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FACTORS AFFECTING PROFITABILITY IN INFRASTRUCTURE COMPANIES LISTED ON IDX

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ABSTRACT

This study aims to determine the factors that can affect profitability in infrastructure sector companies listed on the Indonesia Stock Exchange (IDX) during 2020-2022. This research was conducted using three independent variables consisting of company leverage, company size, and company liquidity. The company leverage variable is proxied through the DAR (Debt to Asset Ratio) ratio, the company size variable is proxied through the Log of Total Assets, and the company liquidity variable is proxied through the CR (Current Ratio) ratio. The profitability variable is proxied through the ROA (Return on Asset) ratio. The sample tested in this study was selected by purposive sampling method and the data used was valid data from 19 infrastructure sector companies. Data processing techniques in this study using multiple regression analysis assisted by the SPSS (Statistical Product and Service Solution) program version 27 and Microsoft Excel. The results of the study showed that the leverage variable has a significant negative effect on profitability, the company size variable has a significant positive effect on profitability, and the liquidity variable has no significant effect on profitability. The implication of this research is the need for companies to optimally utilize existing assets and arrange good funding sources so that they can earn profits optimally and can increase the company's profitability value which will provide good signals for investors.

Keywords: *Profitability, Leverage, Firm Size, Liquidity*

1. INTRODUCTION

Economic growth and development in Indonesia hold an important key role in realizing development goals in Indonesia. Economic conditions in Indonesia over these past few years have always experienced dynamic changes and fluctuatuions with different growth every year (bps.co.id, 2022). Indonesia’s economic growth is stated to have exceeded the target that previously set by the government. Indonesia’s economic growth is predicted to be increased in 2022. This prediction attracts investor’s attention to invest again, where previously there was a decline in investment during pandemic.

One of the sectors on Indonesia Stock Exhange that plays a role in contributing to Gross Domestic Product (GDP) for the Indonesian economy is the infrastructure sector. Infrastructure sector is stated to be one of the economic sectors that plays an important role for country’s development. The infrastrcutre sector itself refers to a series of public facilities, systems, arrangements and networks that support the overall economic condition, social and environment activities in a country (World Bank). The infrastructure sector itself also plays a role as the key to sustainable economic growth in a country.

A good infrastructure sector can encourage direct investment in the infrastructure sector and related sectors, such as the manufacturing, logistic and services sectors. The presence of the infrastructure Connect 2022 event to support the infrastructure and construction services industry in Indonesia, indicates that the infrastructure sector is a sector that has the potential to support the Indonesian economy (ANP, 2022).

The infrastructure sector which continues to be supported by the government shows that profitability in the infrastructure sector has the potential to increase. Infrastructure companies continue to illustrate that the infrastructure sector is a sector that is seen as having good performance prospects in obtaining a profit. Many aspects are considered by investors in making an investment decision. Profitability according to Alifiandi and Takarini (2020) described as the ability of a company to generate net income from total sales, and is an indicator that reflects management performance in running company operations efficiently. A high level of profitability gives an idea that a company can operate efficiently and optimally.

Profitability is used as one of the considerations for investors whether a company issuer is a worth buying or not. Binekasri (2023) stated that the infrastructure sector is the second sector after the banking sector which contributes the largest contribution to the consolidated net profit of State-Owned Company throughout 2022. Based on the phenomenon above, it is reflected that the infrastructure sector in the Indonesian economy is one of the sectors that has succeeded in increasing the profitability of a company through good company performance. The positive impact of the company's profitability will attract investors to invest in the issuer companies. Decrease or increase in the profitability of a company, it can be concluded that there are several aspects that affect a company's profitability. This study is expected to be useful for companies in trying to increase the company's profitability and also expected to add insight for investors in making decisions related to investment in getting expected return. Pervious researches show different result and unconsistent regarding to the factors that affect company's profitability. Therefore, research is conducted again to find out the factors that affect the profitability company.

Agency Theory

Agency theory is a theory that describes the contractual relationship that explains the conflict of interest of one party called the principal with one other party called the agent (Jensen & Meckling, 1976). Agency theory describes the importance of the relationship between principal and agent, where this theory provides a conceptual description to understand how a contract, incentives, and supervision, are used to minimize conflicts and encourage behavior that is in line and in line with the interests of the principal. This theory states that the principal's interests must be in line with the interests of the agent (Syahrani, 2021). Syahrani (2021) also stated that if the interests between the agent and the principal are not in line, it will cause conflicts that can hinder the growth of company's profitability. The agent has control over the allocation of resources and management over company's fund, and the incentives provided by the principal for the agent allow the agent to perform better in order to increase productivity that can lead to higher company's level of profitability (Hendrastuti & Harahap, 2023). It can be concluded that agency theory explains the effect of incenctives, resource allocation, and avoidance of conflicts of interest on the company's financial performance which aims to ensure that agent can act in accordance with the interests of the principal to increase company's profitability.

Trade-Off Theory

According to Modligani and Miller (1963), trade off theory is a theory that explains the allocation and use of corporate debt to maximize the company's capital structure. This theory states that company management will seek the level of debt usage through the benefits and costs arising from corporate debt, which can maximize firm value. According to Umdiana & Claudia, (2020), companies can increase their value through the use of debt but only to a certain extent. A company will achieve a higher level of profitability if it relies more on internal funding (Youseff et al., 2022).

Leverage

Leverage is a ratio that describes the relationship between a company's debt and its equity and assets (Mufalichah & Nurhayati, 2022). Leverage can provide an overview of how far companies use funding through external parties. Leverage is seen as the ability of a company to pay off all financial obligations, when the company is to be liquidated (Chynthiawati & Jonnardi, 2022). Leverage describes the relationship between debt in a company and the company's assets and capital, as well as providing an overview related to the source of operational funding used by the company and the risks that company will face. According to Nuraini & Suwaidi (2022), a high level of leverage in a company illustrates that the company's largest source of funding comes from debt. The more debt a company has, the higher the interest expense that must be borne by a company, which can reduce the profit level of a company. This is also consistent with the trade-off theory which states if company's debt level exceeds a certain limit, the benefits that will be obtained through the use of debt will be smaller than the costs incurred due to funding from external parties (Umdiana & Claudia, 2020). The result of study by Youssef et al., (2023) and Alarussi & Gao (2021) shows that leverage has a significant and negative impact towards profitability. Based on the explanation above, the first hypothesis in this study is as follows:

Ha1: Leverage has a significant and negative impact on profitability.

Firm Size

Firm size can be used as a scale that can categorize whether a company is large or small, which can be measured through severa things such as total number of company assets, total sales, and the value of company's shares (Maulana & Rahayu, 2022). Larger companies tend to have a higher level of profitability compared to small companies. Large companies tend to have more advantages in utilizing resources as optimally as possible and reducing company operating costs (Moussa & Boubaker, 2023). This is also consistent with agency theory that states larger companies tend to have smaller agency costs (Umdiana & Claudia, 2020). The result of study by Suprapto & Enjeliana (2023) and Wijaya et al., (2022) shows that firm size has a significant and positive impact towards profitability. Based on the explanation above, the second hypothesis in this study is as follows:

Ha2: Firm size has a significant and positive impact on profitability.

Liquidity

Liquidity is a ratio that can provide an overview of how quickly a company's ability to pay off its short-term financial obligations (Nurdiana, 2018). According to Maria et al., (2018), liquidity refers to how liquid the assets possessed by a company, can be used to pay off the company's debt immediately. Company that has high liquidity level indicates that the company is not maximally and optimally utilizing the existing assets for business capital or business development. A high level of liquidity indicated that there are many idle funds that can reduce the company's ability to earn profit (Maulana & Rahayu, 2022). The result of study of Youssef et al., (2022) and Mogro & Barrezueta (2019) shows that liquidity has a significant and negative impact towards profitability. Based on the explanation above, the third hypothesis in this study is as follows:

Ha3: Liquidity has a significant and negative impact on profitability.

Based on the hypothesis above, the framework model can be described as follow:

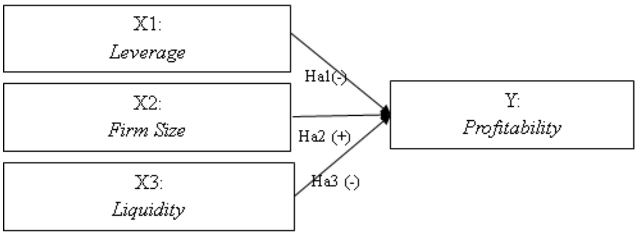

Figure 1. Framework Model

2. RESEARCH METHOD

This research uses descriptive research design with quantitative method using data from all infrastructure companies listed on the IDX from 2020-2022. Non-probability sampling approach is used to determine the sample, in the form of purposive sampling technique. Sample from infrastrcuture companies taken are selected through several criteria that are (1) infrastructure companies that are consistently listed on the Indonesia Stock Exchange during 2020-2022, (2) infrastructure companies that present audited financial reports for the period ended December 31 during 2020-2022 and (3) infrastructure companies that presents financial reports in Rupiah during 2020-2022. The sample of 19 infrastructure companies were selected using the criteria described. The data and information contained in this study was gathered from the Indonesia Stock Exchange website during 2020-2022. SPSS version 27 and Microsoft Excel were used for processing the sample gathered from financial reports. This study uses mulitple linear regression analysis to find out whether the independent variable has an effect on the dependent variable.

The measurement and operationalization of the variable in the study is described as follow:

Table 1. Operationalization of Variable and Measurement

Variable	Measurement	Source
Profitability	ROA = Earning Before Tax/Total Assets	Kumar et al., (2022)
Leverage	DAR = Total Debt/Total Assets	Alarussi & Gao (2021)
Firm Size	SIZE = Ln Total Assets	Gharaibeh & Khaled (2020)
Liquidity	CR = Current Assets/Current Liabilities	Nanda & Panda (2018)

3. RESULTS AND DISCUSSIONS

This study has met the requirements related to classic assumption test. Classic assumption test in this study is conducted through the normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. Data in this study were processed into descriptive and multiple linear regression analysis. This study use descriptive analysis to understand the values of maximum, minimum, mean, standard deviation, and variance for each variable. The result of descriptive statictical test is as follows:

Table 2. Results of Descriptive Statistical Test
Source: Output SPSS 27

	ROA	*DAR*	*SIZE*	*CR*
Maximum	0.1460	0.8582	14.0170	8.4270
Minimum	-0.0579	0.0812	11.5290	0.3390
Mean	0.2603	0.5443	12.9414	3.0071
St. Dev.	0.3952	0.2178	0.7437	2.0465
Variance	0.0015	0.0474	0.5532	4.1882
Obervations	57	57	57	57

Based on the data above, the maximum and minimum values for profitability (ROA) are 0.1460 and -0.0579, respectively, the mean value is 0.2603, the standard deviation is 0.3952, and the variance is 0.0015. The maximum and minimum values for leverage (DAR) are 0.8582 and -0.0812, respectively, the mean value is 0.5443, the standard deviation is 0.2178, and the variance is 0.0474. The maximum and minimum values for firm size (SIZE) are 14.0170 and 11.5290, respectively, the mean value is 12.9414, the standard deviation is 0.7437, and the variance is 0.5532. The maximum and minimum values for liquidity (CR) are 8.4270 and 0.3390, respectively, the mean value is 3.0071, the standard deviation is 2.0465, and the variance is 4.1882. This study uses the multiple linear regression model. The result of data analysis in this study is as follows:

Table 3. The Result of Multiple Linear Regression Analysis

Variable	Coefficient	Std. Error	t-Statistics	Sig.
C	-0.3650	0.1240	-2.942	0.0048267
DAR	-0.1943	0.0364	-5.326	0.0000021
SIZE	0.0384	0.0110	3.480	0.0010093
CR	-0.0004	0.0022	-0.1986	0.8433665
R-squared				0.389607
Adjusted R-squared				0.355056
Sig (F-statistics)				0.000008

Based on the table above, this study form the following equation

$$ROA = -0.3650 - 0.1943\ DAR + 0.0384\ SIZE - 0.0004\ CR + e$$

Through t-test conducted above, it is known that not all independent variable used in this study has significant effect on company's profitability. Leverage (DAR) is found to have significant and negative effect on company's profitability. Firm size (SIZE) shows significant and positive effect on company's profitability. Liquidity indicates no significant effect on profitability.

Based on the result of the multiple linear regression analysis above, company leverage has a significant and negative effect on profitability with Sig. (t-statistic) value is 0.0000021 and coefficient value is -0.1943, therefore Ha1 that stated leverage has significant and negative effect on proditability is accepted. Firm size shows that it has a significant and positive effect on profitability with Sig. (t-statistic) value of 0.0010093 and coefficient value of 0.0384, therefore Ha2 that stated firm size has significant and positive effect on profitability is accepted. Liquidity shows no significant effect on profitability with Sig. (t-statistic) value of 0.8433665, therefore Ha3 that stated liquidity has significant and negative effect on profitability is rejected.

The adjusted R-squared value of 0.355056 means that the independent variables, leverage, firm size, and liquidity can explain profitability by 35.5056% while the remaining 64.4944% is explained by other variables outside the study. The Sig (F-statistic) value is 0.000008. It shows that all independent variables used in this study have a significant effect on the profitability as a dependent variable simultaneously.

Leverage has significant and negative effect on profitability. Leverage used by companies to explain the relationship between debt owned by a company and its assets. Leverage ratio can provide information of the usage of external fund as a source of funding. A high level of leverage describes that the company relies on most of its funding from external parties. Funds arising from external parties lead to an increase in the cost through interest expense. A high level of debt also describes that the company has greater risk of default that can lead to company loss, which can poorly affect the company's level of profitability. This is also consistent with the trade-off theory which states if company's debt level exceeds a certain limit, the benefits that will be obtained through the use of debt will be smaller than the costs incurred due to funding from external parties that can hinder company in achieving higher level of profitability. This result is supported by research previously conducted by Alarussi & Gao (2021) and Sutomo et al., (2019), which stated that leverage has a significant and negative effect on profitability. However, this result contradicts the research previously conducted by Moussa & Boubaker (2023), which stated that leverage has significant and positive effect on profitability. Besides that, the result of research previously conducted by Mogro & Barrezueta (2019), stated that leverage has no significant effect on profitability.

Firm size has significant and positive effect on profitability. Firm size is a measurement made through total assets, total sales, or value of a company's shares that can categorize whether a company is a small or large company. The greater the number of assets owned by a company, the greater the resources that can be utilized by a company to do an expantion which can lead to an increase in company's level of profitability. By large number of assets owned by a company, it is expected that a company can optimally utilize the assets possessed to increase company's productivity that can increase company's profit. This result is supported by research previously conducted by Wijaya et al., (2022) and Gharaibeh & Khaled (2020), which stated that firm size has significant and positive effect on profitability. However, this result contradicts the research previously conducted by Alsharari & Alhmoud (2019), which stated that firm size has significant and negative effect on profitability. Besides that, the result of research previously conducted by Mogro & Barrezueta (2019), stated that firm size has no significant effect on profitability.

Liquidity has no significant effect on profitability. Liquidity used as a ratio that can measure how liquid the total assets owned by a company can be used to meet its short-term obligations. Higher level of company's liquidity indicates the more liquid assets owned by the company that can be used to pay off obligations that will mature in the near future. The level of profitability on company can not measured by how liquid the assets possessed by a company can be used to pay off its short-term liabilities. Companies that have low level of liquidity are not necessarily able to utlilize their assets optimally in gaining profit. This result is supported by research previously conducted by Suprapto & Enjeliana (2021) and Pervan et al., (2019) that stated company's liquidity has no significant effect on profitability. However, this result contradicts the research previously conducted by Nuraini & Suwaidi (2022), which stated that liquidity has significant and positive effect on profitability. Besides that, the result of research previously conducted by Maulana & Rahayu (2022), stated that liquidity has significant and negative effect on profitability.

4. CONCLUSIONS AND SUGGESTIONS

Leverage has significant and negative effect on profitability. A higher level of company's level of leverage reflects the company's indigent condition because the incurrence of debt caused interest expense that caused higher cost to company. Company with high level of leverage also tend to has higher default risk, that can negatively affect the company's level of profitability. Firm size has significant and positive effect on profitability. Bigger company indicates that there are more resources that can be used by company. A high amount of firm's asset can be utilized by a company to expand their businesses that can lead to an increase in company's profitability. Larger company also decrease the agency costs, because larger company tend to be more supervised by interested parties. Liquidity has no significant effect on profitability. High level of company's liquidity describes large number of liquid assets owned by a company that can be used to settle of obligations that will mature in short time. The level of company profitability indeed, can not determined by how liquid the assets owned by a company that can be used to meet its short-term liabilities. Companies that have low level of liquidity are not necessarily able to maximize their usage of assets in obtaining profit. The company still has to have a good operating management that create a high level of productivity that can lead to an increase of profitability level.

This study only examines the effect of leverage, firm size, and liquidity on the company's profitability. Apart from that, this research only used basic infrastructure companies listed on the IDX during 2020-2022. This research has its limitations. Based on the limitations in this study, the subsequent study is suggested to use other independent variables other than these variables used in the study, such as firm's growth, risk, or inflation rate, use a research period longer than three years and to use larger sample beyond infrastructure companies such as manufacture or consumer cyclicals sector.

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