Journal of Accounting Research, Utility Finance and Digital Assets (JARUDA) | ISSN (e): 2962-973X
Volumes 4 No. 2 (2025)

THE EFFECT OF CAPITAL STRUCTURE, COMPANY SIZE, INTEREST RATE, PROFITABILITY AND REVENUE GROWTH ON STOCK PRICES (Case Study on Transportation Companies in the Air, Land and Sea Transportation Sub-Sector Listed on the IDX)

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Received : 01 September 2025
Revised : 15 September 2025
Accepted : 30 September 2025
Published : 15 October 2025
DOI : https://doi.org/10.54443/jaruda.v4i2.274
Publication Link:https://jaruda.org/index.php/go

Abstract

This study aims to analyze the effect of capital structure, firm size, interest rates, profitability, and revenue growth on stock prices of transportation companies in the air, land, and sea transportation sub-sectors listed on the Indonesia Stock Exchange during the 2019–2023 period. The research data were obtained from the official website www.idx.co.id. This study employed a purposive sampling technique, resulting in a sample of 16 companies with a total of 80 observational data points. The data were analyzed using the Panel Data Regression method with the aid of EViews 12 software, employing the Random Effect Model. The results of the study show that capital structure (DER) has a positive and significant effect on stock prices. Firm size has a positive but not significant effect on stock prices. Interest rates (BI Rate) have a positive but not significant effect on stock prices. Profitability (ROA) has a positive but not significant effect on stock prices. Revenue growth (Rev Growth) has a positive and significant effect on stock prices. Simultaneously, capital structure (DER), firm size, interest rates (BI Rate), profitability (ROA), and revenue growth (Rev Growth) collectively have a positive and significant effect on stock prices.

Keywords*: Stock Price, Capital Structure, Firm Size, Interest Rate, Profitability, Revenue Growth*

INTRODUCTION

The capital market is an important component of Indonesia's financial system, serving as a link between investors and companies in need of capital. In this context, stock prices are the main indicator that reflects market perception of the company's performance and prospects (Azhima, 2024). Changes in stock prices not only impact investment strategies, but also affect the company's managerial decisions. The transportation sector, which consists of air, land, and sea transportation subsectors, plays a vital role in supporting the mobility and distribution of goods in Indonesia. A company's performance in this sector is greatly influenced by various internal and external factors, including capital structure, company size, interest rates, profitability, and revenue growth (Ayunia et al., 2021). Historical data shows that the transportation sector index (IDXTRANS) has experienced significant fluctuations, especially during the COVID-19 pandemic, but it also shows strong recovery potential (Indonesia Stock Exchange, 2023).

The urgency of this research lies in the need for a deeper understanding of the factors that affect the stock price of transportation companies. Optimal capital structure, large company size, competitive interest rates, stable profitability, and sustainable revenue growth are believed to increase the value of a company's shares (Brigham & Houston, 2019; Kurnia, 2019; Ong & Mahazan, 2020). The purpose of this study is to analyze the simultaneous and partial influence of five main variables on the stock price of transportation companies listed on the Indonesia Stock Exchange during the period 2019–2023. This study uses a quantitative approach with the panel data regression method and the Random Effect model, and refers to secondary data obtained from the official website of the Indonesia Stock Exchange. As a problem-solving plan, this study identified the relationship between independent variables and stock prices, and tested the significance of their influence. Thus, the results of this research are expected to make a theoretical contribution in the field of financial management and become a practical reference for investors

and company management in strategic decision making.

LITERATURE REVIEW

This research is based on two main theories, namely Signal Theory and Trade-Off Theory. Signal Theory explains that the information conveyed by the company through financial statements serves as a signal to investors regarding the company's performance and prospects (Gitman & Zutter, 2015; Winona, 2022). Positive signals can increase investor interest and drive up stock prices. Meanwhile, the Trade-Off Theory emphasizes the importance of a balance between the use of debt and equity in a company's capital structure, taking into account tax benefits and bankruptcy risks (Husnan & Pudjiastuti, 2015).

1. Capital Market and Stock Prices

The capital market acts as a liaison between investors and companies, as well as an indicator of national economic health (Akhyar et al., 2022; Alfarauq & Yusup, 2020). Stock prices, as a reflection of the company's value, are influenced by internal factors such as profitability and capital structure, as well as external factors such as interest rates and inflation (Hartono, 2017; Akbar & Fahmi, 2020).

2. Capital Structure

Capital structure is a combination of debt and equity that a company uses to finance operations. DER (Debt to Equity Ratio) is used as the main indicator. A high DER indicates high leverage, but it also increases financial risk (Brigham & Houston, 2019; Sembiring, 2019).

$$\text{DER} = \frac{\text{Total Liabilities}}{\text{Total Equity}} \times 100\%$$

3. Company Size

The size of a company is measured through the natural logarithm of total assets. Large companies tend to be more stable and have wider access to funding. However, size does not always have a significant effect on stock prices (Ramadhan & Nursito, 2021; Lorenza et al., 2020).

$$\text{Firm Size} = \text{Logaritma Natural (Total Aset)}$$

4. Interest

Interest rates affect capital costs and investment decisions. The BI Rate is used as an indicator in this study. Interest rate hikes can lower stock prices due to rising borrowing costs (Mishkin, 2019; Kiley & Mishkin, 2024).

5. Profitability

Profitability is measured by ROA (Return on Assets), which shows a company's efficiency in generating profits from assets. High ROA is a positive signal for investors, although it does not always have a significant effect on stock prices (Penman, 2013; Smith & Adams, 2022).

$$\text{ROA} = \frac{\text{net profit}}{\text{total asset}}$$

6. Revenue Growth

Revenue growth reflects the company's success in increasing sales and business expansion. Revenue Growth is used as an indicator. Consistent growth increases investment attractiveness and stock prices (Damodaran, 2020; Bodhanwala & Bodhanwala, 2024). Previous studies have shown mixed results. Evania & Indarti (2022) found that profitability has a significant positive effect on stock prices, while capital structure and company size are inconsistent. Rostina et al. (2023) show that the size of the company has a significant positive influence, but the capital structure does not. Research by Agustin et al. (2021) indicates that interest rates and profitability do not have a significant effect during the pandemic. Although many studies have examined the relationship between financial variables and stock prices, there is a gap in the literature regarding the simultaneous analysis of five key variables specifically in the transportation sector in Indonesia. This research aims to fill the gap with a panel data approach and Random Effect model, as well as an analysis period that includes the impact of the pandemic and economic recovery.

$$\text{Revenue growth} = \frac{\text{Sales} - \text{Sales t} - 1}{\text{Sales t} - 1}$$

Conceptual framework and hypothesis in this study are as follows:

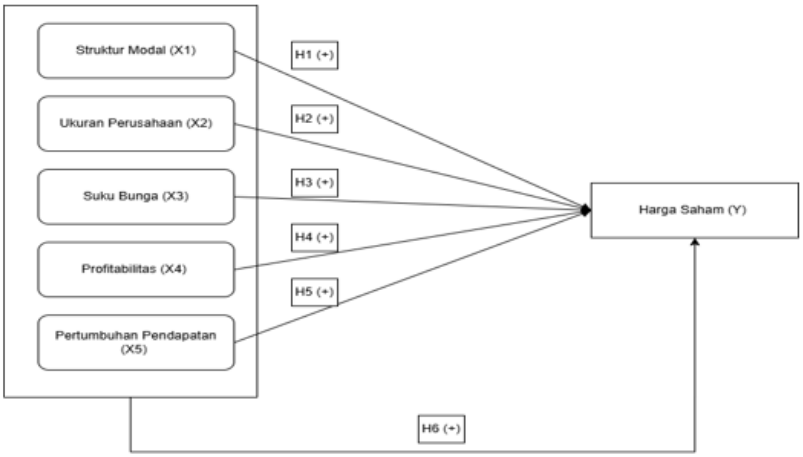

Image 1. Conceptual Framework

H1: Capital Structure has a positive and significant effect on stock prices of transportation companies in the air, land, and sea sub-sectors listed on the Indonesia Stock Exchange (IDX).
H2: Firm Size has a positive and significant effect on stock prices of transportation companies in the air, land, and sea sub-sectors listed on the Indonesia Stock Exchange (IDX).
H3: Interest Rate has a positive and significant effect on stock prices of transportation companies in the air, land, and sea sub-sectors listed on the Indonesia Stock Exchange (IDX).
H4: Profitability has a positive and significant effect on stock prices of transportation companies in the air, land, and sea sub-sectors listed on the Indonesia Stock Exchange (IDX).
H5: Revenue Growth has a positive and significant effect on stock prices of transportation companies in the air, land, and sea sub-sectors listed on the Indonesia Stock Exchange (IDX).
H6: Capital Structure, Firm Size, Interest Rate, Profitability, and Revenue Growth collectively have a positive and significant effect on stock prices of transportation companies in the air, land, and sea sub sectors listed on the Indonesia Stock Exchange (IDX).

METHOD

This study uses a quantitative approach with an empirical study design on transportation companies in the air, land, and sea transportation subsectors listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023. The main purpose of this activity is to analyze the influence of capital structure, company size, interest rates, profitability, and revenue growth on stock prices. The target of the study was 16 transportation companies selected through purposive sampling techniques. The selection criteria include:

- Actively listed on the IDX during 2019-2023
- Publish full financial statements
- Ridak was delisted during the observation period

Based on this criterion, 16 companies were obtained as samples, resulting in a total of 80 panel data observations. The data used in this study is secondary data obtained from the official IDX website (www.idx.co.id). The analysis was carried out with the help of EViews 12 software, using the panel data regression method. The dependent variables in this study are the stock price (closing price), while the independent variables include capital structure measured by Debt to Equity Ratio (DER), company size measured by the natural logarithm of total assets (Firm Size), interest rates represented by BI Rate, profitability measured by Return on Assets (ROA), and revenue growth measured by Revenue Growth.

Data collection is carried out through financial statement documentation and capital market statistics. The operational definition of the variable is systematically compiled to ensure measurement consistency. The stock price is measured based on the annual closing price. DER is calculated by the formula of total liabilities divided by total equity multiplied by 100%. The size of a company is calculated by the natural logarithm of total assets. The BI Rate is used as an indicator of the benchmark interest rate. ROA is calculated by net profit divided by total assets, and Revenue Growth is calculated by the difference between the current year's sales and the previous year divided by the previous year's sales. The data analysis technique used was panel data regression with the Random Effect model. The selection of the model was carried out through a series of specification tests, namely the Chow test to choose between Common Effect and Fixed Effect, the Hausman test to choose between Fixed Effect and Random Effect,

and the Lagrange Multiplier test to choose between Common Effect and Random Effect. The regression model used in this study is formulated as follows:

$$Y_{it} = \alpha + \beta_1 DER_{it} + \beta_2 SIZE_{it} + \beta_3 BIRATE_{it} + \beta_4 ROA_{it} + \beta_5 REVGROWTH_{it} + \varepsilon_{it}$$

This model was used to test the simultaneous and partial influence of the five independent variables on the stock price of a transportation company. The results of the analysis are expected to make a theoretical and practical contribution to investment decision-making and the company's financial strategy.

RESULTS AND DISCUSSION

1. Statistics Descriptive

To understand the characteristics of the data, descriptive statistical analysis was carried out on six research variables. The results are presented in Table 1. From the table, it can be seen that the average stock price is 5.1179 with a standard deviation of 1.6368, indicating relatively low fluctuations. In contrast, the capital structure (DER) averaged 0.2305 but with a high standard deviation of 2.8070, indicating significant volatility between companies. The company's size (LNSIZE) is quite stable with an average of 3.3290 and a standard deviation of 0.0719. The interest rate (BI Rate) has an average of 4.75%, while profitability (ROA) and revenue growth (REVGROWTH) have an average of 0.0296 and 0.1882, respectively, with a fairly high standard deviation.

Table 1. Descriptive Statistical Analysis

	LNHS	THE	LNSIZE	CHOOSE	LENGTH	REVGROWTH
Mean	5.117957	0.230555	3.329005	4.750000	0.029599	0.188215
Median	5.337492	0.558637	3.322626	5.000000	0.018672	0.118592
Maximum	8.107720	11.92786	3.487089	6.000000	2.071767	5.039162
Minimum	0.000000	-7.940314	3.202586	3.500000	-0.578269	-0.839542
Std. Dev.	1.636850	2.807023	0.071936	0.980829	0.291464	0.728725
Skewness	-0.733019	-0.275484	0.151430	-0.121497	4.082018	3.869055
Kurtosis	3.865319	7.347091	2.225172	1.374654	31.87915	26.211023
Jarque-Bera	9.660142	64.00255	2.306939	9.0026657	3002.189	1995.310
Probability	0.007986	0.000000	0.315540	0.011094	0.000000	0.000000
Sum	409.4366	18.44438	266.3204	380.0000	2.367902	15.05723
Sum Sq. Dev.	211.6629	622.4707	0.408808	76.00000	6.711132	42.95212
Observations	80	80	80	80	80	80

2. Correlation Analysis

Table 2. Correlation Analysis

Correlation Probability	LNHS	THE	LNSIZE	CHOOSE	LENGTH	REVGROWTH
LNHS	1.000000 --------- ---------					
THE	0.104741 0.930161 0.3552	1.000000 --------- ---------				
LNSIZE	0.011838 0.104555 0.9170	0.016722 0.147706 0.8830	1.000000 ---------- ----------			
CHOOSE	0.080824 0.716159 0.4760	-0.018379 -0.162344 0.8715	0.006479 0.057219 0.9545	1.000000 ---------- ----------		
LENGTH	0.078453 0.695018 0.4891	0.052735 0.466391 0.6422	-0.141064 -1.258426 0.2120	0.019939 0.176135 0.8606		
REVGROWTH	0.141230 1.259938 0.2114	-0.030925 -0.273253 0.7854	0.054273 0.480032 0.6325	0.294401 2.720655 0.0080	-0.003118 -0.027534 0.9781	1.000000 ---------- ----------

To see the relationship between variables, a correlation analysis was carried out, the results of which are shown in Table 2. The correlation between DER and the stock price of 0.1047 shows a positive but weak relationship. The correlation between REVGROWTH and the stock price of 0.1412 also shows a positive relationship. However, there was no correlation between independent variables exceeding 0.8, so no symptoms of multicollinearity were found.

3. Classic Assumption Test

Before regression, a classical assumption test was performed. The normality test using Jarque-Bera yielded a p-value of 0.135, indicating that the data was distributed normally. Multicollinearity test in Table 3. indicates that all correlations between independent variables are below 0.8. The Glejser test can be seen in Table 4. indicates the absence of heteroscedasticity because all p-values > 0.05. And Autocorrelation Test in Table 5. resulting in a Durbin-Watson value of 2.083, which is within the autocorrelation-free range.

Table 3. Multiilinearity Test

	LNHS	THE	LNSIZE	CHOOSE	LENGTH	REVGROWTH
LNHS	1	0.10474068	0.01183763	0.08082376	0.07845276	0.14122999
THE	0.10474068	1	0.01672210	-0.0183787	0.05273494	-0.0309249
LNSIZE	0.01183763	0.01672210	1	0.00647867	-0.1410638	0.05427277
CHOOSE	0.08082376	-0.0183787	0.00647867	1	0.01993937	0.29440114
LENGTH	0.07845276	0.05273494	-0.1410638	0.01993937	1	-0.0031176
REVGROWTH	0.14122999	-0.0309249	0.05427277	0.29440114	-0.0031176	1

Table 4. Heteroskdasticity Test

Variabel	Coefficient	Std. Error	t- Statistic	Prob
C	-3.659482	4.950593	-0.739201	0.4621
THE	-0.000769	0.037499	-0.020496	0.9837
LNSIZE	1.804867	1.477408	1.221644	0.2257
CHOOSE	-0.220391	0.112076	-1.966442	0.0530
LENGTH	-0.107397	0.364620	-0.294544	0.7692
REVGROWTH	-0.038676	0.151086	-0.255987	0.7987

Table 5. Autocorrelation Test

R- squared	0.574494	Mean dependent var	-9.85E-17
Adjusted R-squared	0.533125	S.D. dependent var	1.604584
S.E of regression	1.096384	Akaike info criterion	3.116551
Sum squared resid	86.54810	Schwarz criterion	3.354753
Log likelihood	-116.6620	Hannan-Quinn criter	3.212053
F- statistic	13.88719	Durbin-Watson stat	2.083177
Prob(F-statistic)	0.000000		

4. Selection of Regression Models

To determine the most suitable regression model, Chow, Hausman, and Lagrange Multiplier tests were performed. The results of the Chow test can be seen in Table 6. which shows that the Fixed Effect Model is better than the Common Effect Model. However, Hausman's test shows that the Random Effect Model is more precise than the Fixed Effect Model, as can be seen in Table 7. Test the Lagrange Multiplier in Table 8. also supports the use of Random Effect Model.

Table 6. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.551638	(15,59)	0.0000
Cross-section Chi-square	114.636952	15	0.0000

Table 7. Hausman Test

Test Summary	Chi-Sq.Statistic	Chi-Sq. d.f.	Prob.

Cross-section random	0.000000	5	1.0000

Table 8. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-section	Time	Both
Breusch Pagan	72.04934	1.718584	73.76792
	(0.0000)	(0.1899)	(0.0000)
Honda	8.488188	-1.310948	5.075075
	(0.0000)	(0.9051)	(0.0000)
King-Wu	8.488188	-1.310948	2.729842
	(0.0000)	(0.9051)	(0.0032)
Standardized Honda	9.219910	-0.859406	2.832095
	(0.0000)	(0.8049)	(0.0023)
Standardized King-Wu	9.219910	-0.859406	0.688112
	(0.0000)	(0.8049)	(0.2457)
Gourieroux, et al.	--	--	72.04934
			(0.0000)

5. Regression Estimation Results

Table 9. Panel Data Regression Estimation with REM

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-28.72610	27.16129	-1.057612	0.2945
THE	0.165839	0.057393	2.889519	0.0054
LNSIZE	10.10048	8.162607	0.124504	0.2208
CHOOSE	0.013692	0.109972	1.237408	0.9013
LENGTH	0.350672	0.388924	0.901646	0.3709
REVRGROWTH	0.562500	0.162263	3.466586	0.0010
R-squared	0.770713	Mean dependent var		5.117957
Adjusted R-squared	0.692988	S.D. dependent var		1.636850
S.E. of regression	0.906956	Akaike info criterion		2.863065
Sum squared resid	48.53158	Schwarz criterion		3.488347
Log likelihood	-93.52261	Hannan-Quinn criter.		3.113759
F-statistic	9.915962	Durbin-Watson stat		1.558702
Prob(F-statistic)	0.000000			

Based on the results of regression estimation with the Random Effect Model in Table 9. The regression equation is obtained as follows:

Share Price = -28.72610 + 0.165839 DER + 10.10048SIZE + 0.013692 BIRATE + 0.350672ROA + 0.562500REVGROWTH + eit

From these results, DER and REVGROWTH have a positive and significant effect on the stock price, with p-values of 0.0054 and 0.0010 respectively. The variables SIZE, BIRATE, and ROA showed a positive but not significant influence.

6. Pengujian Hypothesis

Table 10. Simultaneous Test (F-Test)

F-statistic	F-table	Alpha	Probability	Information
9.915962	2.224.	0.05	0.000000	Signifikan

The (partial) t-test shows that only DER and REVGROWTH have a significant effect on the stock price. The F test (simultaneous) shows that the five variables together have a significant effect on the stock price, with an F-statistic of 9.9159 and a p-value of 0.0000.

Table 11. Results of the Ddetermination Coefficient R^2 Test

R-squared	0.770713	Mean dependent var	5.117957
Adjusted R-squared	0.692988	S.D. dependent var	1.636850

In Table 11. The determination coefficient shows an Adjusted R^2 value of 0.6929, which means that 69.29% of the stock price variation can be explained by all five independent variables.

CONCLUSION

Based on the results of the panel data regression analysis using the Random Effect Model (REM) approach, it can be concluded that of the five independent variables tested, two of them—capital structure (DER) and revenue growth (Revenue Growth)—have a positive and significant influence on the share prices of transportation companies in the air, land, and sea transportation subsectors listed on the Indonesia Stock Exchange during the 2019–2023 period. This shows that investors tend to respond positively to companies that are able to manage financing structures productively and show consistent revenue growth. On the other hand, company size (Firm Size), interest rate (BI Rate), and profitability (ROA) show a positive but not significant influence on stock prices. These findings indicate that although the three variables are theoretically related to stock value, in practice investors are more focused on leverage and income expansion as the main indicators in investment decision-making in the transportation sector. Simultaneously, the five independent variables had a positive and significant effect on the stock price, with an Adjusted R^2 value of 69.29%. This means that the model used in this study was able to explain most of the variation in the share price of transportation companies during the observation period. These findings reinforce the understanding that a combination of internal and external factors of a company has an important role in shaping market perception of stock value.

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