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Profitability Mediation in the Relationship Between Firm Size and Capital Structure with Firm Value: An Empirical Study on Transportation Subsector Companies Listed on the Indonesia Stock Exchange for the 2016–2023 Period

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ABSTRACT

This study aims to examine the effect of firm size and capital structure on firm value. Furthermore, profitability is tested as a mediating variable in the relationship between firm size and capital structure with firm value. The population in this study were 38 companies in the Transportation sub-sector listed on the Indonesia Stock Exchange in the 2016-2023 period. Meanwhile, the number of samples in this study was 11 companies, which were determined by purposive sampling technique. Data analysis techniques in this study include descriptive statistics, classical assumption tests, multivariate regression analysis, and hypothesis testing. The results of this study indicate that firm size has a significant negative effect on firm value, contrary to the proposed hypothesis. Capital structure has a significant positive effect on firm value. Firm size has a significant negative effect on profitability, contrary to the proposed hypothesis. Capital structure has a negative and insignificant effect on profitability, contrary to the proposed hypothesis. Profitability has a negative and insignificant effect on firm value. Profitability can mediate the relationship between firm size and firm value. Meanwhile, profitability cannot mediate the relationship between capital structure and firm value.

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1. INTRODUCTION

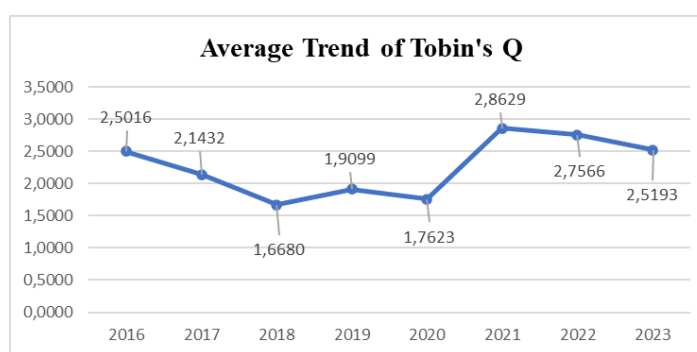
Indonesia's economy in recent years has continued to show significant development. This growth is inseparable from the increasing activities in trade, investment, and infrastructure development that support various sectors. However, global dynamics such as the energy crisis, inflation, and the impact of the Covid-19 pandemic have posed unique challenges to national economic stability. Under such conditions, businesses are required to adapt quickly in order to maintain their performance and competitiveness.

In the midst of increasingly intense business competition, firm value becomes an important indicator that reflects market and investor perceptions of a company's prospects. Firm value not only represents the

company's current financial performance but also investors' expectations regarding its ability to generate future profits. The higher the firm value, the greater the company's attractiveness in gaining investor trust, increasing access to funding, and strengthening its competitive position. Firm value can be influenced by several fundamental factors, including firm size, capital structure, and profitability.

One of the subsectors that plays an important role and has recently gained significant attention from investors is the transportation subsector. This subsector has a vital role in supporting Indonesia's economy, as it contributes to goods distribution, public mobility, and the smooth operation of export–import activities. The Covid-19 pandemic placed great pressure on this sector due to mobility restrictions, which directly affected the decline in passenger numbers and revenues of land, sea, and air transportation companies. Based on the financial reports of transportation subsector companies listed on the Indonesia Stock Exchange during the 2016–2023 period, firm value as measured by Tobin's Q shows significant fluctuations. For instance, in 2018, the average Tobin's Q of transportation companies decreased by 47.52%, in 2020 it further dropped by 14.76%, and in 2023 declined by 23.73%. This downward trend indicates serious challenges related to asset management, operational efficiency, and decreasing investor confidence. The graph of Tobin's Q development in transportation subsector companies can be seen in the following section.

Figure 1. Trends in the Average Firm Value (Tobin's Q) of Transportation Subsector Companies Listed on the Indonesia Stock Exchange for the 2016–2023 Period.



There are many factors that can influence the performance of firm value in the transportation subsector. Based on a review of several relevant references, firm size and capital structure are among the factors that may affect firm value. Previous studies on the relationship between firm size and capital structure with firm value still show inconsistent results. Some studies found that firm size has a positive effect on firm value, as larger firms possess greater resources and better access to financing (Atiningsih & Wahyuni, 2020; Habsari & Akhmadi, 2018). In contrast, Tumangkeng & Mildawati (2018) found that firm size has no effect on firm value. Regarding the relationship between capital structure and firm value, Krisnando & Novitasari (2021) and Jannah & Yuliana (2021) concluded that capital structure significantly influences firm value. However, these results differ from Siregar et al. (2019), who found that capital structure has no effect on firm value.

The inconsistency of these findings is believed to be due to the presence of other variables that influence the relationship between firm size, capital structure, and firm value. Several previous studies highlight the important role of profitability as an intervening variable in this relationship. Christiaan (2022) demonstrated that larger firms have wider access to financing sources and are better able to manage risks, thereby enhancing their ability to generate profits. Higher profitability sends a positive signal to investors, encouraging stock price increases and ultimately enhancing firm value. Similarly, Yulimtinan & Atiningsih (2021) proved that larger firms tend to have better prospects and broader access to the stock market, enabling them to generate higher profits. In addition, Bailusy et al. (2018) found that increased debt can enhance profitability and indirectly raise firm value. Consistently, Istamawarti & Suseno (2017) demonstrated that higher debt levels, as reflected in ROA, indicate that investors perceive debt as having a positive impact on earnings.

This study aims to analyze the influence of firm size and capital structure on firm value. Furthermore, it examines the mediating role of profitability in the relationship between firm size, capital structure, and firm value. The study is expected to provide a twofold contribution: first, by offering a deeper understanding of the role of profitability as a mediating factor in the relationship between firm size and capital structure with firm value; and second, by providing empirical insights for corporate management in formulating effective financial policies, particularly regarding the role of profitability as a mediating factor in enhancing firm value performance.

2. LITERATURE

2.1 Theoretical

2.1.1 Signaling Theory

Signaling theory according to Brigham & Houston (2014) states that corporate managers possess internal information about the company's condition and prospects that is not known to external parties. Therefore, they send signals to the market through financial policies such as capital structure, dividends, and financial statement disclosures. Efficient and sound operational performance serves as a positive signal to investors that the company is well-managed.

2.1.2 Trade off Theory

Trade off theory according to Krisnando & Novitasari (2021) suggests that a company can increase its debt as long as it remains below the optimal point of capital structure, as this provides tax benefits. However, exceeding the optimal threshold will lead to financial risks.

2.1.3 Agency Theory

Agency Theory by Jensen and Meckling (1976) explains the relationship between the owners of the company (principals) and managers (agents). The separation of ownership and management creates potential conflicts of interest, as managers do not always act in the best interests of the owners but rather in their own interests. Therefore, monitoring mechanisms and incentive schemes are required to align the goals of both parties, which give rise to agency costs. Moreover, larger firms tend to face more complex agency problems due to difficulties in monitoring (Daily, Dalton, & Cannella, 2003).

2.1.4 Firm Value

Firm value represents the collective assessment of investors regarding the company's performance and future prospects, as reflected in the stock price in the market. According to Brigham & Houston (2011) in Astohar (2017), financial statements such as the balance sheet provide information on a company's financial condition; however, the capital market places greater emphasis on stock prices as indicators of expectations for the company's future performance. An increase in stock prices reflects investors' trust in management's ability to create added value and strengthen the company's position. Current firm value represents projections of future performance managed by effective management, which increases shareholder confidence (Setiadharmha & Machali, 2017). Therefore, the higher the firm value, the greater the future wealth enjoyed by investors.

2.1.5 Firm Size

Firm size is an indicator that describes the scale of a company, which can be measured through various aspects such as total assets, total sales, and equity value. According to Denziana & Monica (2016), firm size reflects a company's financial strength, which becomes an important consideration for investors and creditors in assessing investment risk. Furthermore, firm size influences investor and creditor perceptions regarding the stability and capacity of the company in carrying out its operations (Martini Putu et al., 2014). Thus, firm size serves as one of the key parameters in evaluating a company's capacity and competitiveness in the market.

2.1.6 Capital Structure

Capital structure refers to the combination of debt and equity owned by a company. It is a component of financial structure used to determine the proportion of debt that the company will utilize to finance its activities. Companies with strong performance tend to reduce their use of debt and prefer internal funding for their operational activities (Nurwulandari & Wibowo, 2021).

2.1.7 Profitability

Profitability refers to a company's ability to generate profits from its operational activities within a specific period. According to Harahap (2015), profitability reflects the efficiency of a company in managing its assets and capital to obtain profits. Meanwhile, Sartono (2010) explains that profitability is also a key indicator for investors in assessing a company's prospects and financial health. Thus, the higher the level of profitability, the greater the company's potential to provide positive returns for stakeholders.

2.2 HYPOTHESIS

2.2.1 The Effect of Firm Size on Firm Value

Firm Size is an indicator that reflects the scale of a company, which can be measured through total assets, sales, or market capitalization. Large firms are generally associated with operational stability, mature

organizational structures, and broader access to financing. In addition, larger companies tend to possess sufficient resources to manage operational activities efficiently and create added value for stakeholders. According to Signaling Theory proposed by Spence (1973), larger firms have incentives to send positive signals to the market regarding their prospects and financial strength. One such signal is the firm's scale itself, which indicates operational capacity and efficiency in utilizing resources. Investors may interpret firm size as an indicator of a company's success in managing its resources effectively and efficiently.

Firm size also implies greater operational efficiency, as larger companies are more likely to benefit from economies of scale, reduce per-unit costs, and optimize their fixed cost structures. This condition improves financial performance, thereby fostering a positive perception among investors regarding firm value. This view is consistent with Denziana & Monica (2016), who argued that firm size can serve as a signal to investors concerning financial strength and business sustainability. Therefore, the larger the firm size, the greater the likelihood that investors will perceive the company as having higher value in the market.

Based on the theoretical explanations and prior research findings, the first hypothesis is formulated as follows:

H1: The larger the firm size, the greater the firm value.

2.2.2 The Effect of Capital Structure on Firm Value

Capital Structure represents the proportion of financing that comes from debt and equity. Decisions regarding capital structure are crucial in corporate finance because they directly affect financial risk and firm value. One of the underlying theories of this relationship is the Trade-Off Theory. According to Myers (1984), firms seek to achieve an optimal capital structure by balancing the benefits and costs of debt usage. On the one hand, debt provides tax benefits (tax shield) since interest is tax deductible. On the other hand, excessive debt increases bankruptcy risk and agency costs. Therefore, companies strive to determine the optimal level of debt, where tax benefits outweigh potential bankruptcy costs. When the optimal capital structure is achieved, overall cost of capital is minimized and firm value is maximized. In other words, an appropriate capital structure serves as a signal to the market that the firm has an efficient and well-planned financing strategy.

Prior research by Sartono (2010) found that moderate debt usage can enhance firm value, as long as it remains within tolerable risk levels. This reinforces the argument that a balanced capital structure is key to strengthening investor confidence and increasing market valuation.

Based on the theoretical explanations and previous research, the second hypothesis is formulated as follows:

H2: The larger the capital structure, the greater the firm value.

2.2.3 The Effect of Firm Size on Profitability

Firm size is also an indicator of the resources owned by a company, such as total assets, sales, and equity. Larger firms tend to have advantages in accessing external financing, achieving economies of scale, and building strong market reputations. These factors provide a positive signal to investors that the company has stability and favorable long-term prospects. From the perspective of Signaling Theory, firm size can be viewed as a positive signal of efficiency and internal performance. The theory posits that corporate managers have more information regarding internal conditions and prospects, which external parties do not know (information asymmetry). Thus, firm size can be interpreted as a signal that the company has efficient operations and strong profitability.

Larger firm size also reflects greater operational efficiency, such as the ability to reduce production costs, utilize resources optimally, and achieve economies of scale. Such efficiency leads to higher net income and profitability ratios, including Return on Assets (ROA) or Return on Equity (ROE). Therefore, the larger the firm size, the greater the potential for higher profitability.

Based on these theoretical explanations and empirical findings, the third hypothesis is proposed as follows:

H3: The larger the firm size, the greater the profitability.

2.2.4 The Effect of Capital Structure on Profitability

Capital structure, as the combination of debt and equity used to finance corporate operations and investments, also influences profitability. Selecting the right capital structure is essential as it affects financial performance, including profitability. According to the Trade-Off Theory, companies seek to achieve an optimal balance between the tax benefits of debt (tax shield) and potential bankruptcy costs. Debt usage may enhance profitability since interest expense reduces taxable income; however, excessive debt increases bankruptcy risks and agency costs, which may harm profitability. Firms that manage their capital structure efficiently can maximize the benefits of debt financing and increase net income, whereas imbalances in debt usage can lead to high financial burdens and reduced profitability. Prior research by Pratama & Wibowo (2020) confirmed that a balanced capital structure aligned with the company's condition improves financial efficiency and profitability.

Based on theoretical arguments and prior evidence, the fourth hypothesis is formulated as follows:

H4: The larger the capital structure, the greater the profitability

2.2.5 The Effect of Profitability on Firm Value

Profitability is a crucial indicator of a company's operational efficiency in generating income from available resources. High profitability indicates that the company is effectively managing its resources, thereby enhancing its attractiveness to investors. According to Signaling Theory by Spence (1973), information provided by management, such as financial reports and profitability ratios, serves as a signal to external stakeholders, especially investors. High profitability signals sound business prospects and competent management, which encourages investors to assign higher valuations to the company.

Increasing profitability provides a positive signal to the market that the company is capable of consistently generating profits, raising investor expectations about future cash flows. This, in turn, elevates market value as reflected in stock prices. Previous studies also support the positive relationship between profitability and firm value. For example, Ngurah et al. (2016) showed that companies with higher profitability levels tend to exhibit higher firm values.

Based on these theoretical explanations and previous findings, the fifth hypothesis is formulated as follows:

H5: The higher the profitability, the greater the firm value.

2.2.6 The Effect of Firm Size on Firm Value with Profitability as an Intervening Variable

Firm size is also an important indicator reflecting resource capacity, operational structure, and economies of scale. Larger firms enjoy greater access to resources, operational efficiency, and bargaining power in the market. Within the context of Signaling Theory, large firms tend to send positive signals to the market, as they are perceived to be more stable and have better future prospects (Brigham & Houston, 2011). Such signals are captured by investors as indicators of good performance, indirectly contributing to firm value.

Firm size also correlates positively with profitability. Larger firms are typically able to achieve cost efficiency and greater economies of scale, thereby enhancing profit margins. This view is consistent with Ngurah et al. (2016), who found that firm size positively influences profitability. High profitability, in the context of signaling theory, reflects management's success in resource utilization, thereby increasing investor confidence and firm value (Harahap, 2015).

Accordingly, firm size not only directly affects firm value but also indirectly influences it through profitability as an intervening variable. Profitability thus serves as a channel that mediates the impact of firm size on firm value.

Based on theoretical and empirical explanations, the sixth hypothesis is formulated as follows:

H6: Profitability mediates the relationship between firm size and firm value.

2.2.7 The Effect of Capital Structure on Firm Value with Profitability as an Intervening Variable

Capital structure, defined as the balance between debt and equity in financing corporate operations, also affects firm value through profitability. According to the Trade-Off Theory, firms strive to achieve an

optimal capital structure by weighing the benefits of debt, such as tax savings (tax shield), against the potential costs of bankruptcy if excessive debt is used (Myers, 2001). An appropriate capital structure enhances resource allocation efficiency and lowers the weighted average cost of capital, thereby improving profitability. Empirical studies by Dewi & Wirajaya (2013) and Sudiyatno et al. (2012) showed that moderate debt usage can increase net income through efficient fund utilization, indicating that capital structure affects profitability.

High profitability then acts as a positive signal to the market, suggesting that the company is well-managed and has promising long-term prospects. In this context, profitability provides valuable information to investors about corporate performance, which further strengthens firm value. Studies by Sartono (2010) and Pratama & Wibowo (2020) highlight profitability's mediating role in the relationship between financial decisions and firm value. Thus, capital structure not only directly influences firm value but also indirectly impacts it through profitability as an intervening variable.

Based on theoretical arguments and empirical evidence, the seventh hypothesis is formulated as follows:

H7: Profitability mediates the relationship between capital structure and firm value.

3 RESEARCH METHOD

This study employs a causal research design to analyze the effect of firm size and capital structure on firm value. In addition, the causal design is also used to examine the role of profitability as a mediating factor in enhancing firm value performance. The study utilizes secondary data in the form of financial ratios and financial statements of transportation subsector companies during the period 2016–2023. The data used are time series data, obtained from the Indonesia Stock Exchange (IDX) through its official website at www.idx.co.id. The population in this study consists of 38 transportation subsector companies listed on the Indonesia Stock Exchange for the 2016–2023 period. The number of sample companies that meet the research criteria is 11. The sampling technique applied is purposive sampling. The sample criteria in this study are as follows:

Table 1. Sampling Process

No	Sampling Criteria	Total Companies
1	Transportation companies listed on the IDX during the 2016–2023 period	38
2	Companies that provided complete financial statements during the 2016–2023 period	11
Total Sampling		11

3.1 Operational Variables

This study uses firm value as the dependent variable, reflecting investors' assessment of the company's performance (Akhmadi & Ariadini, 2018), measured using Tobin's Q, the ratio of EMV + Debt to EBV + Debt (Hamdani, 2020). Firm size is the first independent variable, measured by the company's total assets converted using the natural logarithm (Prasetia et al., 2014). Capital structure, the second independent variable, is measured by the debt to equity ratio (DER), which is the ratio of total debt to total equity (Saftri & Akhmadi, 2017). Profitability is used as an intervening variable, measured by return on equity (ROE), which is the ratio of earnings after taxes (EAT) to total equity (Mercyana et al., 2022).

3.2 Data Analysis

The data analysis techniques in this study include descriptive and inferential statistics, multivariate linear regression, and hypothesis testing.

3.2.1 Descriptive Statistic

Descriptive statistics provide an overview or description of the data observed in terms of mean, standard deviation, maximum, and minimum values. The purpose of descriptive statistics is to describe the distribution and behavior of the sample data (Ghozali, 2016).

3.2.2 Inferential Statistic

Inferential statistics are used to analyze sample data and generalize the results to the population through random sampling. The analyses in this study include classical assumption tests, regression equations, hypothesis testing, and path analysis.

3.2.2.1 Classic Assumption Test

Multivariate linear regression analysis can be conducted after the research model meets the classical assumption criteria. Good parameters are efficient and consistent. To detect deviations from classical assumptions, normality tests, multicollinearity tests, autocorrelation tests, and heteroscedasticity tests are conducted (Ghozali, 2016).

3.2.3 Regression

The multivariate regression equations in this study are as follows:

$$\text{Tobin's } Q = \beta + \beta_1 \text{LnTA} + \beta_2 \text{DER} + \varepsilon_1 \quad \text{Substruktural 1}$$

$$\text{ROE} = \beta + \beta_1 \text{LnTA} + \beta_2 \text{DER} + \varepsilon_2 \quad \text{Substruktural 2}$$

$$\text{Tobin's } Q = \beta + \beta_1 \text{LnTA} + \beta_2 \text{DER} + \beta_3 \text{ROE} + \varepsilon_1 \quad \text{Substruktural 3}$$

3.2.4 Hipotesis Test

The t-test is used to test the hypothesis regarding the effect of each independent variable on the dependent variable individually, by comparing the t-count with the t-table obtained from $df = n - k$ at a 5% significance level, where $k = 2$ (one-tailed test):

a. If $t\text{-count} \leq t\text{-tabel}$, then H_0 is accepted and H_a is rejected

b. If $t\text{-count} > t\text{-tabel}$, then H_0 is rejected and H_a is accepted

Hypotheses tested:

1. $H_0: \beta_1 \leq 0$ Firm size has no effect on firm value.
 $H_a: \beta_1 > 0$ The larger the firm size, the higher the firm value.
2. $H_0: \beta_2 \leq 0$ Capital structure has no effect on firm value.
 $H_a: \beta_2 > 0$ The higher the capital structure, the higher the firm value.
3. $H_0: \beta_3 \leq 0$ Firm size has no effect on profitability.
 $H_a: \beta_3 > 0$ The larger the firm size, the higher the profitability.
4. $H_0: \beta_4 \leq 0$ Capital structure has no effect on profitability.
 $H_a: \beta_4 > 0$ The higher the capital structure, the higher the profitability.
5. $H_0: \beta_5 \leq 0$ Profitability has no effect on firm value.
 $H_a: \beta_5 > 0$ The higher the profitability, the higher the firm value.
6. $H_0: \beta_6 \leq 0$ Profitability does not mediate the relationship between firm size and firm value.
 $H_a: \beta_6 > 0$ Profitability mediates the relationship between firm size and firm value.
7. $H_0: \beta_7 \leq 0$ Profitability does not mediate the relationship between capital structure and firm value.
 $H_a: \beta_7 > 0$ Profitability mediates the relationship between capital structure and firm value.

3.2.5 Path Analysis

The path coefficients in the path analysis use standardized regression coefficients. The path coefficients are calculated by creating two structural equations:

$$\text{Tobin's } Q = \beta + \beta_1 \text{LnTA} + \beta_2 \text{DER} + \varepsilon_1 \quad \text{Substruktural 1}$$

$$\text{ROE} = \beta + \beta_1 \text{LnTA} + \beta_2 \text{DER} + \varepsilon_2 \quad \text{Substruktural 2}$$

$$\text{Tobin's } Q = \beta + \beta_1 \text{LnTA} + \beta_2 \text{DER} + \beta_3 \text{ROE} + \varepsilon_1 \quad \text{Substruktural 3}$$

Keterangan:

LnTA : Log natural dari total aset

DER : Debt to Equity Ratio

ROE : Return on Equity

Tobin's Q : Nilai Perusahaan

3.2.6 Sobel Test

The significance of the indirect effect can be tested using the Sobel Test by calculating the standard error and the indirect effect coefficient (Sp2p3):

$$SP^2P^3 = \sqrt{SP^3^2SP^2^2 + SP^2^2SP^3^2 + SP^2^2SP^3^2}$$

To test the significance of the indirect effect, the t-value is calculated as follows:

$$t = \frac{p^2p^3}{SP^2P^3}$$

4 RESULTS AND DISCUSSION

4.1 Descriptive Analysis

Descriptive statistics are used to describe sample data before utilizing statistical analysis techniques for hypothesis testing. The results of descriptive statistics are as follows:

Tabel 2. Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Ln_TA	88	14.86	29.62	24.5244	4.66019
DER	88	-.9030	2.6238	.380386	.7295706
ROE	88	-5.7182	5.5585	.058959	.9939608
Tobin's Q	88	-.9345	6.2994	2.265467	1.2645795
Valid N (listwise)	88				

Based on Table 1 above, the firm size variable (Ln_TA) has a minimum value of 14.86, a maximum value of 29.62, a mean value of 24.5244, and a standard deviation of 4.66019. The capital structure variable (DER) has a minimum value of -0.9030, a maximum value of 2.6238, a mean value of 0.3804, and a standard deviation of 0.7296. The firm value variable (Tobin's Q) has a minimum value of 0.9345, a maximum value of 6.2994, a mean value of 2.2654, and a standard deviation of 1.2646. The profitability variable (ROE) has a minimum value of -5.7182 and a maximum value of 5.5585, a mean value of 0.0589, and a standard deviation of 0.9939.

4.2 Classic Assumption Test

To use the regression model for estimation, it must meet classical assumptions: (1) Normality Test, (2) Multicollinearity Test, (3) Heteroscedasticity Test, (4) Linearity Test, (5) Autocorrelation Test.

4.2.1 Normality Test

From the previous tests, the Kolmogorov-Smirnov normality test results in substructure 2 indicated that the data were not normally distributed because the Asymp. Sig. was $0.000 < 0.05$. To address this, outliers in the data that were not normally distributed were handled by removing several extreme values from the other observations (Ghozali, 2016). Thus, after outlier treatment, the observation data, which was originally 88 data points (N=88), became 71 data points (N=71).

Tabel 3. Results of the Normality Test

One-Sample Kolmogorov-Smirnov Test				
		Equation 1	Equation 2	Equation 3
N		71	71	71
Normal	Mean	.0000000	.0000000	.0000000
Parameters ^{a,b}	Std. Deviation	1.02125692	.09125960	1.01948090
Most	Absolute	.103	.094	.120
Extreme	Positive	.103	.094	.120
Differences	Negative	-.083	-.073	-.079
Kolmogorov-Smirnov Z		.871	.082	1.014
Asymp. Sig. (2-tailed) ^c		.435	.563	.255
	Sig.	.418 ^c	.542 ^c	.243 ^c

Monte Carlo Sig. (2- tailed) ^e	99% Confidence Interval	Lower Bound	.406	.529	.232
		Upper Bound	.431	.555	.254

a. Test distribution is Normal.

b. Calculated from data.

c. Based on 10000 sampled tables with starting seed 2000000.

The normality test results after outlier treatment for substructure 2 showed an Asymp. Sig. of 0.542 > 0.05, which means the data in substructure 2 are normally distributed

4.2.2 Multicollinearity Test

Table 4. Results of Multicollinearity Test for Equation I

Coefficients ^a		
Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
1 Ln_TA	.998	1.002
DER	.998	1.002

a. Dependent Variable: Tobin's Q

Table 5. Results of Multicollinearity Test for Equation II

Coefficients ^a		
Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
1 Ln_TA	.998	1.002
DER	.998	1.002

a. Dependent Variable: ROE

Table 6. Results of Multicollinearity Test for Equation III

Coefficients ^a		
Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
1 Ln_TA	.998	1.002
DER	.998	1.002
ROE	.864	1.157

Multicollinearity shows that the independent variables have a very strong direct relationship (correlation). Multicollinearity test can be seen from the tolerance value and Variance Inflation Factor (VIF). The calculation results of tolerance values show that firm size has a tolerance > 0.10 , namely $(0.998 > 0.10)$, and a VIF < 10 , namely $(1.002 < 10)$. Capital structure has a tolerance value > 0.10 , namely $(0.998 > 0.10)$, and a VIF < 10 , namely $(1.002 < 10)$, so it can be concluded that in substructure 1 there is no indication of multicollinearity among variables in the regression model. The calculation results of tolerance values in substructure 2 show that firm size has a tolerance > 0.10 , namely $(0.998 > 0.10)$, and a VIF < 10 , namely $(1.002 < 10)$. Capital structure has a tolerance value > 0.10 , namely $(0.998 > 0.10)$, and a VIF < 10 , namely $(1.002 < 10)$, so it can be concluded that this model does not show signs of multicollinearity among variables in the regression model. The calculation results of tolerance values in substructure 3 show that firm size has a tolerance > 0.10 , namely $(0.865 > 0.10)$, and a VIF < 10 , namely $(1.156 < 10)$, indicating that firm size does not show multicollinearity. The capital structure variable has a tolerance > 0.10 , namely $(0.991 > 0.10)$, and a VIF < 10 , namely $(1.009 < 10)$, indicating that capital structure (DER) does not show multicollinearity. Meanwhile, the profitability variable (ROE) has a tolerance > 0.10 , namely $(0.864 > 0.10)$, and a VIF < 10 , namely $(1.157 < 10)$, indicating that profitability does not show multicollinearity.

4.2.3 Heterokedasticity Test

The test results indicate symptoms in substructures 1 and 3, so to ensure there is no heteroscedasticity, the authors conducted a test using Spearman Rho to address heteroscedasticity symptoms. The results of the heteroscedasticity test using Spearman Rho are presented in the table:

Table 7. Heteroscedasticity Test Results for Equation 1 (*Spearman's Rho*)

Correlations				
		Ln_TA	DER	Equation 1
Spearman's rho	Ln_TA	Correlation Coefficient	1.000	-.048
		Sig. (2-tailed)	.	.693
		N	71	71
	DER	Correlation Coefficient	-.048	1.000
		Sig. (2-tailed)	.693	.
		N	71	71
	Sub Struktur 1	Correlation Coefficient	.025	-.052
		Sig. (2-tailed)	.834	.667
		N	71	71

Tabel 8. Heteroscedasticity Test Results Equation 3 (*Spearman's Rho*)

Correlations					
		Ln_TA	DER	ROE	Equation 3
Spearman's rho	Ln_TA	Correlation Coefficient	1.000	-.048	-.207
		Sig. (2-tailed)	.	.693	.083
		N	71	71	71
	DER	Correlation Coefficient	-.048	1.000	-.162
		Sig. (2-tailed)	.693	.	.177
		N	71	71	71
	ROE	Correlation Coefficient	-.207	-.162	1.000
		Sig. (2-tailed)	.083	.177	.

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	N	71	71	71	71
	Correlation Coefficient	.034	-.053	-.043	1.000
Sub Struktur 3	Sig. (2-tailed)	.781	.659	.725	.
	N	71	71	71	71

Based on the table above, it can be seen that the significance values of the correlation for the firm size variable in substructure 1 are 0.834, and for capital structure are 0.667. For substructure 3, the firm size variable is 0.781, capital structure is 0.659, and profitability is 0.725. Thus, it can be concluded that the regression model is free from heteroscedasticity symptoms because all significance values are greater than 0.05.

4.2.4 Linearity Test

Tabel 9. Linearity Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Equation 1	.575 ^a	.331	.311	1.0361666
Equation 2	.368 ^a	.136	.110	.09259
Equation 3	.557 ^a	.333	.303	1.0420552

Based on the table above, using the Lagrange multiplier test method, substructure 1 has a c^2 count $< c^2$ tabel or $23.501 < 89,391208$. Substructure 2 has c^2 count $< c^2$ tabel or $9,656 < 89,391$, and substructure 3 has c^2 count $< c^2$ tabel or $23,643 < 88,250$. Therefore, it can be concluded that the linear regression analysis model can be used in this study.

4.2.5 Autocorrelation Test

From previous tests, the autocorrelation test results indicate symptoms in substructures 1 and 3, where the Durbin-Watson value in substructure 1 with $dU = 1.6697$ and $4-dU = (4 - 1.6697 = 2.3303)$, and in substructure 3 with $dU = 1.6678$ and $4-dU = (4 - 1.6768 = 2.3322)$ are less than the dU value, so it can be concluded that substructures 1 and 3 show autocorrelation symptoms. Based on the conclusions above, since there is autocorrelation in both substructures, the observation data must undergo autocorrelation treatment using the Cochrane-Orcutt method, in which 71 observations are used ($N = 71$). The following are the Cochrane-Orcutt test results processed using SPSS.

Tabel 10. Autocorrelation Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Equation 1	.575 ^a	.331	.311	1.0361666	1.173
Equation 2	.368 ^a	.136	.110	.09259	1.797
Equation 3	.557 ^a	.333	.303	1.0420552	1.194

Based on the autocorrelation treatment results in substructures 1 and 3 using the Cochrane-Orcutt test, the Durbin-Watson (DW) results for both substructures are above the dU value. Therefore, the Durbin-Watson

in substructures 1 and 3 can be considered free from autocorrelation according to the decision-making in the autocorrelation test.

4.3 Multivariate Regression

4.3.1 Substructural Regression 1

The effect of other variables on firm value (ε_1) that cannot be explained by firm size and capital structure can be determined as follows:

$$e1 = \sqrt{1 - 0,331} = 0,8179 \text{ atau } 81,8\%$$

In substructural equation 1, the aim is to examine the effect of firm size and capital structure on firm value; the equation for structure 1 is as follows:

$$\text{Tobin's } Q = \beta_0 + \text{Ln_TA } \beta_1 + \text{DER } \beta_2 + \varepsilon_1$$

$$\text{Tobin's } Q = 4,555 - 0,106 \text{ Ln_TA} + 1,307 \text{ DER} + 0,8179$$

4.3.2 Substructural Regression 2

The effect of other variables on profitability (ε_2) that cannot be explained by firm size and capital structure can be determined as follows:

$$e2 = \sqrt{1 - 0,136} = 0,9295 \text{ atau } 92,9\%$$

The substructural equation 2 aims to examine the effect of firm size and capital structure on profitability; thus, the equation for structure 2 is as follows:

$$\text{ROE} = \beta_0 + \text{Ln_TA } \beta_1 + \text{DER } \beta_2 + \varepsilon_2$$

$$\text{ROE} = 0,256 - 0,008 \text{ Ln_TA} - 0,020 \text{ DER} + 0,9295$$

4.3.3 Substructural Regression 3

The effect of other variables on profitability (ε_3) that cannot be explained by firm size, capital structure, and profitability can be determined as follows:

$$e3 = \sqrt{1 - 0,333} = 0,81670 \text{ atau } 81,7\%$$

Furthermore, the substructural equation 3 aims to examine the effect of firm size and capital structure on firm value, with profitability included in the study as a mediating variable to strengthen the research; the equation for structure 3 is as follows:

$$\text{Tobin's } Q = \beta_0 + \text{Ln_TA } \beta_1 + \text{DER } \beta_2 + \text{ROE } \beta_3 + \varepsilon_3$$

$$\text{Tobin's } Q = 4,724 - 0,111 \text{ LN_TA} + 1,294 \text{ DER} - 0,660 \text{ ROE} + 0,8167$$

4.4 Hypothesis Test (Partial t-test)

Test of the Effect of Firm Size on Firm Value: The regression test shows t-count < t-table, i.e., -3.458 < 1.994, with a significance level of 0.001 < 0.005. The Ln_TA coefficient indicates a negative direction of -0.095. It is concluded that Firm Size has a significant negative effect on Firm Value, so H1 is rejected. Test of the Effect of Capital Structure on Firm Value: The regression test shows t-count > t-table, i.e., 3.894 > 1.994, with a significance level of 0.000 < 0.005. The DER coefficient indicates a positive direction of 1.444. It is concluded that Capital Structure has a significant positive effect on Firm Value, so H2 is accepted.

Test of the Effect of Firm Size on Profitability: The regression test shows t-count < t-table, i.e., -2.762 < 1.994, with a significance level of 0.007 < 0.05. The Ln_TA coefficient indicates a negative direction of -0.007. It is concluded that Firm Size has a significant negative effect on Profitability, so H3 is rejected. Test of the Effect of Capital Structure on Profitability: The regression test shows t-count < t-table, i.e., -1.495 < 1.994, with a significance level of 0.139. The DER coefficient indicates a negative direction of -0.050 but is not significant, so H4 is rejected. Test of the Effect of Profitability on Firm Value: The regression test shows t-count < t-table, i.e., -0.223 < 1.994, with a significance level of 0.824 > 0.05. The ROE coefficient indicates a negative direction of -0.299. It is concluded that Profitability has a negative and insignificant effect on Firm Value, so H5 is rejected.

4.5 Mediation Test

4.5.1 Direct and Indirect Effect

From the regression test, the effect values are shown in the diagram in Figure 1 below:

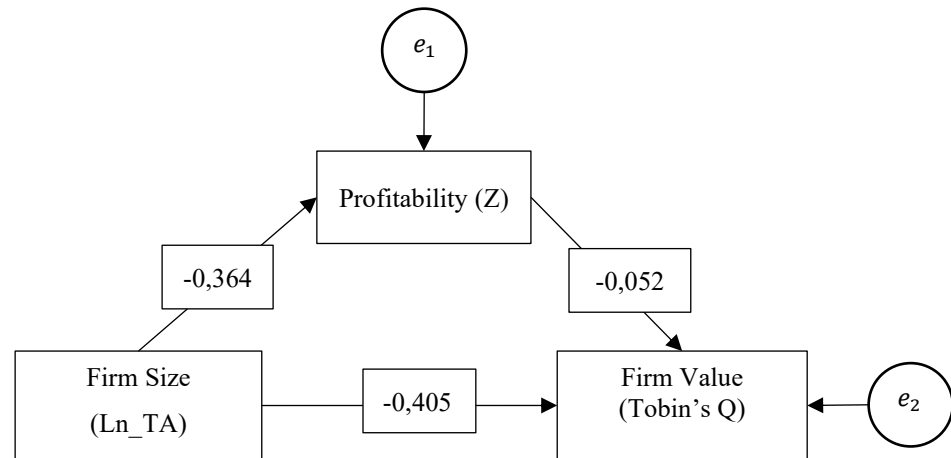


Figure 1 – Sobel Test for Mediation

Path Analysis of Ln_TA on Tobin's Q through ROE

$$\text{Direct Effect} = -0,405$$

$$\text{Indirect Effect} = -0,364 \times -0,052 = 0,0189$$

$$\text{Total Effect} = -0,405 + 0,0189 = -0,4239$$

From the calculation above, the direct effect is smaller than the indirect effect ($-0.405 < 0.0189$). Therefore, it can be concluded that the variable Profitability (ROE) can mediate the relationship between Firm Size and Firm Value. Thus, H6 is accepted.

Path Analysis of DER on Tobin's Q through ROE

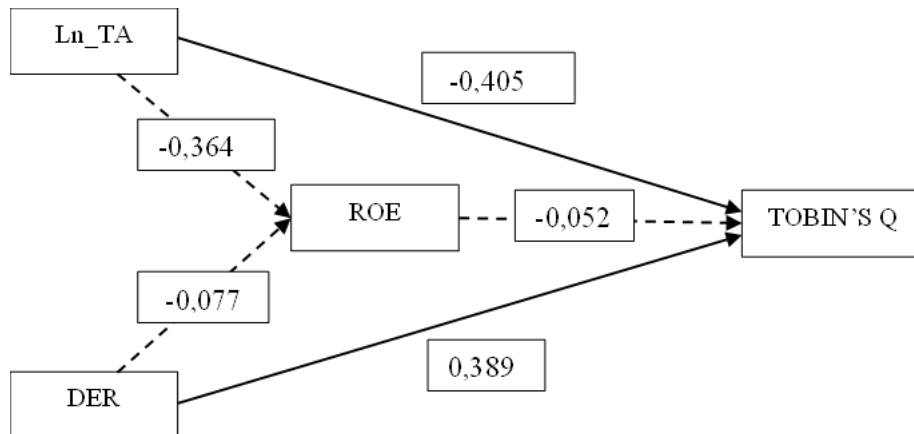
$$\text{Direct Effect} = 0,389$$

$$\text{Indirect Effect} = -0,077 \times -0,052 = 0,0040$$

$$\text{Total Effect} = 0,389 + 0,0040 = 0,393$$

From the calculation above, the direct effect is greater than the indirect effect ($0.389 > 0.0040$). Therefore, it can be concluded that the variable Profitability (ROE) cannot mediate the relationship between Capital Structure and Firm Value. This indicates that Profitability cannot mediate the relationship between DER and Tobin's Q because Profitability does not strengthen the effect of Capital Structure on Firm Value. Thus, H7 is rejected.

4.6 SOBEL TEST



Gambar 4.6. Path Analysis

Path Analysis of the Effect LN_TA on Tobin's Q through ROE

The mediation test of profitability in the relationship between firm size and firm value is presented as follows:

$$\begin{aligned}
 Sp2p3 &= \sqrt{p3_1^2 \cdot Sp2_1^2 + p2_1^2 \cdot Sp3_1^2 + Sp2_1^2 \cdot Sp3_1^2} \\
 &= \sqrt{(-0,660)^2 \times (0,002)^2 + (-0,008)^2 \times (1,365)^2 + (0,002)^2 \times (1,365)^2} \\
 &= \sqrt{0,4356 \times 0,000004 + 0,000064 \times 1,863225 + 0,000004 \times 1,863225} \\
 &= \sqrt{0,0000017424 + 0,0001192464 + 0,0000074529} \\
 &= \sqrt{0,0001284417} \\
 Sp2p3 &= 0,01134
 \end{aligned}$$

Based on the results presented above, the subsequent step is to calculate the t-statistic for the mediation effect using the following formula:

$$T = \frac{p2p3}{Sp2p3} = \frac{0,01893}{0,01134} = 1,6689$$

The calculated t-value is 1.6968, while the critical t-table value at a significance level of $\alpha = 5\%$ with a degree of freedom $(df) = (n-k) = 71 - 2 = 69$ is 1.66724. these results indicate that the calculated t-value is greater than the t-table value $(1.6689 > 1.6672)$. Therefore, profitability is confirmed to mediate the relationship between firm size and firm value.

4.7 DISCUSSION OF RESEARCH RESULTS

4.7.1 The Effect of Firm Size on Firm Value

The results of the study indicate that firm size (Ln_TA) has a significant negative effect on firm value (Tobin's Q) in the transportation subsector. This finding contradicts the initial hypothesis, which assumed that larger company assets would lead to higher firm value. The results suggest that an increase in total assets may reduce investor confidence, reflected in a decrease in Tobin's Q. This can be explained by the characteristics of the capital-intensive transportation industry, where the asset structure is dominated by fixed assets such as vehicle fleets, aircraft, ships, and infrastructure. High investment in fixed assets leads to large operational and depreciation costs, so larger assets that are not optimally utilized can weaken the company's financial performance and decrease firm value.

This study supports Signaling Theory, where a large firm size can create perceptions of inefficiency due to complex bureaucracy and reduced flexibility in adapting to change. Additionally, from the perspective

of Agency Theory, large firms are at risk of agency conflicts and higher administrative costs, which can potentially reduce profits. The results are consistent with studies by Zebua & Nuswandari (2024) and Rivandi & Petra (2022), which show that large-scale companies are not always seen as a competitive advantage but may reduce operational efficiency and firm value in the eyes of investors. The implication of this finding is that transportation companies need to be more cautious in expanding assets. The focus should not only be on increasing firm size but also on asset utilization efficiency and operational cost control.

4.7.2 The Effect of Capital Structure on Firm Value

The results of the study indicate that capital structure (DER) has a significant positive effect on firm value (Tobin's Q) in the transportation subsector, so the second hypothesis is accepted. This shows that a higher proportion of debt in the capital structure indicates a higher market appreciation of the company. Investors perceive proportional debt usage as an efficient financing strategy as well as a mechanism for managerial discipline. This study aligns with Trade-off Theory, which emphasizes that companies strive to achieve an optimal capital structure by balancing the tax benefits of debt with the risk of bankruptcy. In the context of capital-intensive transportation companies, proper debt usage is considered able to support fixed asset financing while increasing operational efficiency. This result also corresponds with Ramdhonah et al. (2019), which shows that high debt usage may increase risk, but as long as it remains at an optimal level, debt still contributes positively to firm value.

The implication of this finding is that company management needs to develop a balanced financing strategy between debt and equity. Proper debt management not only provides tax benefits (tax shield) but also increases investor confidence in the company's business prospects. However, companies must still control the risk of default if debt is excessively used.

4.7.3 The Effect of Firm Size on Profitability

The results show that firm size (Ln_TA) has a significant negative effect on profitability (ROE) in transportation companies. This result contradicts the researcher's expectations, indicating that larger firm size is associated with lower profitability. This finding supports Agency Theory, which states that the larger the company, the greater the potential for agency conflicts between managers and shareholders. Bureaucratic complexity in large-scale companies can slow decision-making and reduce operational efficiency, negatively affecting financial performance. This condition is relevant to the capital-intensive transportation sector, where most company assets are fixed assets (transport fleets, ships, aircraft, and infrastructure). Fixed assets generate high depreciation, maintenance, and operational costs. If these assets are not productively utilized, the resulting net income will be low, which depresses the ROE ratio.

This study is consistent with Hermanto & Dewinta (2023), which found that large companies often face barriers in responding to market changes due to more complex bureaucracy. Although economies of scale can be achieved in large firms, inefficiencies in asset management and high operational costs can reduce profitability. The implication of this finding is that transportation company management should emphasize operational efficiency and asset optimization to support profitability growth. Asset growth without adequate productivity will reduce the company's ability to generate profit.

4.7.4 The Effect of Capital Structure on Profitability

The results indicate that capital structure has a negative and insignificant effect on profitability (ROE) in transportation companies, so the fourth hypothesis is rejected. This means that an increase in the proportion of debt in the capital structure does not necessarily increase or decrease profitability. This finding does not

align with Trade-off Theory, which assumes that debt usage can increase profitability through tax benefits (tax shield). Based on financial statement data, most transportation companies have a relatively high proportion of debt compared to equity. However, high interest expenses are not proportional to net income. This is reflected in large equity values but relatively low net income, resulting in a small ROE. This condition is consistent with the characteristics of the capital-intensive transportation industry, where financing needs for fleets, infrastructure, and operational costs are very high but do not always generate optimal revenue, so incentives to increase company profit are limited.

This finding aligns with Tandi et al. (2018), Ardiana & Chabachib (2018), Fathoni & Syarifudin (2021), and Wulandari & Damayanti (2022), which show that capital structure has a negative and insignificant effect on profitability, especially in capital-intensive industries. The implication is that excessive debt use does not guarantee higher profitability, particularly if it is not directed toward revenue-generating activities. Therefore, transportation company management needs to be selective in using debt. A healthy capital structure should consider profit capacity and sectoral risk fluctuations to maintain profitability.

4.7.5 The Effect of Profitability on Firm Value

The results show that profitability has a negative and insignificant effect on firm value in the transportation subsector. This finding does not support the hypothesis, which assumed that higher profitability would increase firm value, so the fifth hypothesis is rejected. Theoretically, this result does not support Signaling Theory, which states that increased profitability provides positive signals to investors and can increase firm value. Instead, the finding aligns more with Agency Theory, where potential conflicts of interest exist between management and shareholders regarding the use of profits. In this context, relatively low net income compared to equity tends to be retained for internal company needs (business expansion, long-term investment), so it does not significantly improve shareholder welfare or firm value.

The capital-intensive nature of the transportation subsector explains this phenomenon. Large fixed asset requirements, such as fleets, infrastructure, and operational costs, suppress net income. Consequently, profitability ratios remain low and insufficient to strongly influence market firm value. The implication is that profitability is not always perceived positively by the market, especially if profits are not accompanied by transparent use or clear distribution strategies. Therefore, transportation companies need to strengthen profit distribution policies, improve operational efficiency, and maintain consistent communication with investors regarding business strategies and long-term financial prospects.

4.7.6 Profitability Mediation in the Relationship Between Firm Size and Firm Value

The results indicate that profitability significantly mediates the effect of firm size on firm value. The indirect effect through profitability is stronger than the direct effect of firm size on firm value, as shown by the Sobel test. This indicates that an increase in firm size in the transportation subsector cannot fully enhance firm value if not accompanied by increased profitability. Large assets, especially non-current assets, only provide benefits if optimally managed to generate profits. In other words, a large firm size is not automatically perceived positively by investors unless reflected in adequate financial performance, which is measured by the company's ability to generate profit.

This finding is consistent with Agency Theory, which suggests that asset growth can generate agency costs if not efficiently managed. However, if firm size growth can be converted into high profitability, it becomes a positive signal for investors. This, in turn, increases stock demand, thereby raising firm value. This finding aligns with Perdana & Adityaputra (2024), which found that large firm size that increases operational activity generating profit provides a positive signal to investors and raises market stock prices.

The implication is that companies with large assets need to optimize management strategies so that size growth is reflected in increased profitability. This strengthens firm value in the eyes of investors while improving competitiveness in the capital-intensive and efficiency-demanding transportation sector.

4.7.7 Profitability Mediation in the Relationship Between Capital Structure and Firm Value

The results show that capital structure directly has a significant positive effect on firm value. This means that an optimal combination of debt and equity can increase firm value through tax shield benefits and

expansion funding capacity, sending positive signals to investors about the company's growth prospects. However, when profitability is introduced as a mediating variable, the indirect effect of capital structure on firm value becomes insignificant compared to the direct effect. This indicates that profitability cannot mediate the relationship between capital structure and firm value.

The insignificance of profitability as a mediating factor is due to two main reasons. First, high debt increases interest expenses, which does not always correspond to higher net income. Second, investors often evaluate capital structure as a managerial signal about company prospects and risks without considering profitability first. In some cases, highly leveraged companies remain attractive to investors due to expected growth or asset value. This finding aligns with Pecking Order Theory, which explains that companies generally prioritize internal financing. In the capital-intensive transportation subsector, debt is often allocated to long-term assets that do not directly affect profitability, weakening profitability's mediating role. This also corresponds with Perdana & Adityaputra (2024), who found that changes in profitability do not always strengthen the relationship between capital structure and firm value.

The implication is that financing decisions through debt will only add value if accompanied by efficient capital and asset management. Therefore, companies need to balance capital structure strategy with profitability improvement to strengthen firm value in the eyes of investors.

5 CONCLUSION

Firm size (Ln_TA) has a negative and significant effect on firm value (Tobin's Q). This indicates that ownership of large assets, especially non-current assets, does not always reflect an increase in firm value. Growth in firm size without an effective asset management strategy has the potential to reduce firm value. Next, capital structure (DER) has a positive and significant effect on firm value (Tobin's Q). This indicates that proportional use of debt can create financial discipline, promote managerial efficiency, and provide positive signals to investors, thus playing an important role in enhancing firm value.

Firm size (Ln_TA) has a negative and significant effect on profitability (ROE). This indicates that growth in total assets dominated by non-current assets suppresses the return on equity due to high operational and maintenance costs. Therefore, a large firm size cannot be considered a main determinant of improved key performance without efficient asset management. Capital structure (DER) has a negative but insignificant effect on profitability (ROE). This indicates that high interest expenses and principal debt obligations can potentially reduce net profit, but the effect is not strong enough to significantly lower the return on equity. This condition can be explained by the capital-intensive nature of the transportation industry, where debt is primarily directed toward long-term non-current asset financing. Operational efficiency is more determined by management's ability to optimize existing assets rather than solely by the composition of capital structure.

Profitability (ROE) has a negative and insignificant effect on firm value (Tobin's Q). This indicates that relatively small increases in net income compared to total equity do not have a meaningful impact on market valuation. It shows that the profits earned have not fully increased investor confidence, especially when most of the profits are neither distributed as dividends nor allocated to productive new projects.

Profitability is able to mediate the relationship between firm size and firm value. This indicates that firm size growth will optimally contribute to firm value if it is accompanied by good profitability performance. Therefore, companies need to manage assets more efficiently so that business scale growth not only increases total assets but also generates effective profitability. Improved profitability attracts investor interest, drives stock demand, and ultimately increases firm value. On the other hand, profitability cannot mediate the relationship between capital structure and firm value. This indicates that investors' perception of firm value is more directly influenced by debt financing policies, which are seen as signals of good debt management, rather than by profitability levels. This can be explained by the conditions in the transportation subsector, where the profits generated are relatively small compared to the equity held, making them insufficient to strengthen the relationship between capital structure and firm value. Thus, profitability cannot serve as a significant mediating variable in this relationship.

This study has limitations. First, the results cannot be generalized to all subsectors listed on the Indonesia Stock Exchange. The study used only one proxy for each observed variable, so the potential relationships using other proxies have not been examined. Future research should be improved by involving multiple subsectors

on the Indonesia Stock Exchange. Additionally, examining other proxies for the observed variables is necessary to determine the sensitivity level of each analyzed proxy.

REFERENCES

- Akhmadi, A., & Ariadini, A. (2018). Profitabilitas dan Dampak Mediasinya Terhadap Nilai Perusahaan (Studi Empirik Pada Perusahaan Sektor Pertambangan yang Terdaftar di Bursa Efek Indonesia Periode 2011-2015). *Sains: Jurnal Manajemen dan Bisnis*, 11(1), 105–132. <https://doi.org/10.35448/jmb.v11i1.4328>
- Astohar. (2017). Pengaruh likuiditas dan profitabilitas terhadap nilai perusahaan dengan struktur modal sebagai variabel intervening. *Prima Ekonomika*, 8(1). <https://doi.org/10.35448/jrat.v9i1.4290>
- Bailusy, M. N., Meliana, & Khasanah, M. (2018). Pengaruh Struktur Modal dan Kebijakan Dividen Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Intervening Pada Perusahaan Yang Tergabung Dalam Indeks LQ-45 di Bursa Efek Indonesia Tahun 2012-2016. *Jurnal Manajemen Sinergi*, 6(1), 1–97.
- Christiaan, P. (2022). Pengaruh Ukuran Perusahaan Dan Leverage Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Intervening (Studi Pada Perusahaan Sektor Industri Barang Konsumsi). *AkMen JURNAL ILMIAH*, 19(1), 37–50. <https://doi.org/10.37476/akmen.v19i1.2439>
- Denziana, A., & Monica, W. (2016). Analisis Ukuran Perusahaan dan Profitabilitas Terhadap Nilai Perusahaan (Studi Empiris Pada Perusahaan Yang Tergolong LQ45 di BEI Periode 2011-2014). *Jurnal Akuntansi dan Keuangan*, 7(2), 241–254.
- Hamdani, M. (2020). Pengaruh Kinerja Keuangan, Kebijakan Dividen dan Umur Perusahaan Terhadap Nilai Perusahaan di Moderasi Ukuran Perusahaan. *Jurnal Akuntansi dan Ekonomika*, 10(2), 188–197. <https://doi.org/10.37859/jae.v10i2.2042>
- Istamawati, & Suseno, Y. D. (2017). Pengaruh Ukuran Perusahaan dan Debt To Equity Ratio Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Intervening. *Jurnal Manajemen Sumber Daya Manusia*, 11(1), 148–162.
- Krisnando, K., & Novitasari, R. (2021). Pengaruh Struktur Modal, Pertumbuhan Perusahaan, dan Firm Size terhadap Nilai Perusahaan Pada Perusahaan Consumer Goods yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2017-2020. *Jurnal Akuntansi dan Manajemen*, 18(02), 71–81. <https://doi.org/10.36406/jam.v18i02.436>
- Martini Putu, N. N. G., Moeljaidi, Djumahir, & Djazuli, A. (2014). Factors Affecting Firms Value of Indonesia Public Manufacturing Firms. *International Journal of Business and Management Invention*, 3(2), 35–44.
- Mercyana, C., Hamidah, & Kurnianti, D. (2022). Pengaruh Struktur Modal, Profitabilitas, Ukuran Perusahaan dan Likuiditas terhadap Nilai Perusahaan Infrastruktur yang Terdaftar di Bursa Efek Indonesia Periode 2016- 2020. *Jurnal Bisnis, Manajemen, dan Keuangan*, 3(1), 101–112.
- Ngurah, A. A., Adi, D., & Lestari, P. V. (2016). Pengaruh Kebijakan Dividen, Likuiditas, Profitabilitas dan Ukuran Perusahaan Terhadap Nilai Perusahaan. *E-Jurnal Manajemen Unud*, 5(7), 4044–4070.
- Nurwulandari, A., & Wibowo, Y. (2021). Effect of Liquidity , Profitability, Firm Size on Firm Value with Capital Structure as Intervening Variable. *ATESTASI: JURNAL ILMIAH AKUNTANSI*, 4(2), 257–271. <https://doi.org/10.57178/atestasi.v4i2.271>
- Praselia, T. E., Tommy, P., & Saerang, I. S. (2014). Struktur Modal, Ukuran Perusahaan dan Risiko Perusahaan Terhadap Nilai Perusahaan Otomotif Yang Terdaftar di BEI. *Jurnal EMBA*, 2(2), 879–889.
- Saftri, & Akhmadi. (2017). Pengaruh Profitabilitas Dan Pertumbuhan Perusahaan Terhadap Struktur Modal Dengan Ukuran Perusahaan Sebagai Variabel Moderating. *Sains: Jurnal Manajemen dan Bisnis*, 9(2), 265–281. <https://doi.org/10.35448/jmb.v9i2.2042>
- Setiadharmas, S., & Machali, M. M. (2017). The Effect of Asset Structure and Firm Size on Firm Value with Capital Structure as Intervening Variable. *Journal of Business & Financial Affairs*, 6(4). <https://doi.org/10.4172/2167-0234.1000298>
- Yulimtinan, Z., & Atiningsih, S. (2021). Leverage Ukuran Perusahaan Pertumbuhan Penjualan Terhadap Nilai Perusahaan Dengan Profitabilitas Sebagai Variabel Mediasi. *Balance: Jurnal Akuntansi dan Bisnis*, 6(1), 69–82.