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THE EFFECT OF CAPITAL STRUCTURE, GROWTH, AND FIRM SIZE ON FIRM VALUE

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ABSTRACT

This research aims to determine the impact of capital structure, growth, and firm size affect the infrastructure industry companies stated on the Indonesia Stock Exchange (IDX) from 2019 and 2023 in terms of their firm value. The sample size was determined using purposive sampling. The research employed secondary data, which was sourced from the 2019 until 2023 financial statements of infrastructure companies. The multiple linear regression analysis method was applied in this investigation. Version 26 of SPSS was used to an analyze the data. The findings of this research indicated that a firm's value is influenced by its capital structure, growth, and size.

Keywords: *Capital Structure, Growth, Firm Size, Firm Value*

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INTRODUCTION

As business progresses rapidly, more and more companies are established, causing competition to become increasingly fierce. This encourages companies to continue to improve their performance in order to achieve the set goals (Silalahi & Sihotang, 2021). In general, the firm's goal is to provide benefits to shareholders, which can be measured by firm value (Wirianata & Wijoyo, 2020).

Increasing firm value is the most important thing, especially for companies that have gone public and offer their shares to the public (Mercyana et al., 2022). This is because a good firm value indicates that the firm has the potential to provide benefits to shareholders. One of the factors that's affect firm value is the firm's financial performance. Good financial performance can increase firm value and provide a guarantee of the welfare of shareholders (Setiawati & Wijaya, 2023).

Firm value is influenced by many factors, one of which is capital structure, firm growth rate, and firm size (Husaeni, 2018). Financial management is closely related to decisions about how funding affects the firm's capital structure. A firm's overall value can be impacted by its financial performance and position, both of which can be influenced by the quality of the capital structure of the organization (Darsono, 2017). The capital structure shows the origin of funding used by the firm to run its operations, such as internal funding from shareholders and external funding through loans or debt (Wirianata & Wijoyo, 2020).

Companies that have go public can be considered as large companies or companies with good growth, therefore firm growth (growth) can have an impact on firm value (Mawardi, 2020). According to Ramdhonah et al. (2019), growth is an indicator of whether the firm will experience good development or not. An increase in growth will bring greater benefits to investors because growth has beneficial benefits for investors (Syardiana et al., 2016). In addition to capital structure and growth, firm size is also considered to affect firm value because the larger the firm, the easier it is to obtain the financial resources needed to achieve predetermined goals (Irsad et al., 2023).

Infrastructure companies are one of the business entities that play a role in infrastructure development and procurement. Companies in the infrastructure industry are pioneers in driving Indonesia's economic development. The Indonesian government under the leadership of President Joko Widodo during his second term (2019-2024) has recently made various efforts, with the main focus on hard and consistent efforts, to recover the economy after the impact of the COVID-19 pandemic. President Joko Widodo has emphasized the importance of infrastructure development as the foundation for the country's progress. Therefore, in recent years, the government has prioritized infrastructure development as a key indicator of progress across Indonesia (bkpm, 2024).

Source : Data Processed by Researchers (2024)

Figure 1. Firm Value of Infrastructure Sector in 2019-2023

However, it was discovered that infrastructure category companies stated on the Indonesia Stock Exchange from 2019 and 2023 continued to see a decline in their firm value as determined by the Price to Book Value (PBV). In 2019, PBV was recorded at 2.54%, then decreased to 1.77% in 2020 due to the decline in the Indonesian economy triggered by the Covid-19 outbreak, which caused many companies in the infrastructure industry to experience losses (investasi.kontan, 2024). Furthermore, in 2021 and 2022, the PBV of companies in this industry decreased again, to 1.63% and 1.27% respectively and still decreased to 1.08%.

Source : Data Processed by Researchers (2024)

Figure 2. Capital Structure of Infrastructure Sector 2019-2023

In contrast, the capital structure in infrastructure industry companies as measured by the Debt to Equity Ratio (DER), has increased during the period 2019 to 2023. In 2019, the DER value of companies in this industry was 0.52%, then rose to 0.68% in 2020 and continued to increase in 2021, 2022, and 2023 which amounted to 0.71%, 0.95%, and 1.16% respectively (Ferdyansyah & Suwaidi, 2023). This increase indicates that companies in the industry are experiencing a decline in firm performance, because the high DER value indicates that the firm has a large debt to support its operations which results in high firm risk as well (Suwardika & Mustanda, 2017).

There are several cases of infrastructure companies in Indonesia experiencing a significant decline in share value due to high debt, one example is PT Waskita Karya (Persero) Tbk, this firm has experienced a suspension of share trading on the Indonesia Stock Exchange (IDX) since May 8, 2023. The suspension was then extended on May 16, 2024 and is still ongoing today (June 22, 2024). The main reason for the suspension is the late payment of IDR 2.1 trillion in debt to 17 bank creditors as well as the high debt-to-equity ratio (D/E) which reached 4.25, well above the ideal limit (CNN Indonesia, 2024).

Previous research conducted by Ikhsani & Muliana (2019) and also supported by Ruslim & Michael (2019); Wirianata & Wijoyo (2020); and Karimah et al. (2024) explain that capital structure has a positive influence on firm value, but research conducted by Rezeki et al. (2023) and Hamam et al. (2020) explain that capital structure has a negative influence on firm value.

While research by Akhmadi (2023) which is also supported by Kurniawan et al. (2019) and Ramdhonah et al. (2019) shows a positive effect of growth on firm value, but research conducted by Boenyamin & Santioso (2023); Wulandari et al. (2021); Mawardi (2020) states that growth has no effect on firm value. Previous research conducted by Irsad et al. (2023); Audina & Sasongko (2023); Diana & Munandar (2024); Irawati et al. (2021) reveal that firm size has a positive influence on firm value. Conversely, studies by Mercyana et al. (2022); Ramdhonah et al. (2019) state that firm size has a negative effect on firm value.

Numerous prior researchers have conducted research on firm value based on these phenomena and research gaps; however, the results of these studies continue to be inconsistent amongst researchers, so researchers are eager to carry out investigations with the title **"The Effect of Capital Structure, Growth, and Firm Size on Firm Value : Case Study on Infrastructure Industry Companies Stated on the IDX 2019 - 2023"**

REVIEW OF THE LITERATURE

Agency theory

The research of Tusolihah & Hunein (2022) references Jensen & Meckling's (1976) agency theory, which describes an agreement from the principal (the party who grants authority) and the agent (the party that receives it).. According to Soemarso (2019), in giving authority to managers, principals are concerned that managers may make decisions that only benefit themselves and have the potential to negatively affect firm performance. This can cause agency conflicts to arise. According to research by Karimah et al. (2024), there are several factors such as information imbalance, separation of control, and time difference, which can cause agency conflicts. By understanding why agency conflicts occur and how to reduce agency costs, principals can ensure that agents will act in the best interest of the principal.

Signaling Theory

According to Michael Spence in research conducted by Karimah et al. (2024), presented signal theory in his article entitled "Signaling in the Labor Market" in 1973 as a strategy to provide positive or negative signals to investors with the aim of attracting investor interest or reducing the risk of unstable market price changes for a firm. The signal is a general explanation of the actions that have been taken by management to fulfill the principal's objectives (Ruslim, & Michael, 2019). This signal can take various forms, such as firm profits (profit), dividend distribution, or investment decisions (Karimah et al., 2024). Signaling theory has been used in many contexts, including financial reporting. In the context of financial reporting, signaling theory indicates that companies with bright prospects will send this signaling information to investors through their financial statements.

Firm Value

Kurniawan et al. (2019) assert that a firm's value is important, particularly for investors, as it represents the evaluation of the market for the purpose of assessing the performance of the firm. An increase in the share price of the firm is indicative of a rise in the firm's value. In contrast, investors typically assume that a firm's value is declining if its share price falls. Consequently, investors and shareholders anticipate an improvement in the firm's value. To attain optimal outcomes, augmenting the share price of the firm is a necessary step towards augmenting its value. The business must increase both its operational and financial performance in order to meet this objective (Chandra & Hastuti, 2023).

Capital Structure

A firm's capital structure shows how it arranges its funding sources, including preferred stock, common stock, and long-term debt, to achieve financial balance. In order to lower the cost of capital and boost shareholder wealth, capital management decisions are critical to the firm's financial management (Karimah et al., 2024). The debt ratio is one of the important variables that determines the capital structure. Because they bear less risk, businesses with low operational debt ratios typically have higher financial debt ratios.

Growth

Growth can be described as the total change in sales of a firm, which can increase or decrease (Hamam et al., 2020). According to the view of Meidiawati & Mildawati cited in research by Kurniawan et al. (2019), growth refers to the ability of a firm to survive and continue to develop in the economic and industrial context in which the firm operates. The level of growth of a firm will reflect the extent to which the firm will utilize debt as a source of funds. For investors, growth shows positive progress, which has the potential to increase the value of a firm (Antoro et al., 2020).

Firm Size

The concept of firm size refers to a certain amount used by a firm to determine the scale of its business (Irawan et al., 2022). According to Novari & Lestari quoted in Mercyana et al. (2022) explains that firm size describes how big or small a firm is. Pratiwi (2020) revealed that the larger the size of the firm, the easier it is for the firm to obtain funds from internal and external sources. The large size of a firm indicates better controllability and stability in the market as well as strong competitive ability. These factors contribute positively to firm value which can encourage an increase in capital structure (Susanti and Restiana, 2018).

The Effect of Capital Structure on Firm Value

A firm's choice of funding sources—debt or equity—to support its operations is reflected in its capital structure. The financial decision made by the firm led to this capital structure. According to capital structure theory, the goal of controlling the firm's funding sources while establishing its capital structure is to increase its worth. In the financial framework of the firm, capital structure is a combination of loans and share ownership with a long attachment period. Because it affects the

success or failure of the capital structure, which in turn affects the firm's value, capital structure plays a crucial role in the business (Fasridon & Angraini, 2021).

An increase in the debt ratio can promote an increase in firm value, according to an empirical study by Wirianata & Wijoyo (2020). This result is consistent with studies by Karimah et al. (2024), who found that raising the debt ratio is a crucial component of raising firm value. The results of earlier studies by Krisnando & Novitasari (2021), Anggraini & Siska (2021), and Karimah et al. (2024) are also supported by this finding, confirming that a higher debt ratio can promote a higher firm value. Consequently, the following is the hypothesis that this study puts forth.

H1: Capital structure has an influence on firm value

The Effect of Growth on Firm Value

An increase in firm revenue in the future indicates positive growth and good progress in developing its business for a firm. If growth shows positive results and has bright potential for the future, it will also get a positive response. By doing this, the opportunity to get funding from stocks will increase, and investors will see that the firm has the potential to achieve a higher rate of return on its investment. That way, there will be an increase in the firm's share price which will have an impact on increasing the overall firm value (Chandra & Hastuti, 2023).

Empirical studies conducted by Akhmadi (2023) show that increasing firm growth (growth) is a very strong factor in increasing firm value. Similar findings have been revealed by Ikhsani & Muliana (2019), which confirms that increasing firm growth is the main element that contributes to increasing firm value. Previous research relevant to this topic has been conducted by Silalahi & Sihotang (2021) as well as Rahayu & Darim (2020), both of which show that firm growth has a positive impact on firm value. Therefore, the hypothesis formulated in this study is as follows.

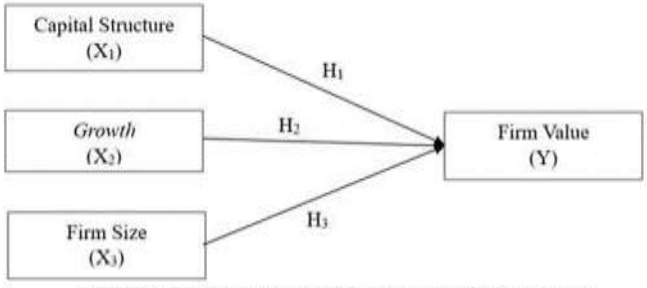
H2: Growth has an influence on firm value

The Effect of Firm Size on Firm Value

According to Irsad et al. (2023), the bigger a firm is, the more attention investors pay to it. Large companies enjoy the benefits of more stable conditions, this stability makes investors tend to maintain their share ownership. As a result, the firm's share price increases in the capital market. Large companies are expected to meet the high expectations of investors. Dividend payments by companies help fulfill these expectations. Changes in total sales during the study period have an impact on the price per share among investors (Dewi & Yuniarta, 2014). In the capital market, the share price will increase along with the increasing demand for the firm's shares. The bigger a firm is, the higher the tendency of investors to hold its shares, which causes the stock price to rise. This increase in share price will increase Price to Book Value (PBV) or firm value.

Due to their larger size, reputation among investors, and easier access to resources, markets, and capital, large companies typically have lower investor concerns regarding performance (Boenyamin & Santioso, 2023). This result is in line with research by Kurniawan et al. (2019), which demonstrates that one of the elements that can raise a firm's value is its size. Additionally, this assertion is consistent with studies by Irsad et al. (2023), Rezeki et al. (2023), and Audina & Sasongko (2023). The following hypothesis is put forth in light of the above-described logic of reasoning and empirical support.

H3: Firm size has an influence on firm value



Source : Data Processed by Researchers (2024)

Figure 3. Research Model

RESEARCH METHODOLOGY

The infrastructure companies that are stated on the Indonesia Stock Exchange from 2019 and 2023 comprise the study's population. The purposive sampling method is used in this study. Purposive sampling is a technique for gathering data based on specific considerations or criteria, according to Sugiyono (2019). The criteria for selecting samples are as follows:

No.	Description	Amount
1.	Infrastructure companies listed on the Indonesia Stock Exchange for the period 2019-2023.	53
2.	Companies that do not provide consecutive annual reports for the period 2019-2023.	(6)
3.	Companies that do not include the data needed for research in consecutive annual reports for the period 2019-2023.	(1)
4.	Number of companies that are sampled	46
5.	**Total research sample (46 x 5)**	**230**

Source : Data Processed by Researchers (2024)

Figure 4. Research Samples

From the sampling criteria above, the number of samples obtained was 46 Infrastructure Companies stated on the Indonesia Stock Exchange for the period 2019 - 2023. The data used in this study are secondary data. In accordance with Uma Sekaran's explanation mentioned in the writing of Rinaldo & Priyanto (2022), secondary data refers to information that has been collected from existing sources. Examples include data obtained from organizational or agency archives, literature reviews, previous research, and journals relevant to the research topic to be carried out (Purwohedi, 2022). The method used in analyzing data in this study is the multiple linear regression analysis method. This data analysis was carried out using SPSS version 26.

Analysis Methods

Descriptive Statistics Analysis

According to Martias (2021), descriptive statistics is a popular type of statistical analysis for presenting data. Descriptive statistics are usually used as the first step in tidying up data before further analysis is carried out. However, descriptive statistics can also stand as its own analysis that can present data and provide various information about the data. There are various descriptive forms that can be made from various data. In this study, descriptive statistical measurements were used in the form of the mean and standard deviation of the dependent and independent variable data.

Normality Test

The purpose of a normality test is to determine whether or not the distribution of data within a set of variables or data follows a normal distribution pattern (Fahmeyzan et al., 2018). There are several ways to test for data normality, but in this study, we used the Kolmogorov-Smirnov test method since it is better suited for samples larger than 50 (Sintia et al., 2022). According to Pramono et al. (2021), the Kolmogorov-Smirnov test employs the criterion that states the data distribution is normal if the asymptotic Sig (p) > α (0.05).

Multicolonierity Test

According to Mardiatmoko (2020), multicollinearity happens when the independent variables in a regression model have a strong linear relationship with one another. This relationship may be extremely robust, or it may even be nearly perfect in a linear sense. If there is no correlation from the variables in a regression model, it is deemed to be good. Additionally, Sholihah et al. (2023) stressed that evaluating the Tolerance and Variance Inflation Factor (VIF) values on a regular basis is a technique that is frequently employed in research. Multicollinearity is absent if VIF < 10 and tolerance > 0.1, but present if VIF > 10 and tolerance > 0.1 (Ningsih & Dukalang, 2019).

Heteroscedasticity Test

Heteroscedasticity is a condition in which there is inequality in the variation of the residuals for each observation in the regression model (Mardiatmoko, 2020). Meanwhile, Homoscedasticity occurs when the regression model shows consistency in values. Ideally, the regression model is expected to have homoscedasticity, which means no heteroscedasticity is detected (Sholihah et al., 2023). There are several methods that can be used to test for heteroscedasticity, one of which is the graph analysis method. This method is done through scatterplot observation where the horizontal axis displays the Predicted Standardized value (ZPRED) and the vertical axis displays the Studentized Residual value (SRESID).

Autocorrelation Test

When there is a correlation from the regression residuals in period t and the regression residuals in the previous period (t-1), the regression model is said to exhibit autocorrelation. Regressions that exhibit no autocorrelation are considered effective (Mardiatmoko, 2020). The Durbin Watson (DW) test can be used to test for autocorrelation.

Multiple Linear Regression Analysis Test

Ningsih & Dukalang (2019) explain that, regression analysis is a data analysis method in the field of statistics used to predict results and also study the correlation or relationship from various variables. Before using a regression model, it is important to ensure that the variables to be used in building the model have a theoretical relationship or can be estimated in advance. The equation of this study is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Y = Firm value
X_1 = Capital structure
X_2 = Growth
X_3 = Firm size
α = Constant Numbers (the price of Y, if X = 0)
β1 = Reg. coefficient for capital structure variable
β2 = Reg. coefficient for growth variable
β3 = Reg. coefficient for firm size variable
e = error term

Partial Test (t Test)

To ascertain whether there is a significant correlation from each independent variable and the dependent variable, the t-test is utilized. According to Ningsih and Dukalang (2019), partial hypothesis testing involves determining if the t value is greater than or equal to the t table value. On the basis of the research data, partial tests were conducted using the criterion that if Significance > 0.05, no influence was found. On the other hand, if the significance is less than 0.05, then an influence is present (Mardiatmoko, 2020).

Model Feasibility Test (F Test)

In general, the F statistical test indicates whether all independent factors included in a model have a joint (simultaneous) impact on the dependent variable. To determine whether the regression model used is a fixed model, a comparison is made from the F table value and the calculated F value, or by comparing the sig. value with α = 0.05 (Ningsih & Dukalang, 2019). The criteria used for the simultaneous test on this research data is if Significance > 0.05 means there is no influence. Conversely, if Significance < 0.05, it means there is an influence (Mardiatmoko, 2020).

Test Coefficient of Determination (Adjusted R^2)

a) The Coefficient of Determination Test (Adjusted R^2) is a method that measures how much variable X plays a role in influencing variable Y. This analysis is useful for understanding the overall percentage contribution of the independent variable to the dependent variable

(Mardiatmoko, 2020). The multiple regression analysis's summary model output contains the findings of the determination analysis (Ningsih & Dukalang, 2019).

RESULTS AND DISCUSSIONS

Descriptive Statistics Analysis Results

Descriptive statistical measurements of the study's numerous variables, including firm size, value, growth, and capital structure, were done. Each variable's minimum and maximum values, as well as its mean and standard deviation, are included in this measurement. The results of descriptive statistics are shown in the table below:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Capital Structure	200	-.96	4.53	1.6241	1.98505
Growth	200	-.26	.34	.0351	.12167
Firm Size	200	2.48	11.91	7.4543	1.99471
Firm Value	200	-.89	2.99	1.1448	.77121
Valid N (listwise)	200				

Source: Output of SPSS v 26

Figure 5. Descriptive Statistics Analysis

The ratio of debt to equity, or the Debt to Equity Ratio (DER) proxy, which represents the percentage of outstanding shares held by management, is used in this study's measurement of capital structure. It is evident from the above table's descriptive analysis results that the capital structure variable's mean is 1.6241. The capital structure component has a minimum value of - 0.96, and in 2020, Nusantara Infrastructure Tbk has this minimum value. In 2019, PT Tower Bersama Infrastructure Tbk reached the maximum value of the capital structure variable of 4.53, and the standard deviation of the capital structure variable is 1.98505, indicating that the sample's diversity is significant and has heterogeneous characteristics, so the deviation value is greater than the mean.

In this research, growth is measured using asset growth, by evaluating asset growth to compare annual asset changes. The mean growth variable is 0.0351. The growth variable has a minimum value of -0.26, recorded at PT Waskita Karya (Persero) Tbk in 2023. The peak maximum value of the growth variable is 0.34, and this peak number is recorded at PT Meta Epsi Tbk in 2019. The standard deviation of the growth variable is 0.12167, indicating that the diversity in the sample is quite large because its value is greater than the mean. This indicates that the firm size is heterogeneous.

Since the natural logarithm is used in this study to calculate firm size, sales that are measured in hundreds of billions or even trillions will be simplified without affecting the actual sales proportion. Based on the data of the variable, the mean value of the firm size is 7.4543. PT Terregra Asia Energy Tbk recorded 2.48 as the minimum value of the firm size variable in 2020. The highest recorded value of 11.91 for firm size was made in 2023 at PT Telekomunikasi Indonesia (Persero) Tbk. Firm size has a standard deviation of 1.99471, which shows that data variation from the mean value is minimal. This suggests that the sample's degree of diversity is rather consistent and constrained.

The Price to Book Value (PBV) proxy is used in this study to calculate the firm value. The opportunity for the business to grow and add value is greater for a higher PBV. The mean of the firm value variable is 1.1448. The firm value variable's lowest value in 2023 is -0.89 for PT Centratama Telekomunikasi Tbk, while the highest value in 2023 is 2.99 for PT Telekomunikasi Indonesia (Persero) Tbk, making it the largest value among the other firms. The firm value's standard deviation is 0.77121, which is less than the mean and suggests that the data variation is generally homogeneous and small.

Normality Test Results

The purpose of the normality test is to ascertain whether the regression model contains any unsettling variables or residual values with a normal distribution. The validity of the regression results may be impacted if the results of the normality test reveal a non-normal distribution. The t-test and F-test results will no longer be valid if the data are not normal. The data distribution in this study was assessed using the Kolmogorov-Smirnov normalcy test.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		230
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.58355893
Most Extreme Differences	Absolute	.197
	Positive	.197
	Negative	-.126
Test Statistic		.197
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Source: Output of SPSS v 26

Figure 6. Normality Test

Based on the Kolmogorov-Smirnov normality test results in the table presented, it can be concluded that the residual values do not show a normal distribution. The evidence showing non-normal data distribution in this study is the Asymp, sig value of 0.000, which is smaller than the significance value of 0.05, indicating a normality symptom in this study. To correct the normality test results, outlier data will be removed from this study.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		200
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.76316571
Most Extreme Differences	Absolute	.089
	Positive	.097
	Negative	-.054
Test Statistic		.097
Asymp. Sig. (2-tailed)		.203[c]

d. Test distribution is Normal.
e. Calculated from data.
f. Lilliefors Significance Correction.

Source: Output of SPSS v 26

Figure 7. Normality Test

Based on the normality test results above, it can be concluded that the Asymp, Sig value is 0.203, which means it is greater than 0.05. Therefore, after outliers are removed, there is no normality problem in this study. From this information, it can be concluded that initially, there were 230 data samples, but then it was reduced to 200 data samples. This change occurred because there was an improvement in the process of correcting the normality and autocorrelation conditions in the data. Therefore, 200 data samples will be used in the subsequent data analysis.

Multicollinearity Test Results

To ascertain whether or not there is a correlation from independent variables, multicollinearity testing is performed. When multicollinearity is not an issue, the linear regression model is considered good. Examining the tolerance value and the VIF (Variance Inflation Factor) value can help determine whether multicollinearity exists.

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Capital Structure	.708	1.413
	Growth	.943	1.061
	Firm size	.674	1.484

Source: Output of SPSS v 26

Figure 8. Multicollinearity Test

Based on the multicollinearity test results in table 4.5, it shows that there is no multicollinearity problem in this research data. It can be seen from the evaluation of the tolerance values of each variable, which are capital structure of 0.708, growth of 0.943, and firm size of 0.674, all of which have values greater than 0.1, which is the lower limit of the tolerance value. This proves that these variables have high tolerance, and can also be evaluated by examining the VIF values of each variable, which are capital structure of 1.413, growth of 1.061, and firm size of 1.484, all of which are lower than the VIF limit of 10.

Heteroscedasticity Test Results

To ascertain whether there is a variance difference from the residuals from each observation, the heteroscedasticity test is employed. It is referred to as homoscedasticity if the variance is constant, and heteroscedasticity if the variance value varies. The absence of heteroscedasticity symptoms is one of the requirements for the linear regression model.

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.272	.238		5.335	.000
Capital Structure	.026	.049	.044	.533	.595
Growth	.734	.497	.106	1.477	.141
Firm size	-.020	.036	-.048	-.566	.572

Source: Output of SPSS v 26

Figure 9. Heteroscedasticity Test

Based on the data heteroscedasticity test table, it shows that the probability values for all research variables are greater than 0.05, with each value being, namely, capital structure of 0.595, growth of 0.141, and firm size of 0.572. Therefore, there is no heteroscedasticity problem in this research because the Sig values are > 0.05.

Autocorrelation Test Results

To ascertain whether there's a relationship among the disturbance variables in the present period (t) and the period before it (t-1), the autocorrelation test is run. If there are symptoms in the autocorrelation test, there may occasionally be a correlation or sequential impact. The Durbin Watson test (DW test) was use in this investigation to measure autocorrelation at a significance level of 5%.

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.778[a]	.617	.685	6.26073	1.885

Source: Output of SPSS v 26

Figure 10. Autocorrelation Test

The Durbin-Watson (DW) value of 1.885 can be determined by looking at the information in the table above. After that, this value and the Durbin-Watson table value will be compared using the formula (k; n) at a significance level of 5% (0.05). In this study, 200 samples were used, and there are 3 independent variables. The dU value is 1.799, and the dL value is 1.738. The value of 1.885 for Durbin-Watson (DW) is greater than the upper limit (dU) of 1.799 and less than (4-dU) of 4 - 1.799

= 2.201. It is determined that there's no autocorrelation issue or symptom based on the criteria in the Durbin-Watson test. Thus, we can move forward with this research.

Multiple Linear Regression Analysis Test Results

Multiple Linear Regression is the method employed in this investigation. Assessing the correlation between the independent and dependent variables is the aim of this methodology. The firm value is the dependent variable in this research, and the capital structure, growth, and size of the firm are the independent variables. The goal of hypothesis testing is to ascertain how the firm's size (X3), growth (X2), and capital structure (X1) influence its value (Y). The following is a summary of the regression equation given on the information in table below:

$$Y= 1.598 + (-0.084\ SM) + 0.140\ G + 0.186\ UK + e$$

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.598	.259		6.163	.000
Capital Structure	-.084	.028	-.151	-2.364	-.010
Growth	.140	.363	.026	.387	.039
Firm size	.186	.036	.045	6.658	.019

Source: Output of SPSS v 26

Figure 11. Multiple Linear Regression Analysis Test

From the above equation, it can be explained that:

1. The constant value (α) of 1.598 indicates that the firm value is 1.598% if the three independent variables—capital structure, growth, and firm size—are all equal to zero.
2. Assuming all other variables stay constant, a one-unit increase in capital structure will result in a -0.084% increase in firm value, according to the coefficient value of capital structure (X1), which is - 0.084.
3. With other factors staying constant, a one-unit increase in Growth (X2) will result in a 0.140% increase in the Firm Value, according to the coefficient value of 0.140 for Growth (X2).
4. Assuming all other variables stay constant, a one-unit increase in firm size will result in a 0.186% increase in firm value, according to the coefficient value of firm size (X3) of 0.186.

Partial Test (t-test) Results

The degree to which capital structure, growth, and firm size have a partial impact on the value of a firm stated on the Indonesia Stock Exchange is determined using the Partial Test (t-test). In a study, the t-test is used to evaluate each independent variable's impact on the dependent variable.. The alternative hypothesis (Ha) is accepted and the null hypothesis (H0) is rejected if the significance value is less than 0.05. The information displayed in the model feasibility test (t-test) is as follows:

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.598	.259		6.163	.000
Capital Structure	-.084	.028	-.151	-2.364	-.010
Growth	.140	.363	.026	.387	.039
Firm size	.186	.036	.045	6.658	.019

Source: Output of SPSS v 26

Figure 12. Partial Test

We can infer the following conclusions about each independent variable's influence on the dependent variable from the data in the table found in the results and discussion:

a. The t-test results are obtained to test the significance of the independent variables and the constant based on the analysis results of the Capital Structure variable (X1). Given that the t-count value for the capital structure variable (X1) is -2.364 and the t-table value is 1.97214 at a significance level of -0.010 < 0.05, the alternative hypothesis (H1) gets approval and the null hypothesis (Ho) gets rejected. This demonstrates that, in the infrastructure industry, capital structure has a big impact on a firm's worth.
b. The t-test results are obtained to test the significance of the independent variables and the constant based on the analysis results of the Growth variable (X2). With a significance level of 0.039 < 0.05, the growth variable (X2) has a t-count value of 0.387 and a t-table value of 1.97214. As a result, the alternative hypothesis (H2) gets approval and the null hypothesis (Ho) gets rejected. This demonstrates that in the infrastructure industry, growth has a major impact on a firm's value.
c. The t-test results are obtained to test the significance of the constant and the independent variables based on the analysis results of the Firm Size variable (X3). With a significance level of 0.019 < 0.05, the t-count value for the firm size variable (X3) is 6.658, and the t-table value is 1.97214. As a result, the alternative hypothesis (H3) gets approval and the null hypothesis (Ho) gets rejected. This demonstrates that, in the infrastructure industry, a firm's size has a big impact on its value..

Model Feasibility Test (F-test) Results

The F-test, sometimes referred to as the model feasibility test, is intended to assess the concurrent impacts of three independent variables on the dependent variable, which is the firm value of infrastructure industry companies listed on the Indonesia Stock Exchange from 2019 until 2023: capital structure, growth, and firm size. If the probability is lower than 0.05, the null hypothesis is rejected; if the probability is higher than 0.05, the null hypothesis cannot be rejected.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.566	3	.855	2.448	.008[b]
	Residual	121.144	205	.591		
	Total	123.710	208			

Source: Output of SPSS v 26

Figure 13. Model Feasibility Test (F-Test)

The F-test results revealed a significant value of 0.008, which indicates that the value is smaller than 0.05, according to the analysis done in table 4.11. This suggests that the variables capital structure, growth, and firm size together affect the firm value in the infrastructure industry.

Determination Coefficient Test Results (Adjusted R^2)

By using the adjusted R2 determination coefficient test, one can ascertain the extent to which the independent variables can explain changes in the dependent variable. The Adjusted R Square ranges in value from 0 to 1. A value of Adjusted R Square near 1 indicates that the independent variables have the strongest ability to explain the dependent variable, while a value near 0 indicates that the independent variables have the weakest ability to explain the dependent variable. The model summary table appears as follows:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778[a]	.617	.685	6.26073

Source: Output of SPSS v 26

Figure 14. Adjusted R^2

By analyzing the information presented in table above, it is possible to determine that Adjust R Square is 0.685. This means that independent variables like capital structure, growth, and firm size account for 68.50% of the variation in the firm value variable, with the remaining 31.50% being influenced by variables not included in the regression model. The aforementioned variables have a noteworthy influence on the movement of the firm value stated on the IDX over the observed period, as indicated by the 68.50% percentage.

Hypothesis Discussion

The Influence of Capital Structure on Firm Value

In infrastructure industry companies stated on the Indonesia Stock Exchange (IDX) from 2019 to 2023, there is a significant relationship from capital structure, as measured by the Debt to Equity Ratio (DER), and firm value, as measured by the Price to Book Value (PBV), according to the statistical analysis results (t-test). Based on the results of a statistical test comparing the t-count with the t-table, the capital structure significance value is -0.010, meaning that the result is less than 0.05. Given that the t-count of -2.364 is less than the t-table value of 1.97214, it can be said that capital structure significantly influences the value of a firm to a lesser extent. As a result, hypothesis 1 (H1) is agreed upon.

Based on data from the entire research sample, there is an increase in the DER value each year, indicating that the amount of debt used to generate firm profits is also increasing. With a high level of debt in the firm, the tendency for investment risk will also increase. With a high level of investment risk, investors will certainly be cautious before deciding to invest their money. Thus, high debt usage will reduce the firm value, which is also in line with the sample data showing that the firm value continues to decline each year.

A firm's value will decline if its debt exceeds its optimal limit, according to research done in the past by Rezeki et al. (2023), which also supports this conclusion. A firm's worth may drop as a result of inefficient use of debt. According to studies done by Hamam et al. (2020), Rinaldo & Priyanto (2022), Irawan et al. (2022), and Akhmadi (2023), this is also consistent.

The Influence of Growth on Firm Value

In infrastructure industry companies stated on the Indonesia Stock Exchange (IDX) from 2019 to 2023, there is a significant relationship from growth, as measured by total asset growth, and firm value, as measured by the Price to Book Value (PBV), according to the statistical analysis results (t- test). Growth's significance value of 0.039 indicates that the outcome is less than 0.05 and is in line with the findings of the statistical test that compares the t-count and t-table. Given that the t-count of 2.387 is higher than the t- table value of 1.97214, it can be said that growth significantly affects the value of the firm to a lesser extent. As a result, hypothesis 2 (H2) is agreed upon.

Based on the data from the research sample, there is a decrease in total asset growth each year in infrastructure industry companies, which is also consistent with the data showing that firm value continues to decline each year. The concept of signaling theory, which holds that a rise in a firm's assets that elicits a favorable reaction from the market can be a significant indication of the firm's growth, supports this as well. This may therefore result in an increase in the stock price of the firm, raising its value in the process.

This outcome is further corroborated by earlier research by Chandra & Hastuti (2023), which claims that growth is indicated by an increase in the firm's assets over the prior year and is a important factor for investors to take into account when arranging their stock investments. Additionally, studies by Olii et al. (2021), Mawardi (2020), Ikhsani & Muliana (2019), and Ramdhonah et al. (2019) are consistent with this.

The Influence of Size on Firm Value

The results of the statistical analysis (t-test) indicate that, among infrastructure industry companies stated on the Indonesia Stock Exchange (IDX) from 2019 until 2023, there is a significant relationship from firm value, as measured by the Price to Book Value (PBV), and firm size, as measured by the logarithm (Ln) of total sales. The result is smaller than 0.05, which means it is consistent with the statistical test results comparing the t- count with the t-table. The significance value for firm size is 0.019. Given that the t-count of 6.658 is higher than the t-table value of 1.97214, it can be said that size significantly influences the partial value of a firm. As a result, hypothesis 2 (H2) is agreed upon.

Based on the data from the research sample, there is a decrease in sales levels each year in infrastructure industry companies, which is also consistent with the data showing that firm value continues to decline each year. It can be concluded that the decrease in sales impacts the reduction of firm income and profits, ultimately affecting the firm's ability to pay dividends to shareholders. As a result, investors consider the firm less attractive, reducing their interest in investing. This can lead to a decrease in stock prices and overall reduce the firm value.

This is also corroborated by earlier research by Kurniawan et al. (2019), which found that large-scale businesses typically have stronger financial conditions, attracts investors to invest their funds in the firm, and may improve the value of the firm's stock on the stock exchange, supports this conclusion as well. Moreover, research by Irsad et al. (2023), Wulandari et al. (2021), Audina & Sasongko (2023), and Boenyamin & Santioso (2023) is in line with this.

CONCLUSIONS AND RECOMMENDATION

Conclusions

This research aims to investigate the infrastructure industry companies stated on the Indonesia Stock Exchange (IDX) from 2019 until 2023 will fare in terms of their firm value in relation to factors such as capital structure, growth, and size. According to the analysis findings from the preceding chapter, the study's conclusions are as follows:

1. This study's first hypothesis (H1) of this study states that firm value is influenced by capital structure. The capital structure of infrastructure industry companies stated on the Indonesia Stock Exchange from 2019 until 2023 was found had a significant impact on their firm value, based on the research results previously presented in this chapter.
2. In this study, growth has an impact on firm value, according to the second hypothesis (H2). Growth was found had a significant impact on the firm value of infrastructure industry companies stated on the Indonesia Stock Exchange from 2019 until 2023, based on research findings previously presented in this chapter.
3. This study's third hypothesis (H3) asserts that a firm size has an impact on its value. Firm size was found had a significant impact on the firm value of infrastructure industry companies stated on the Indonesia Stock Exchange form 2019 until 2023, based on research findings previously presented in this chapter.

Recommendations

The researcher can make a number of recommendations for additional research based on the study's findings, including:

1. For future researchers, it is expected to expand the research sample by including companies from industrys other than infrastructure, such as the manufacturing, trade, and services industrys.
2. For future researchers, it is expected to add other independent variables that may affect firm value, such as macroeconomic factors.

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