoption may have no significant effect or may even burden companies with higher costs (Naela & Muhammad, 2024). Governance has been consistently emphasized as an essential factor for transparency, accountability, and long-term profitability (Fernanda & Wahyuningsih,2025) These differing results indicate that contextual variables may shape the relationship. Consequently, firm-specific characteristics deserve further exploration in ESG studies.

This study introduces novelty by focusing on basic materials companies listed on the Indonesia Stock Exchange between 2019 and 2023. While earlier studies primarily investigated direct relationships, this research includes firm size as a moderating variable. Firm size represents the scale and resources available to companies, which may strengthen or weaken ESG's influence on profitability. Larger firms often have better capacity to implement sustainable strategies, thereby reinforcing the ESG–performance connection. By considering firm size, the research provides deeper insights into how corporate characteristics interact with ESG adoption (Fransiska *et al*., 2025)

The focus of this study is to analyze how environmental, social, and governance dimensions influence financial performance, while also testing whether firm size moderates these effects. The objectives are to examine whether environmental practices, social initiatives, and governance mechanisms improve profitability and whether larger firms benefit more from ESG adoption. The research also aims to validate theoretical perspectives such as stakeholder theory and legitimacy theory in explaining corporate behavior. In doing so, it bridges the gap between

regulatory requirements and corporate strategy. This ensures that the study contributes both academically and practically (Zulfa & Marsono, 2023).

B. METHOD

This research was conducted on manufacturing companies in the basic materials sector listed on the Indonesia Stock Exchange during 2019–2023, with the study carried out from March to July 2025. The research uses a quantitative approach to examine the effect of Environmental, Social, and Governance (ESG) dimensions on financial performance, with firm size as a moderating variable. The population includes all basic materials companies listed on the IDX, while the sample was determined using purposive sampling with specific criteria, resulting in 162 firm-year observations. The study relies on secondary data obtained from annual and sustainability reports. Data analysis was performed using SPSS version 24, applying descriptive statistics, classical assumption tests, multiple linear regression, Moderated Regression Analysis (MRA), and hypothesis testing (t-test, F-test, R^2, and interaction moderation tests) to assess both the direct and moderating effects of ESG on financial performance.

C. RESULTS AND DISCUSSIONS

1. Data Description

The data used in this study consists of basic materials companies listed on the Indonesia Stock Exchange (IDX) during 2019–2023. The sample was drawn from annual reports and sustainability reports obtained from the IDX's official website and the companies' official websites. Companies included in the sample met specific criteria, namely not being delisted, not reporting financial statements in U.S. dollars, and consistently publishing both financial and sustainability reports during the study period. Based on purposive sampling, 162 firm-year observations were initially obtained, and after excluding 15 outliers, a total of 147 firm-year data points were analyzed.

2. Descriptive Statistics Test

Table 1. Results of Descriptive Statistics Test

Descriptive Statistics					
Variable	N	Minimum	Maximum	Mean	Std. Deviation
Environmental	162	.032	.903	.42493	.194470
Social	162	.056	.972	.42644	.197014
Governance	162	.231	1.000	.66952	.218567
Financial Performance	162	-.451	.241	.03405	.078023
Firm Size	162	25.214	32.049	28.49464	1.738104
Valid N (listwise)	162				

Source: Processed Data using IBM SPSS Statistics 24

The descriptive statistics show that environmental and social disclosures have moderate averages (0.4249 and 0.4264), while governance records the highest mean (0.6695), indicating stronger emphasis on governance practices. Financial performance (ROA) averages 0.0340, reflecting both gains and losses among firms. Firm size varies considerably with a mean log value of 28.49.

3. Results of the Classical Assumption Test

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		147
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.37413224
Most Extreme Differences	Absolute	.050
	Positive	.050
	Negative	-.035
Test Statistic		.050
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

From table 2, Asymp.sig (2-tailed) shows a value of 0.200 > 0.05, which is greater than 0.05. Therefore, it can be concluded that the residual value or research data is normally distributed.

Table 3. Multicolinierity Test Results

Coefficients[a]			
		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Environmental	.573	1.746
	Social	.674	1.483
	Governance	.716	1.398
	Company Size	.935	1.069
a. Dependent Variable: Financial Performance			

Based on table 3shows the results of the multicollinearity test of the four independent variables with a tolerance value of more than 0.100 and a VIF value of less than 10. So it can be concluded that the regression model in this study does not occur multicollinearity. The environmental variable (X1) has a tolerance value of 0.573 with a VIP of 1.746. The social variable (X2) has a tolerance value of 0.674 with a VIP of 1.483. The governance variable (X3) has a tolerance value of 0.716 with a VIP of 1.398. The company size variable (Z) has a tolerance value of 0.935 with a VIP of 1.069.

Table 4. Autocorrelation Test Results

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.660[a]	.436	.520	.37937	2.160
a. Predictors: (Constant), Environmental, LNZ, LNX2, LNX3					
b. Dependent Variable: LNY					

4.

Based on table 4, the results of the autocorrelation test can be seen using the Durbin-Waston (DW) test with a D value of 2.160 with a DU value of 1.772 and a DL value of 1.6890. With the Durbin-Waston (DW) results, D<4-DU of 2.2278. So this shows there is no autocorrelation.

Table 5. Heteroscedasticity Test Results

Coefficients[a]

Model		t	Sig.
1	(Constant)	15.050	.000
	Environmental	.217	.828
	Social	-2.560	.311
	Governance	1.042	.299
	Company Size	.588	.558

a. Dependent Variable: ABS_RES

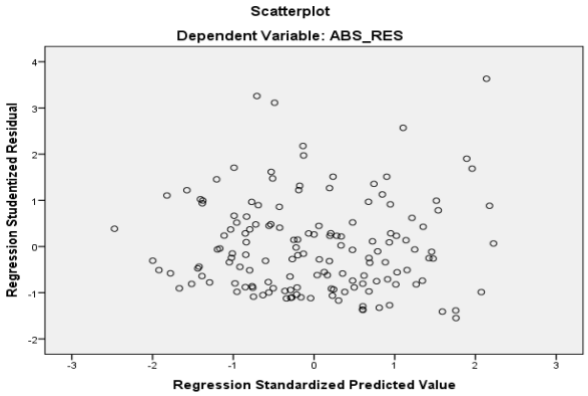

Figure 1. Scatterplot

Based on table 5 shows the results of the heteroscedasticity test which can be seen that the significance value of the Glejser test for the environmental variable (X1) is 0.823, the social variable (X2) is 0.311, the governance variable (X3) is 0.299, and the company size variable (Z) is 0.558. It can also be seen from the points that are spread randomly and do not form a pattern, and the points are spread above or below the 0 point of the Y axis. So it can be concluded that there is no heteroscedasticity in the regression model.

4. Results of Regression Analysis

Table 6. Results of Multiple Linear Regression Analysis

Coefficients[a]				
Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta
1	(Constant)	-.013	.034	
	Environmental	-.335	.041	-.720
	Social	.220	.045	.402
	Governance	.012	.041	.024
a. Dependent Variable: Financial Performance				

Based on table 6, the results of the equation from multiple linear analysis are as follows:

$Y=\beta 0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\epsilon$

Y= -0,013 – 0,335 *Environmental* + 0,220 *Social* + 0,012 *Governance*

The regression results show that when environmental, social, and governance variables are zero, financial performance decreases by –0.013. The environmental variable has a negative coefficient (–0.335), indicating that a 1% increase in environmental performance reduces financial performance by 0.335. In contrast, the social variable has a positive coefficient (0.220), meaning a 1% increase in social performance improves financial performance by 0.220. Similarly, the governance variable also has a positive coefficient (0.012), suggesting that a 1% increase in governance practices enhances financial performance by 0.012.

Table 7. F Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.769	4	3.942	27.392	.000[b]
	Residual	20.436	142	.144		
	Total	36.205	146			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Company Size, Governance, Social, Environmental						

Based on table 10, it can be seen that the ANOVA significance value obtained is 0.00 < 0.05, so it can be concluded that the independent variables environmental, social, governance, and company size have a significant simultaneous effect on the dependent variable.

Table 8. T test Results

Coefficients[a]

Model		t	Sig.
1	(Constant)	-.388	.699
	Environmental	8.200	.000
	Social	4.920	.000
	Governance	.304	.762

a. Dependent Variable: Financial Performance

Based on table 9, the T-test results obtained are as follows: T count > t table = 1.655 The hypothesis testing results show that environmental (H_1) has a significant effect on financial performance, with a significance value of 0.00 < 0.05 and t-value of 8.200 > 1.655, leading to H_1 being accepted. Similarly, the social variable (H_2) also shows a significant positive impact on financial performance, with a significance value of 0.00 < 0.05 and t-value of 4.920 > 1.655, thus H_2 is accepted. In contrast, governance (H_3) has no significant effect, as indicated by a significance value of 0.762 > 0.05 and t-value of 0.304 < 1.655, resulting in H_3 being rejected.

Table 9. Results of the MRA Moderated Regression Test Equation II

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.002	.032		.072	.942
	Environmental	-.366	.039	-.785	-9.427	.000
	Social	.202	.042	.370	4.818	.000
	Governance	.026	.038	.052	.692	.490
	Ukuran Perusahaan	.170	.037	.302	4.631	.000

A. Dependent Variable: Kinerja Keuangan

Y = 0,002 – 0,366 + 0,202 + 0,026 + 0,170.

Table 10. Results of the MRA Moderated Regression Test Equation III

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.008	.033		.239	.812
	Environmental	-.375	.039	-.805	-9.622	.000
	Social	.201	.043	.368	4.721	.000
	Governance	.015	.038	.030	.401	.689
	Ukuran Perusahaan	.180	.038	.320	4.689	.000
	E*UP	.030	.062	.057	2.485	.003
	S*UP	-.010	.076	-.015	2.139	.002
	G*UP	-.010	.055	-.019	-.180	.857

a. Dependent Variable: Kinerja Keuangan

Y= 0,008 - 0,375 + 0,201+ 0,015 + 0,180 + 0.030 – 0,010 – 0,010

Based on table 10, the T-test results obtained are as follows: T count > t table = 1.655. The moderation test results indicate that firm size significantly moderates the relationship between environmental performance and financial performance, with a significance value of 0.003 < 0.05 and t-value of 2.485 > 1.665, leading to H_4 being accepted as quasi moderation. Similarly, firm size also significantly moderates the effect of social performance on financial performance, with a significance value of 0.002 < 0.05 and t-value of 2.139 > 1.665, supporting H_5 as quasi moderation. However, firm size does not moderate the effect of governance on financial performance, as shown by a significance value of 0.857 > 0.05 and t-value of –0.180 < 1.665, resulting in H_6 being rejected as pure moderation.

Table 11. R^2 Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.660[a]	.436	.520	.37937

a. Predictors: (Constant), COMPANY SIZE, GOVERNANCE, SOCIAL, ENVIRONMENTAL

Table 11 shows that the R^2 test result is 0.520, indicating a simultaneous influence of 52%. This demonstrates the significant percentage influence of environmental, social, governance, and company size variables on financial performance. The remaining 48% is partially influenced by variables other than this study.

H1: Environmental and Financial Performance

The study finds that environmental performance has a positive and significant effect on financial performance. This supports legitimacy theory (Suchman, 1995) and stakeholder theory (Freeman, 1984), showing that environmentally responsible firms gain trust, attract investors, and improve reputation. Prior studies by Rojaba et al. (2025), Vefiadytria & Rosyadi (2025), and Sari & Maryama (2024) confirm these findings.

H2: Social and Financial Performance

Social performance also shows a positive and significant effect on financial performance. Companies that invest in employee welfare, CSR, and community development benefit from stronger loyalty, reputation, and operational stability. This result is consistent with research by Fernanda & Wahyuningsih (2025), Cipto & Hersugondo (2024), and Rao et al. (2023).

H3: Governance and Financial Performance

In contrast, governance does not have a significant impact on financial performance. Although governance is crucial for long-term sustainability, its financial effect is limited when implemented symbolically or only for compliance. Similar results were found by Vefiadytria & Rosyadi (2025) and Husada & Handayani (2021).

H4: Firm Size, Environmental, and Financial Performance

Firm size strengthens the relationship between environmental performance and financial performance. Large firms with strong environmental disclosures gain higher investor trust, reputational benefits, and global competitiveness. This result is supported by Cipto & Hersugondo (2024), Rojaba et al. (2025), and Ariasinta et al. (2024).

H5: Firm Size, Social, and Financial Performance

Firm size also strengthens the effect of social performance on financial performance. Larger companies, with greater resources and visibility, gain stronger reputational and financial benefits from social initiatives. This aligns with findings by Maulana et al. (2025) and Fernanda & Wahyuningsih (2023).

H6: Firm Size, Governance, and Financial Performance

However, firm size does not moderate the relationship between governance and financial performance. Governance practices are often less visible to stakeholders, making their financial impact limited. This result is consistent with Gharchia & Mindosa (2023), Qorib & Mulyani (2024), and Ariasinta et al. (2022).

D. CONCLUSIONS

This study investigates the impact of Environmental, Social, and Governance (ESG) factors on financial performance with firm size as a moderating variable, focusing on 102 basic materials companies listed on the Indonesia Stock Exchange during 2019–2023. Using multiple linear regression and MRA with SPSS 24, the results show that environmental and social practices positively influence financial performance, while governance has no significant effect. Furthermore, firm size strengthens the relationship between environmental and social factors with financial performance but does not moderate the effect of governance, indicating that larger companies benefit more from sustainability and social initiatives, whereas governance effectiveness remains limited in driving financial outcomes.

E. SUGGESTIONS

Based on the findings and research limitations, several recommendations can be made. For companies, it is advised to actively improve environmental and social practices, not merely to comply with regulations but also as a long-term business strategy to enhance corporate value. Large companies are encouraged to view governance not as a formality but to strengthen internal controls and transparency to ensure effectiveness. For investors, it is suggested to consider ESG information, particularly environmental and social aspects, as additional factors in assessing a company's performance and risk, while remaining cautious of firms that demonstrate governance only formally without genuine openness and consistency. For future researchers, expanding the study to different industrial sectors may provide deeper insights into the impact of ESG on financial performance. Additionally, incorporating variables such as profitability, leverage, or CSR effectiveness as control or intervening variables, and applying ESG measurement methods based on indices or third-party ratings like Refinitiv, MSCI, or Bloomberg, could improve objectivity in evaluating independent variables.

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