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## The Effect of Environmental, Social, Governance and Financial Factors on Firm Value in Transportation Companies

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**Abstract:** This study examines the effect of Environmental, Social, and Governance practices, capital structure, and profitability on firm value in transportation and logistics companies listed on the Indonesia Stock Exchange during 2020–2024, with firm growth and investment decisions as moderating variables. The research aims to clarify whether sustainability initiatives independently enhance firm value or depend on financial discipline and investment governance. Using a quantitative approach with panel data regression analysis and moderated regression analysis, firm value is measured by Tobin's Q, capital structure by debt-to-equity ratio, profitability by return on assets, firm growth by sales growth, and investment decisions by investment opportunity set. The findings indicate that Environmental, Social, and Governance practices negatively and significantly affect firm value, capital structure has no significant effect, and profitability positively influences firm value. Firm growth does not moderate these relationships, while investment decisions significantly moderate the effects of sustainability practices and profitability. The results suggest that sustainability initiatives enhance firm value only when aligned with disciplined investment strategies and strong financial performance in a volatile industry environment.

**Keyword:** ESG, Capital Structure, Profitability, Firm Value, Firm Growth, Investment Decisions.

### INTRODUCTION

The transportation and logistics sector plays a strategic role in supporting national economic growth, supply chain efficiency, and public mobility. Despite its significant contribution to Indonesia's Gross Domestic Product, the sector has experienced considerable volatility during the 2019–2024 period, reflected in fluctuations in passenger traffic and logistics volumes. Such instability creates uncertainty in financial performance and may influence investor perceptions of firm value.

Firm value reflects market confidence in a company's ability to generate sustainable future cash flows and manage financial and non-financial risks effectively. Traditionally, firm value has been explained by financial determinants such as capital structure and profitability. However, contemporary corporate evaluation increasingly incorporates non-financial

dimensions, particularly Environmental, Social, and Governance (ESG) practices. ESG disclosure is perceived as a signal of sustainability commitment, transparency, and ethical governance, potentially enhancing corporate reputation and reducing information asymmetry.

Nevertheless, empirical findings regarding the effects of ESG, capital structure, and profitability on firm value remain inconclusive. While some studies document positive relationships, others report insignificant or negative effects, especially in emerging markets and volatile industries. These inconsistencies suggest that the relationships may be conditional rather than purely linear.

Internal firm conditions may explain these variations. Growth opportunities can signal expansion potential, while investment decisions reflect managerial discipline in allocating resources. In industries characterized by operational volatility, such as transportation and logistics, the effectiveness of sustainability initiatives and financial strategies may depend on how firms manage growth and investment risk.

Therefore, this study examines the effects of ESG, capital structure, and profitability on firm value, incorporating firm growth and investment decisions as moderating variables. By developing a moderated framework, this research aims to clarify the value formation mechanism within a highly volatile industry context and contribute to the ongoing debate regarding the financial relevance of sustainability practices.

**METHOD**

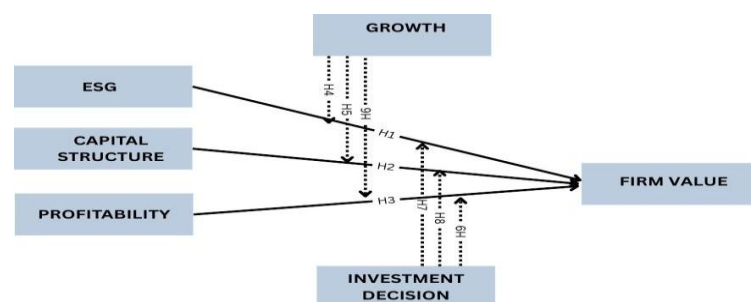
This study employs a quantitative explanatory approach using panel data regression to examine the effects of Environmental, Social, and Governance (ESG), capital structure, and profitability on firm value, with firm growth and investment decisions as moderating variables. The population consists of transportation and logistics companies listed on the Indonesia Stock Exchange during the 2020–2024 period. The sample was selected using purposive sampling based on data availability and ESG disclosure consistency, resulting in 135 firm-year observations.

Secondary data were obtained from annual reports, sustainability reports, and audited financial statements published on the Indonesia Stock Exchange and corporate websites. Firm value is measured using Tobin’s Q. ESG is measured based on disclosure scores. Capital structure is proxied by the Debt-to-Equity Ratio (DER), profitability by Return on Assets (ROA), firm growth by sales growth, and investment decisions by the Investment Opportunity Set (IOS).

Data were analyzed using panel regression analysis. Model selection was conducted using the Chow and Hausman tests, resulting in the use of the Fixed Effect Model (FEM). Moderated Regression Analysis (MRA) was applied to examine interaction effects at a 5 percent significance level.

**RESULTS AND DISCUSSION**

**Figure**



Source: Research Results

**Figure 1. Conceptual Framework**

Based on theoretical foundations and prior empirical findings, this study formulates the following hypotheses. Environmental, Social, and Governance (ESG) performance is expected to significantly influence firm value. Capital structure is hypothesized to have a significant effect on firm value. Profitability is also predicted to significantly affect firm value. Furthermore, firm growth is proposed to moderate the relationships between ESG, capital structure, and profitability and firm value. In addition, investment decisions are expected to moderate the relationships between ESG, capital structure, and profitability and firm value.

This study conceptualizes firm value as the dependent variable influenced by ESG performance, capital structure, and profitability as independent variables. Firm growth and investment decisions are positioned as moderating variables that may strengthen or weaken the effects of sustainability and financial performance on firm value. By integrating financial and sustainability perspectives, the proposed framework explains that the impact of ESG and financial strategies on firm value depends on firms' growth opportunities and investment discipline. This integrated model aims to clarify inconsistent findings in prior studies by capturing the interaction between sustainability initiatives, financial structure, and managerial decision-making under conditions of industry uncertainty

### Descriptive Statistics

Table 1 presents the descriptive statistics of the research variables, consisting of Tobin's Q (TQ), Environmental Social Governance (ESG), Debt to Equity Ratio (DER), Return on Assets (ROA), Growth Opportunity (GOS), and Investment Opportunity Set (IOS), with a total of 135 observations.

**Table 1. Descriptive Statistics**

Statistik	TQ	ESG	DER	ROA	GOS	IOS
Mean	1.746207	0.653101	0.156975	0.034341	0.156707	-0.067959
Median	1.067331	0.638554	0.472144	0.019692	0.063158	-0.017072
Maximum	20.71759	0.987952	42.85793	2.071767	5.039162	0.274852
Minimum	0.144941	0.325301	-78.50082	-0.580308	-0.839542	-1.294378
Std. Dev	2.303279	0.144519	8.417307	0.228031	0.643107	0.171658
Observations	135	135	135	135	135	135

Source: Research Data (Processed)

On average, firm value (TQ) is 1.746, indicating that the market generally values firms above their book value. The relatively high standard deviation (2.303) suggests considerable variation in firm valuation across the sample.

The mean ESG score of 0.653 indicates a moderate level of ESG disclosure among the observed firms. DER exhibits the largest standard deviation (8.417), reflecting substantial differences in capital structure across companies. ROA shows a relatively low average of 0.034, indicating modest profitability levels. Meanwhile, GOS and IOS demonstrate variability in firms' growth and investment opportunities.

### Model Fit Test

Table 2 presents the overall regression model results.

**Table 2. Model Fit Test**

Indicator	Value
F-statistic	0.674714
Prob (F-statistic)	0.040100
R-squared	0.357346
Adjusted R-squared	0.307637

Source: Research Data (Processed)

The probability value of the F-statistic (0.0401) is below 0.05, indicating that the regression model is statistically significant and appropriate for explaining firm value. The Adjusted R-squared value of 0.3076 implies that approximately 30.76% of the variation in firm value can be explained by the independent and moderating variables included in the model, while the remaining 69.24% is explained by other factors outside the model.

### Regression Results and Hypothesis Testing

The estimated regression equation is as follows:

$$TQ = 1.807083 - 0.356008 ESG - 0.128521 DER + 0.755776 ROA - 0.234238 ESG\_GOS + 0.037838 DER\_GOS - 0.683716 ROA\_GOS - 1.101153 ESG\_IOS + 0.497691 DER\_IOS + 1.884174 ROA\_IOS + e$$

**Table 3. Regression Results**

Variable	Coefficient	Prob
C	1.807083	0.0000
ESG	-0.356008	0.0403
DER	-0.128521	0.4869
ROA	0.755776	0.0407
ESG_GOS	-0.234238	0.8797
DER_GOS	0.037838	0.8806
ROA_GOS	-0.683716	0.7560
ESG_IOS	-1.101153	0.0293
DER_IOS	0.497691	0.6764
ROA_IOS	1.884174	0.0386

Source: Research Data (Processed) Discussion

The results indicate that ESG has a negative and statistically significant effect on firm value. This finding suggests that, within the observed sector and period, the market does not fully interpret ESG disclosure as a positive signal. Instead, ESG initiatives may be perceived as additional costs that reduce short-term profitability.

DER does not significantly affect firm value, indicating that capital structure is not a primary determinant of market valuation in this sample. This may imply that investors place greater emphasis on performance indicators rather than leverage levels.

ROA has a positive and significant effect on firm value, confirming that profitability remains a key driver of market valuation. Firms with higher returns on assets tend to receive stronger investor appreciation.

Regarding moderating effects, IOS significantly moderates the relationship between ESG and firm value as well as between ROA and firm value. The negative coefficient of ESG\_IOS suggests that investment opportunities weaken the ESG–firm value relationship. In contrast, the positive coefficient of ROA\_IOS indicates that investment opportunities strengthen the positive effect of profitability on firm value.

However, GOS does not significantly moderate the relationships between the independent variables and firm value, as all interaction terms involving GOS are statistically insignificant.

Overall, the findings highlight that profitability plays a dominant role in determining firm value, while ESG effectiveness appears to depend on the firm's investment structure and market perception.

## CONCLUSION

This study aimed to examine the effect of Environmental, Social, and Governance (ESG), capital structure, and profitability on firm value, as well as the moderating roles of firm growth and investment decisions in transportation and logistics companies during the 2020–2024 period. The findings confirm that firm value in this sector is primarily driven by profitability, while the roles of ESG and capital structure are highly dependent on market perception and strategic alignment.

Empirical evidence shows that profitability consistently enhances firm value, indicating that earnings performance remains the most credible signal for investors in a volatile and capital-intensive industry. In contrast, ESG disclosure demonstrates a negative relationship with firm value, suggesting that sustainability initiatives in this sector have not yet translated into immediate market appreciation. Capital structure does not significantly influence firm value, implying that leverage decisions alone are insufficient to alter investor valuation without strong performance fundamentals.

The moderating analysis further reveals that firm growth does not strengthen the relationship between ESG, capital structure, or profitability and firm value, indicating that external growth dynamics in the transportation and logistics sector do not substantially change how investors interpret financial and sustainability information. However, investment decisions play a significant conditional role. When investment strategies are combined with ESG initiatives, the market tends to interpret this combination as an increase in risk exposure, whereas profitable firms supported by disciplined investment decisions receive stronger market valuation.

These results refine the understanding of value formation mechanisms by demonstrating that sustainability practices and financing policies do not automatically enhance firm value unless supported by strong profitability and prudent investment allocation. From a scientific perspective, this study contributes to financial and sustainability research by providing contextual evidence from a high-risk industry in an emerging market setting, highlighting that the effectiveness of ESG and financial strategies is contingent upon industry characteristics and strategic coherence.

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