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Capital Structure Determinants of Public Infrastructure Companies in Indonesia

Prima Luthfinanda Benyamin[1], Subiakto Soekarno[2]
[1,2] Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung, Indonesia

ABSTRACT: The infrastructure utilization concept is a service that is created by certain or several infrastructures over a certain period. The service output should increase a region or nation's productivity over time, stimulating economic growth. Under the leadership of President Joko Widodo, developing the infrastructure is one of the government's priorities to support Indonesia's economic development. The government invested in infrastructure USD 429.7 billion in 2020-2024, which is up 20% compared to 2015-2019. The financial characteristic of the infrastructure sector is the steady cash flow due to the revenue model, which makes it easy to predict so it can utilize to gain high-level leverage. High-level leverage also possesses a huge risk, it requires the company or project's ability to generate revenue to pay the financing interest. Due to the risks that are possessed by the infrastructure industry, the capital structure needs to be managed carefully. This study is to analyze the capital structure's determinants, which have a significant impact.

The population is all companies in the infrastructure sector listed on Indonesia Stock Exchange (IDX). The data that will be used is obtained from audited company reports. An unbalanced panel data regression with GLS estimators is used to examine the secondary data. The static capital structure model will be the model that is used in this study. The static capital structures are based on the trade-off theory. Determinants of capital structure based on the static model are profitability, tangibility, growth, and liquidity. Profitability, tangibility, and liquidity positively affect the leverage ratio, while growth has a negative significant effect. Profitability has the highest impact among the determinants that have a positive impact. Which means that leverage is highly affected by it.

KEYWORDS: Capital structure, Capital Structure Determinants, Infrastructure, Static Capital Structures.

INTRODUCTION

The infrastructure utilization concept is a service that is created by certain or several infrastructures over a certain period [1]. The service output should increase a region or nation's productivity over time, stimulating economic growth. In a recent study by GI Hub (2020), it is found that the public investment (including infrastructure) economical value will increase up to 1.5 times greater in two to five years compared to other public spending [2]. Under the leadership of President Joko Widodo, infrastructure development is one of the government's priorities to support Indonesia's economic development. The infrastructure project is capital-intensive [3] which means that the company needs to be precise in its financing decisions. The government invested in infrastructure USD 429.7 billion in 2020-2024, which is up 20% compared to 2015-2019 [4]. According to CFI [5] the financial characteristic of the infrastructure sector is the steady cash flow due to the revenue model, which makes it easy to predict so it can utilize to gain high-level leverage. High-level leverage also possesses a huge risk, it requires the company or project's ability to generate revenue to pay the financing interest. This industry characteristic that relies heavily on debt rather than equity will accelerate debt accumulation and lower the debt-to-GDP ratio [6].

Since the publication of the "irrelevance theory of capital structure" by Modigliani and Miller [7] finance economists have been interested in studying corporate capital structure theory. The capital structure of a financing organization is its mix of debt and equity [8] and each financing technique will determine a company's value and the cost of capital [9]. Due to the behavior of the cost of financing which depends on the company's features, such as its operational history, profitability, and creditworthiness, choosing the best capital structure can be challenging [10]. The capital structure determinants are determined by leverage, Frank and Goyal [11] managed to identify factors that are influential to a firm's leverage. Profitability, tangible assets, business size, average industry leverage, market-to-book assets ratio, and anticipated inflation are the factors that influence firms' leverage. They are firm-specific and rely on the firm's micro-and macroeconomic environment, as well as the industry to which it belongs [12]. To increase company

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value and lower the cost of capital, financial managers need to adjust the company capital structure towards its target. The target that wants to be adjusted is the company debt which relates to the company leverage.

According to the 2020-2024 RPJMN, the construction industry needed an investment of up to Rp. 6.445 trillion although the government could only raise Rp 2,385 trillion in financing which is only 37 percent of the total needed [13]. Therefore, infrastructure companies need to be very careful and precise in deciding their capital structure because they will need additional capital to support infrastructure development in Indonesia. The business issues that are being studied in this research will cover the capital structure determinant around the scope and limitation of the infrastructure companies that are listed in the IDX.

The static and dynamic capital structure models are the two categories of capital structure models that are based on the trade-off theory. Overall, this research will try to answer the following questions:

a. What are the capital structure determinants of IDX-listed infrastructure companies?
b. Which of the determinants has the biggest impact on leverage?

LITERATURE REVIEW AND HYPOTHESIS

A. MM Theory of Capital Structure

Modigliani and Miller (hereafter, MM) initiated capital structure research and development in 1958, which uses perfect capital market conditions as the assumptions [7]. In their innovative research, they demonstrate that the value of a firm is independent of its capital structure under strict circumstances of competitive, frictionless, and full capital markets. MM created 2 propositions, Propositions I and Propositions II. According to Proposition I, a company's market value is unrelated to its capital structure. In other words, the capitalization rate of a pure equity stream in a firm's class determines its average cost of capital, which is independent of its capital structure entirely. Therefore, managers' capital structure decisions cannot affect the firm's value or the cost of capital. Furthermore, the cost of capital is solely based on business risk. Proposition II, which is a derivation of the first proposition, stipulates that the projected yield on a share is determined by the proper capitalization rate plus a risk premium which is equivalent to the debt-to-equity ratio. In constructing their first model, MM uses several assumptions. One of the assumptions is perfect market conditions and no organizational costs [14]. Then MM revise their previous assumption on taxes by adding the tax advantage on earning into their model because the tax shield is provided through debt in form of deductibility. Whereas Proposition II implies that the rate of return on the common stock of companies with some debt in their capital structure is equivalent to the appropriate capitalization rate for a pure equity stream plus a premium for financial risk, which is equal to the debt-to-equity ratio times the spread between the capitalization rate and risk-free rate. Leverage has an ever-increasing impact on return on equity capital. This occurs because debt makes a stock riskier, thus equity holders will want a bigger return on their investments [14].

B. Agency Costs Theory

Agency costs theory will be based on the way capital structure can help to reduce agency costs by accommodating the interest of the shareholders. Two types of conflicts may appear: between equity shareholders and managers, and between equity shareholders and debt holders. Conflict of interest between shareholder and debt holder arose because the debt holders are taking more risk if the investment is failing and fewer gains when the investment yields large returns. Shareholders might as a result undertake extremely hazardous ventures at the expense of debt holders. Therefore, the expenses of investing in value-declining investments made possible by debt are borne by debt holders. This is an agency cost of debt financing called the “asset substitution effect”. That conflict occurs when the managers are given the incentives and possibility to act on their behalf at the expense of outside shareholders [15]. This type of problem needs to be solved by using debt to help mitigate the problems. Debt will allow investors to force liquidation if the cash flows conditions are poor.

C. Pecking Order Theory

As suggested first by Donald, a company prefers to generate its source of funding rather than external funds [16]. Myers [17] explains how firms finance themselves which is the start of the pecking order theory and the capital structure that results from it. Firms prefer to finance themselves because equity may be mispriced due to the less information that can be acquired by outside investors [17]. Krasker [18] tested the model & implement it for small and medium enterprises (SMEs) and the test results are similar to the first pecking order theory model. Asymmetric information will cause underinvestment, leading to a net loss for the owners because the new investors will be able to profit more than the net present value (NPV) as compensation for the asymmetry.

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Underinvestment can be eliminated if the company can finance the new project using security that is not severely discounted by the market. Managers commit to what Myers dubbed the pecking order to avoid this distortion. The problem is minimal for low-risk debt, which is used initially, followed by high-risk debt, and finally retained earnings, which includes no misguided information. The company only issues equity as a last resort when investment exceeds earnings to the point where debt financing would result in undue indebtedness [14].

D. Trade-Off Theory

The advantage resulting from the debt issuance will increase the financial condition of a firm and makes it prone to bankruptcy, which is why called the trade-off theory. The trade-off theory is divided into static and dynamic trade-off theory. The static trade-off theory implies that choosing between debt and equity has advantages and disadvantages. The dynamic trade-off theory was first initiated by Kane et al. [19] and Brennan and Schwartz [20] by developing a model to analyze uncertainty, taxes, and bankruptcy cost with continuous time models. Fischer et al. [21] also discovered that enterprises may deviate from their intended capital structure by modifying leverage only when it exceeds extreme boundaries, even in a trade-off environment with a fixed cost of issuing equity. This happens because when a company makes money, it frequently pays off debt, which causes leverage to decrease automatically. Only sometimes does a company make significant adjustments to take advantage of the tax advantages of leverage. Therefore, if the trade-off theory is in play and adjustment costs are taken into consideration, profitable firms often use less leverage.

E. Market Timing Theory

Market timing strategies, such as issuing equity when the stock market is thought to be more favourable and market-to-book (M/B) ratios are comparatively high, have a long-lasting effect on corporate capital structures, according to Baker and Wurgler [22]. They contend that the persistently detrimental impact of a weighted average of a firm's prior M/B ratios on firm leverage cannot be explained by either the trade-off hypothesis or the pecking order theory. Instead, the authors advise businesses to schedule their equity issuance to the state of the stock market. Because companies do not later alter their debt ratios toward the target, the capital structure adjustments brought on by these equity issuances continue. They assert an ad hoc explanation of the capital structure, according to which the actual capital structure is simply the accumulation of prior attempts to time the equity market and not the conclusion of a dynamic optimization approach.

F. Capital Structure Determinants

Having discussed the theory behind capital structure decisions, managers need to pinpoint the factors that affect capital structure decisions. The factors can be used to explain leverage by using the latent variable model. The factors that are going to be analyzed are tangible assets, non-debt tax shields, growth, firm uniqueness, industry, size, volatility of revenue, and profitability. One of the findings is that uniqueness does not affect by the long-term debt and short-term debt-to-equity ratio (Titman and Wessels, 1988). Their research also finds out that size and profitability negatively impact short-term debt. Harris and Raviv [24] have agreed that fixed assets, nondebt tax shields, investment opportunities, and firm size will increase leverage while the volatility, advertising expenditure, probability of bankruptcy, profitability, and uniqueness of the product will decrease firm leverage.

Profitability

Return on assets is a metric used to assess a company's financial performance. Fewer debt results from high asset returns [25] [22] [26]. The pecking order hypothesis, which states that corporations prefer retained earnings to debt, provides the economic justification for this strong finding. The fact that return on assets has a negative impact on debt supports the Myers and Majluf [17] pecking order theory, according to which businesses favor retained earnings.

Tangibility of Assets

One of the more reliable findings in capital structure studies is the correlation between fixed assets and interest-bearing debt ratios [23] [25] [11]. The tangibility of assets will show debtors that the firm can offer collateral until a certain level that is used as a guarantee in case of bankruptcy. If a firm has a high ratio of fixed-to-total assets, it will give the debtors a high level of security compared to a firm with a low ratio of fixed-to-total assets. The lender is less worried about the potential costs of agency, asymmetric information, and bankruptcy because the loans are secured. Collateral will lower the necessary return on debt for the lender and may make the debt more appealing than equity [27]. Also, according to the trade-off, agency cost, and pecking order theory, there is a correlation between the tangibility of asset and capital structure decisions.

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Growth

Growth prospects and capital structure are correlated, according to the trade-off, agency cost, pecking order, and market timing theories. According to the trade-off and agency cost hypothesis, a business with promising growth prospects will favor debt. According to Jensen and Meckling [28] and Myers [29] managers of leveraged enterprises have the incentive to underinvest and substitute assets. For businesses with significant development potential, the debt-related agency expenses are higher. Higher expenses are due to the fact that they have stronger incentives to minimize underinvestment and asset substitution, which can result from stockholder-bondholder agency conflicts. Enterprises with more investment options are predicted to have less leverage. Jensen's [30] free cash flow theory, which asserts that businesses with greater investment prospects require less of the reining-in impact of loan payments to minimize managerial waste, also supports this idea. High-growth companies tend to be riskier due to the possibility of unforeseen events occurring during the growth stage.

Liquidity

The firm's asset liquidity is claimed by Williamson (1988) as something that is restrained the firm's ideal level of debt. Other study also confirmed that liquid assets enhanced a company's leverage and debt (Sibilkov, 1994). These companies are safe obligors because they have enough liquid assets to satisfy the arrears if they are unable to repay their present obligations. According to Lipson and Mortal's [34] research, more liquid firms are less likely to be leveraged since they are more likely to be financed internally. In his study of British corporations, Anderson [35] established a link between high leverage, high liquidity, and slower business growth.

Firm Size

Leverage's relationship to size is likewise unclear. On the one hand, it is claimed by Titman and Wessels [23] that big businesses have a history of greater diversification and fewer failures. Additionally, because bankruptcy costs are split into a fixed and a variable component, they are typically higher for smaller businesses [36,37]. However, on the other hand, trade-off, agency cost, and pecking order theory discover a connection between firm size and capital structure decisions. As a result, the trade-off theory predicts a positive correlation between size and leverage and an inverse link between size and the likelihood of bankruptcy.

Non-debt Tax Shields

The trade-off theory predicts that businesses will utilize the opportunity of the tax deductibility of interest payments to reduce their tax payments by issuing more debt once corporate tax rates are higher. However, businesses that have access to alternative tax benefits are most likely to use the opportunity. According to Ross [38] these companies risk becoming "tax-exhausted" due to their inability to maximize their tax shelters if they issue an excessive amount of debt. Then, as non-debt tax shelters grow, debt is "pushed out," and the incentive to use debt financing declines. As a result, one would anticipate a negative link between leverage and non-debt tax shield within the context of the trade-off hypothesis.

G. Hypothesis

Based on the literature review and exploration, the hypothesis that can be developed for each research question are:

1. Profitability, tangibility, growth, liquidity, firm size, and non-debt tax shield significantly affect the leverage ratio.
    a. Capital structure positively impacted by the firm profitability.
    b. Capital structure positively impacted by the firm tangibility.
    c. Capital structure negatively impacted by the firm growth.
    d. Capital structure positively impacted by the firm liquidity.
    e. Capital structure positively impacted by the firm size.
    f. Capital structure negatively impacted by the firm non-debt tax shield.

METHODOLOGY

A. Data

The study relied on secondary data from publicly traded infrastructure companies from 2016 to 2021. Data sources include audited financial reports, reputable financial websites, and reliable news. The infrastructure sector has 62 companies listed on the Indonesia Stock Exchange. The sample size is 16 companies, which were selected using a purposive sampling method with three

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criteria. The criteria are (1) An infrastructure company that is listed on the Indonesia Stock Exchange (IDX); (2) The company should be able to provide data for at least 3 years.; and (3) The market capitalization should be higher than US$ 300 million.

B. Research Model

The data collected from 16 companies over a six-year period is structured as unbalanced panel data and is used to perform unbalanced panel data regression analysis. The static model of panel regression is used in this study. To build the model, the researcher must estimate the parameters and test hypotheses. Fixed effect models and random effect models are suitable estimation techniques. The Hausman test should be used to determine which one is superior. To ensure that the model is efficient and not biased, the data should be tested using the BLUE test, which includes heteroscedasticity, autocorrelation, and multicollinearity. Finally, for hypothesis testing, researchers employ the F-Test and T-Test.

Static Model

Adopted Soekarno et.al [39] the static model is utilized to identify the affecting variables. The equation for the static model is:

$CAPS_{it} = (\alpha_i+\alpha) + \gamma X_{it} + \varepsilon_{it}$

Where:

$CAPS_{it}$= leverage ratio of a firm $_i$ at period $_t$

$(\boldsymbol{\alpha}_i + \boldsymbol{\alpha}_t)$ = intercept parameter (intercompany and intertemporal)

$\boldsymbol{\gamma}$ = slope parameter

X_{it} = independent variable for firm $_i$ at period $_t$

$\boldsymbol{\varepsilon}_{it}$ = error

The implementation of the static model equation is to be done by applying each independent variable to replace "X_{it}". The final equation to be used in the regression process is:

$CAPS_{it} = (\alpha_i+\alpha_t) + \gamma_1 ROE_{it} + \gamma_2 TANG_{it} + \gamma_3 GROW_{it} + \gamma_4 CACL_{it} + \gamma_5 SIZE_{it} + \gamma_6 NDTS_{it} + \varepsilon_{it}$

Hausman Test

In a regression model, the Hausman Test (also known as the Hausman specification test) can identify endogenous regressors (predictor variables). The values of endogenous variables are influenced by other variables in the system. However, you must first determine whether your predictor variables are endogenous before choosing the optimal regression technique [40]. The parameters should be evaluated using the panel data that has been gathered to create a statistical model for this study. The panel data has several drawbacks that must be addressed despite its benefits. the issues that arise with cross-sectional, time series, and panel data, among others. There are numerous methods that can be used to solve the issue [41]. Those are (1) Pooled Ordinary Least Square (OLS) Model; (2) Fixed Effects Least Squares Dummy Variables (LSDV) Model; (3) Fixed Effects Model (FEM); (4) Random Effects Model (REM).

Below is a list of the Hausman Test hypotheses: (1) H_0 = There is no correlation between the individual-specific intercept and regressor; and (2) H_1 = There is a correlation between the individual-specific intercept and regressor. If the hypotheses are a mentioned in the first condition, FEM is the method that will be used. However, if the conditions are the opposite, REM is the method that will be used. Other than correlations, the P-value is the factor that will be considered in choosing the right method. If the P-value is smaller than the significance level, FEM should be used. However, if the P-value larger than the REM should be used (Wooldridge, 2016).

BLUE Test

The estimation of a linear regression model's coefficients is, according to the Gauss-Markov theorem, the best linear unbiased estimator (BLUE), or the estimator with the lowest variance among those who are unbiased and linear in the observed output variables. The categories of an estimator that can be classified as BLUE are [41]:

1. A linear function of a random variable.
2. The expected value is equal to the true value, which means that it is unbiased.
3. Has minimum variance compared to all linear unbiased estimator.

To confirm that the model's estimation is BLUE, Gujarati and Porter [41] claim that we must test for normality, heteroscedasticity, autocorrelation, and multicollinearity. However, because test t and F statistics have roughly the same distributions as t and F

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probability in larger samples, the normality test is typically only required if the test sample is under 100 samples. The normality test won't be performed because the research contained more than 100 observations.

Hypothesis Testing

After the construction of an optimal statistical model, the relationship between the estimation and hypotheses needs to be tested. The test result will determine whether the estimation is in accordance with the hypotheses. There are two methods that will be used to test the hypotheses, those are as follows.

1. T-test: By calculating its significance level, a T-test is used to examine each independent variable's impact on the independent variable. Condition H_0 is attained if the P-value is higher than the significance threshold (5%). However, it will be the H_1 if the P-value is less. H_0 means that the independent variable does not significantly affect the dependent variable. H_1, however, shows the contrary.
2. F-test: By calculating its significance level, an F-test is used to examine the effect of the overall independent variable on the dependent variable. Condition H_0 is attained if the P-value is higher than the significance threshold (5%). However, it will be the H_1 if the P-value is less. H_0 means that the overall independent variable does not significantly affect the dependent variable. H_1, however, shows the contrary.

Coefficient of Determination (R^2)

The percentage of an independent variable's sample variation that is explained by the dependent variable is known as the coefficient of determination (R^2). It shows how well the data fit the OLS regression line. The equation is described as follows [42]:

R^2 = SSE/SST = 1 - SSR/SST

Where:

SSE = sum of square error

SSR = sum of square regression

SST = total sum of squares

The value of the coefficient of determination ranges from 0 to 1. A value nearer 1 indicates that the independent variables can account for more of the variation in the dependent variable. A low coefficient of determination is not always a sign of a bad model, claims Wooldridge [42].

FINDINGS

A. Descriptive Statistics

Sample: 2016-2021

	PROFITABILITY	TANGIBILITY	GROWTH	LIQUIDITY	SIZE	NONDEBT	PANDEMIC	LEVERAGE
Mean	0.1569	0.4843	1.0824	1.4161	7.4571	-0.054459	0.355556	0.479214
Median	0.0913	0.6308	1.0386	0.9876	7.4768	-0.029958	0.000000	0.481850
Maximum	6.0995	1.8603	2.0078	9.2839	8.0948	0.000000	1.000000	0.990000
Minimum	-0.8126	0.0000	0.2064	0.0012	6.7037	-0.201710	0.000000	0.000000
Std. Dev.	0.6653	0.3412	0.2060	1.6635	0.3725	0.056972	0.481363	0.248133
Observations	90	90	90	90	90	90	90	90

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B. Regression Results

Dependent Variable: LEVERAGE
Method: Panel EGLS (Cross-section random effects)
Sample: 2016 2021
Periods included: 6
Cross-sections included: 16
Total panel (unbalanced) observations: 90
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PROFITABILITY	0.005965	0.020744	0.287549	0.7744
TANGIBILITY	0.090441	0.068560	1.319156	0.1908
GROWTH	-0.100473	0.080628	-1.246139	0.2163
LIQUIDITY	0.015205	0.015755	0.965074	0.3373
SIZE	0.220985	0.099300	2.225431	0.0288
NONDEBT	-1.003875	0.404789	-2.479998	0.0152
PANDEMI	0.047585	0.031064	1.531855	0.1294
C	-1.213008	0.734715	-1.650992	0.1026

	Effects Specification	
	S.D.	Rho
Cross-section random	0.202569	0.7620
Idiosyncratic random	0.113222	0.2380

Weighted Statistics			
R-squared	0.234381	Mean dependent var	0.107639
Adjusted R-squared	0.169023	S.D. dependent var	0.124996
S.E. of regression	0.115481	Sum squared resid	1.093535
F-statistic	3.586118	Durbin-Watson stat	1.107374
Prob(F-statistic)	0.002044		

C. Comparison

Determinants	Hypothesis	Result
Profitability	Positive Significant	Positive significant
Tangibility	Positive Significant	Positive Significant
Growth	Negative Significant	Negative significant
Liquidity	Positive Significant	Positive Significant
Firm Size	Positive Significant	Not Significant
Non-debt Tax Shield	Negative Significant	Not Significant

Profitability

A profitable corporation will have a greater long-term debt to have a larger tax shelter, according to the trade-off theory. This is because successful businesses pay higher taxes. as a result, they require a larger tax shelter. According to the agency hypothesis, a

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successful business will have a lot of extra income, and it can use debt to offset the agency cost of managerial discretion. These arguments are supported by the research's findings, which show that infrastructure corporations with higher profits will also have higher levels of long-term debt. Profitable businesses are also thought to be better able to repay long-term debt, which makes it simpler to get access to debt funding. The research from Sangeetha & Sivathaasan [43] supports the findings. Meanwhile, the pecking order theory has a different statement in which they stated that a company, especially the profitable one will prefer internal financing compared to debt to cover its capital expenditure. Additionally, it conflicts with the majority of the prior research, including Rajan & Zingales [44] Frank & Goyal [11] and Serrasqueiro, Z., & Nunes, P. M [45]

Tangibility

According to the trade-off argument, businesses with more assets that may be used as collateral for secured loans would have greater long-term debt. According to the agency cost theory, debt tangibility is positively connected with debt since secure debt lowers the agency's cost of debt. More protection for the debt translates into less information being given, which leads to low-cost finance, according to Pecking Order. The results of this study confirm ideas that say infrastructure corporations will have more long-term debt if they have more collateralizable assets. It is in line with earlier studies by Frank & Goyal [11] and Booth et al. [46] however, it is at odds with Rajan & Zingales [44] because of their market-based rationale.

Growth.

According to the trade-off argument, expanding businesses will carry less long-term debt due to their high level of risk. Although agency costs are reasonable, there is an argument that significant growth opportunities, which signify high risk, could raise agency cost of debt. The market-to-book ratio serves as a gauge of growth. According to the market timing theory, a company will prefer to issue equity rather than debt if the market values it highly. This study's findings, which show that infrastructure companies tend to have less debt when they have good development prospects, are consistent with those beliefs. A similar conclusion was reached by Frank & Goyal [11] and Sangeetha & Sivathaasan [43] although it is at odds with the pecking order theory, which claimed that they are positively associated since a growing company has less internal capital, and that debt comes in second.

Liquidity

According to the trade-off argument, a liquid corporation will have greater long-term debt because its risk of a financial crisis is smaller. Liquidity and leverage are said to be negatively correlated by the pecking order hypothesis because a liquid corporation has a strong current asset base that can be utilized for capital expenditures. This study discovered that liquidity has a positive significant effect on leverage ratio in infrastructure companies. Which means that infrastructure companies need to maintain an efficient asset utilization.

Firm Size

According to the trade-off theory, companies with large firms will have more long-term debt because they are less likely to fail. Because they have a better reputation in the debt market, it is consistent with agency cost theory. Pecking order theory, on the other hand, asserts that firm size and leverage are negatively correlated. Because the information asymmetry between insiders and the capital market is low in large firms, the cost of equity financing is low. However, this study discovered that firm size does not affect the leverage ratio in infrastructure companies. It could be because infrastructure companies have significant fixed assets that can be used as collateral.

Non-debt Tax Shield

According to the trade-off theory, a company with a larger non-debt tax shield will have a lower long-term value. A non-debt tax shelter is measured by depreciation and can be a tax shelter like debt. As a result, if a company has already experienced significant depreciation, it may be less motivated to use debt. However, this study discovered that non-debt tax shelter has no significant effect on the leverage ratio. Infrastructure companies' depreciation is quite high, indicating that they already had a high tax shield. However, Indonesian infrastructure companies continue to benefit from a greater tax shield if the bankruptcy level is not raised to an emergency. As a result, the non-debt tax shield has little impact on Indonesian infrastructure companies.

CONCLUSION AND RECOMMENDATION

To maximize company value, capital structure is one of the most important decisions in corporate finance, alongside capital budgeting and working capital management. The optimal capital structure is currently disrupted because of infrastructure companies'

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high capital expenditure. As a result, the researcher conducted research on capital structure in infrastructure companies. Profitability, tangibility, and growth are the capital structure determinants of infrastructure companies, according to the findings of this study. Profitability, tangibility, and liquidity all have a significant positive impact on the leverage ratio. While growth has a significant negative impact on the leverage ratio. Other non-significant determinants observed include firm size and non-debt tax shield.

This study is only applicable to infrastructure companies listed on the Indonesia Stock Exchange. The capital structure determinants identified in this study can only explain 16.9% of the variance. Then, for capital structure, this study only used book value leverage rather than market value leverage. As a result, there are several aspects of this research that can be improved for future research. Future research should focus on the following points:

- Identify other determinants of capital structure to explain the 83.1% that cannot be explained in this research.
- Next researchers can use market value leverage and compare it to this research to get a better picture of the current state.
- Utilizing other methodology to obtain a different approach and compared to determine which methodology is better.
- Compared to the other sectors with a similar financial characteristic.

Also, this research is only covering some of the infrastructure companies that are listed on the IDX. Furthermore, this research only uses book value leverage for capital structure instead of using market value leverage. Therefore, there are several improvements:

- Emphasize more on the determinants that are significantly affected the company capital structure.

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