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THE EFFECT OF ASSET STRUCTURE, SALES GROWTH AND NET PROFIT MARGIN ON THE CAPITAL STRUCTURE OF INFRASTRUCTURE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE 2019–2023

Ayu Namira Sasti[1] *, Wardhiah[2] , Darmawati Muchtar[3] , Zulfan[4]
[1,2,3,4] Faculty of Economic and Business, Universitas Malikussaleh
Jln.Unimal Bukit Indah campus, Blang Pulo, Muara Satu, Lhokseumawe,
Phone/Faks : +62.645.41373/+62.645.44450
Email: ayu.210410341@mhs.unimal.ac.id [1] *, wardhiah@unimal.ac.id [2] , darmawati@unimal.ac.id [3] , zulfan.sb@unimal.ac.id [4]

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Abstract

The purpose of this study is to determine the effect of asset structure, sales growth, and net profit margin on the capital structure of infrastructure companies listed on the Indonesia Stock Exchange for the 2019-2023 period. The data used in this study are secondary data. The population in this study was 58 companies and the sample used was 26 companies selected using purposive sampling technique, resulting in a total of 150 observations. The data analysis method used was panel data regression. The results of the study indicate that partially the asset structure has a negative and insignificant effect on the capital structure of infrastructure companies for the 2019-2023 period. Meanwhile, sales growth has a negative and significant effect on the capital structure of infrastructure companies for the 2019-2023 period and net profit margin has a negative and significant effect on the capital structure of infrastructure companies for the 2019-2023 period.

Keywords: ***Capital Structure, Asset Structure, Sales Growth, Net Profit Margin***.

INTRODUCTION

Advances in communication technology and easier access to global markets have created increasingly fierce business competition, requiring every company to enhance product excellence to strengthen its competitiveness. In the context of Indonesia's infrastructure industry, capital structure management is crucial, given the investment needs, which reach IDR 6,445 trillion according to the 2020-2024 National Medium-Term Development Plan (RPJMN), while the government can only raise IDR 2,385 trillion, or 37% of the total requirement (Benyamin et al., 2023). Capital structure is the ratio between equity and long-term debt, which is crucial to a company's financial position (Sedana & Andika, 2019). In this study, capital structure can be measured using the leverage ratio.

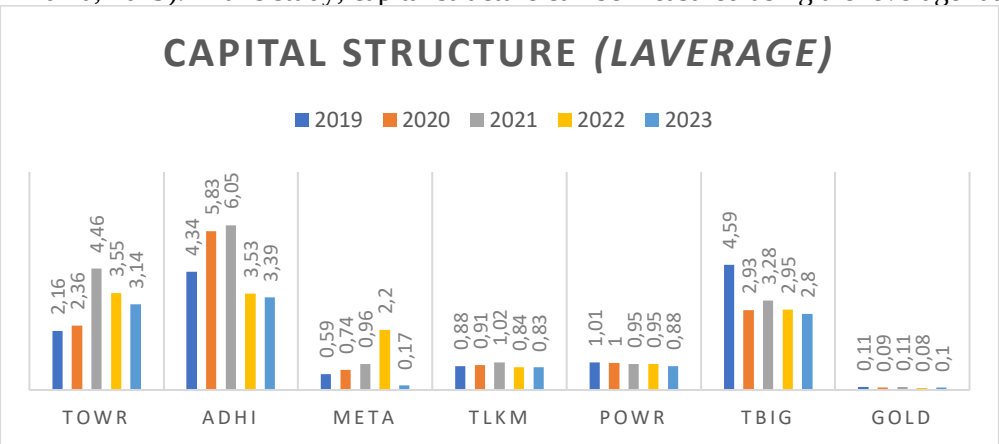

Figure 1.Capital Structure Data of Infrastructure Companies

Figure 1 shows fluctuations in leverage ratios, as measured by the Debt-to-Equity Ratio (DER), for infrastructure companies from 2019 to 2023. Several companies experienced overleverage, such as ADHI, which reached 605% in 2021, TOWR 446%, and TBIG 328%. Despite decreasing in 2023 to 339%, 314%, and 280%, respectively, all three companies remained overleveraged.Overleverage can have negative consequences, including the risk of financial distress due to high interest rates, declining stock prices, and increased default risk (Dewi et al., 2021; Khasana & Triyonowati, 2019). This can lead a company to extreme leverage, where it becomes trapped in high debt levels (Susilawati & Purnomo, 2023). Previous research has shown inconsistent results regarding the factors influencing capital structure. Benyamin & Soekarno (2023) found that profitability, asset structure, growth, and liquidity influence capital structure. Setiawati & Veronica (2020) added company size and business risk as determining factors. Meanwhile, Girsang & Purnasari (2020) stated that the current ratio, company size, and net profit margin are influential factors. These discrepancies in results indicate a research gap that requires further study.

Based on data analysis for the 2019-2023 period, the asset structure of infrastructure companies increased from 50.42% to 56.57%, sales growth fluctuated due to the pandemic, and net profit margin decreased from 31.85% to 21.14%. This phenomenon impacts the capital structure of infrastructure companies. Asset structure, as measured by the Fixed Asset Ratio, has yielded mixed results. Suherman et al. (2019) and Ade Yulianti et al. (2022) found a significant effect on capital structure, but Irian et al. (2022) and Yunita & Aji (2018) found the opposite. Similarly, for sales growth, Sugiharto et al. (2022) and Dzikriyah & Sulistyawati (2020) found a significant positive effect, while Hutabarat (2022) found an insignificant negative effect. For Net Profit Margin, Rozi et al. (2021) and Mukaromah & Fauziah (2020) found a significant positive effect, but Susanto (2019) found a significant negative effect. Based on Pecking Order Theory, companies with high NPM tend to reduce debt usage because they prefer to use retained earnings.

LITERATURE REVIEW

Pecking Order Theory

Pecking order theoryDescribes a company's funding policy, which is primarily carried out internally, namely from profits (Myers 1984). If the value is still insufficient, the shortfall can be covered by borrowing from external parties. Funding by issuing equity is a last resort (Miswanto et al., 2022).

Capital Structure

Capital structure is a combination of various long-term financing sources, such as debt, common stock, and preferred stock. In this context, capital structure reflects the proportion of equity (own capital) and debt in a company's financing (Andiya & Windijarto 2021).

$$\text{Leverage} = \frac{\text{Total liabilities}}{\text{Total Equity}} \text{x} 100\%$$

Asset Structure

According to Setiawati & Veronica (2020), asset structure reflects the extent to which a company's assets have collateral value. Hamdan & Hartini (2022) add that companies with substantial long-term fixed asset holdings tend to rely more on long-term debt, as these assets can be used as collateral for loans.

$$\text{Fixed asset ratio} = \frac{\text{fixed asset}}{\text{Total Asset}} \text{x } 100\%$$

Sales Growth

Sales growth is the difference in sales from year to year and is an indicator of the success of market demand and competitiveness. The higher a company's sales growth rate, the greater its need for additional financing. Similarly, the lower the retention ratio, the greater its need for additional funds (Setiawati & Veronica 2020).

$$\text{Sales Growth} = \frac{\text{sales}_{t} - \text{sales}_{t-1}}{\text{sales}_{t-1}} \text{x } 100\%$$

Net Profit Margin

According to Kasmir (2019), Net Profit Margin (NPM) is a profit indicator that compares net profit after tax with net sales. According to Werner R. Murhadi (2013),(Kurniasih et al., 2024)Net Profit Margin is a measure of a company's ability to generate revenue from each sale. Therefore, a higher Net Profit Margin indicates a company's ability to generate profits.

$$\text{NPM} = \frac{\text{net profit after tax}}{\text{net sales}} \times 100\%$$

The conceptual framework and hypotheses in this study are as follows:

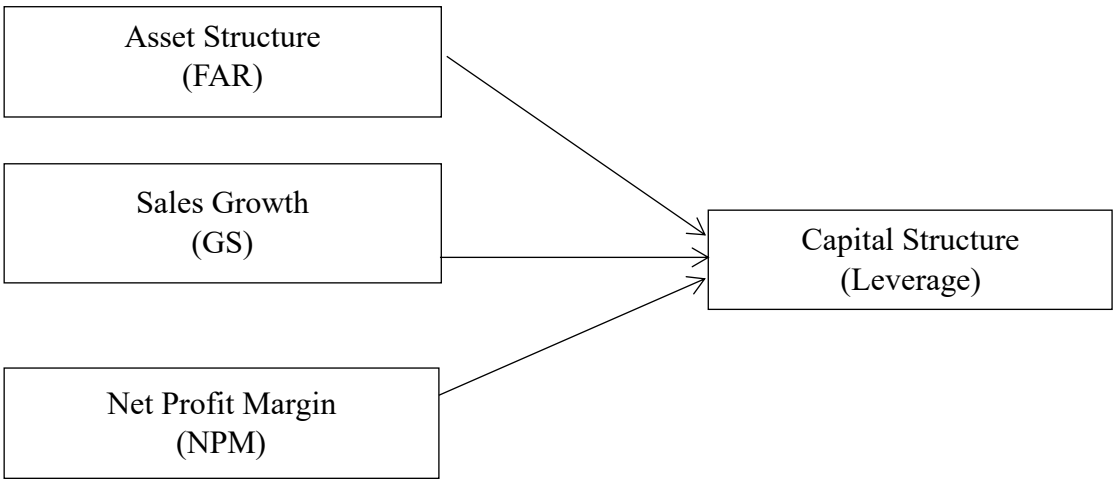

Figure 2 Conceptual Framework

The description of the conceptual framework with support from relevant theories, the hypothesis for this study is as follows:

H1: Asset structure has a positive and significant effect on the capital structure of infrastructure companies listed on the Indonesia Stock Exchange for the 2019-2023 period.

H2: GrowthSales have a positive and significant impact on the capital structure of infrastructure companies listed on the Indonesia Stock Exchange for the 2019-2023 period.

H3: Net Profit Marginhas a negative and significant effect on the capital structure of infrastructure companies listed on the Indonesia Stock Exchange for the 2019-2023 period.

METHOD

This study uses a quantitative approach with a panel data regression method.This approach was chosen because it can simultaneously combine time-series and cross-sectional data dimensions, providing a more comprehensive analysis. Panel data regression is considered appropriate because the research object involves several companies observed over a specific time period.The data used is secondary data in the form of annual financial reports of infrastructure companies listed on the Indonesia Stock Exchange for the 2019–2023 period. The sample was selected using a purposive sampling technique based on specific criteria, resulting in 26 companies with a total of 58 observations. Data analysis was performed using EViews 12 software. The panel data regression models used included the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM). The best model was selected using the Chow Test, the Hausman Test, and the Lagrance Multiplier Test.

RESULTS AND DISCUSSION

Model Selection Results

Of the three regression models that can be used to estimate panel data, the one with the best results will be used in the analysis. Therefore, in this study, to determine the best model for analysis, we first conducted tests using the Chow test, the Hausman test, and the LM test.

Table 1 Chow Test

Effect Test	Statistics	df	Prob.
Cross-Section F	27.887616	(25,101)	0.0000
Cross-Section Chi-Square	268.739465	25	0.0000

Based on the results of the chow test in Table 1 above, it shows that the cross-section probability value F is 0.0000 or less than 0.05, so it can be concluded that the Fixed Effect Model is the most appropriate model to use in estimating panel data regression in this study.

Table 2 HausmanTest

Test Summary	Chi-Sq Statistics	Chi-Sq. df	Prob.
random cross-section	1.915592	3	0.5901

Based on Table 2 above, the results of the Hausman test show a random cross-section probability value of 0.5901 > 0.05, indicating that the Random Effect Model is the most appropriate model for panel data regression estimation in this study. The Lagrange Multiplier test is then used to select between the random effect model and the Cammon effect model.

Table 3 Lagrance Multiplier Test

	Cross-section	Hypothesis Test Time	Both
Breusch-pagan	180.4608 (0.0000)	2.021687 (0.1551)	182.4825 (0.0000)

Based on Table 3 above, the results of the LM test show a Breusch-Pagan cross-section probability value of 0.0000 < 0.05, indicating that the Random Effect Model is the most appropriate model for panel data regression estimation in this study. The results obtained from the Hausman and Lagrange Multiplier tests are consistent, with the Random Effect Model (REM) used.

Panel Data Regression Analysis (Random Effect Model)

Table 3 Panel Data Regression Analysis (Random Effect Model)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	181.9687	33.14735	5.489690	0.0000
FAR	-0.482996	0.634204	-0.761578	0.4477
GS	-0.320200	0.161670	-1.980580	0.0498
NPM	-1.482048	0.407637	-3.635704	0.0004

Based on table 3 above, the panel data regression equation value can be obtained as follows:

$$\mathbf{SM = 181.9687 - 0.482996FAR - 0.320200GS - 1.482048NPM}$$

Based on the equation above, the coefficient value on the Asset Structure (FAR) variable is negative, namely (-0.482996), meaning that if the Asset Structure (FAR) variable increases by 1%, the capital structure (Leverage) variable will decrease by 0.482996. The coefficient value on the sales growth (GS) variable is negative, namely (-0.320200), meaning that if the sales growth (GS) variable increases by 1%, it will decrease the capital structure (Laverage) variable by 0.320200. The coefficient value on the Net Profit Margin (X3) variable is negative, namely (-1.482048), meaning that if the net profit margin (X3) variable increases by 1%, the capital structure (Laverage) variable decreases by 1.482048.

Hypothesis Test Results

The Influence of Asset Structure on Capital Structure

Based on the test results using the Eviews 12 program, it shows that the asset structure variable has a relationship with the capital structure of -0.7615 < (t_{hitung})t_{tabel})1,657 with a Prob. (significance) value of 0.4477 above > 0.05, the results of the study illustrate that the asset structure variable has a negative and insignificant effect on capital structure (H1 is rejected). When a company's fixed assets increase, it does not affect the capital structure, because creditors will determine other conditions for it to be used as collateral. This finding is consistent with the research of Marpaung et al. (2024), which revealed that asset structure does not significantly influence capital

structure. In this case, management tends not to consider asset composition as a primary factor in decisions regarding the addition or use of debt. These results also reinforce the findings of several previous studies, such as those by Pramana & Darmayanti (2020), Inayati & Sofian (2019), and Lestari & Oktaviani (2024), which all concluded that asset structure does not significantly contribute to capital structure formation.

The Effect of Sales Growth on Capital Structure

Based on the results of the analysis using EViews 12 software as shown in Table 4.9, it was found that the sales growth variable has a t-value of -1.9805, which is absolutely greater than the t-table of 1.657. In addition, the probability value (p-value) of 0.0498 indicatesshow itsignificant leveli is below the threshold of 0.05. Thus, it can be concluded thata pertpenju plantAlan Berpenegative influenceif dan sigsignificantadapt smod structureal pthere is a companythe infrastructure sector, yesng recorded in BUrsa EIndonesia's fek during theiode 2019–2023.Therefore (H2 is rejected). This aligns with the Pecking Order Theory. When sales increase, it contributes to increased company profits. This increased profit allows companies to reduce financing costs, eliminating the need to rely on debt as an additional source of capital. Thus, positive sales growth will drive increased profitability, and ultimately, companies will tend to use internal funds to fund their operational activities without relying on external financing (Rachmawati & Faisal, 2024). The findings of this study support previous studies by Ratri & Christianti (2020) and Nataliana & Erin (2022), which showed that sales growth has a significant negative impact on capital structure. This means that increased sales tend to be accompanied by a decrease in debt use in a company's financing structure.

The Effect of Net Profit Margin on Capital Structure

Based on the test results using the Eviews 12 program, it shows that the sales growth variable on the capital structure with (t_count) of -3.6357> (t_table) 1.657 with a Prob. value (significance) of 0.0004 below <0.05, it can be concluded that the net profit margin variable has a negative and significant effect on the capital structure of infrastructure companies listed on the Indonesian stock exchange for the 2019-2023 period. If net profit increases, the capital structure will decrease (H3 is accepted). These results indicate that when companies are able to generate higher net profit margins from their operations, they tend to reduce the proportion of debt in their capital structure. This can be explained by companies with a high NPM having a greater ability to generate internal funds through retained earnings, thereby reducing the need for external financing in the form of debt while reducing the financial risk associated with interest payments (Hakim & Santoso, 2022). This finding supports previous research conducted by Said et al. (2023), Hakim & Santoso (2022), and Susanto (2019). In line with the Pecking Order Theory proposed by Miyers (1984), which states that companies will prefer internal funding such as retained earnings over external funding, especially debt, to avoid additional costs such as interest and the risk of bankruptcy. Companies with high net profit margins provide sufficient cash reserves for the company to meet its funding needs without having to rely on debt.

CONCLUSION

The conclusion of this study shows that asset structure has a negative and insignificant influence on capital structure, while sales growth and net profit margin have a negative and significant influence on the capital structure of infrastructure companies.

REFERENCES

Ade Yulianti, Devia Ramaladini, Fitri Meliya, Muhammad Idris, & Suripto. (2022). The Effect of Tax Avoidance and Asset Structure on Capital Structure (Empirical Study on Infrastructure, Utilities and Transportation Service Companies Listed on the IDX 2019-2020). PROCEEDINGS OF PIM (Student Scientific Week), 2(2).

Andiya, F., & Windijarto. (2021). Refinancing in Capital Structure: A Study of Manufacturing Companies on the Indonesia Stock Exchange. Equity: Journal of Economics and Finance, 5(1), 59–77. https://doi.org/10.24034/j25485024.y2021.v5.i1.4736

Benyamin, PL, & Soekarno, S. (2023). Capital Structure Determinants of Public Infrastructure Companies in Indonesia. International Journal of Current Science Research and Reviews, 06(02), 1017–1027. https://doi.org/10.47191/ijcsrr/v6-i2-18

Dewi, SP, Susanti, M., Susanto, L., & Sufiyati. (2021). The impact of leverage, liquidity, and sales growth on profitability. Journal of Accounting, 21(1), 67–80.

Dzikriyah, D., & Sulistyawati, AI (2020). The Effect of Sales Growth, Asset Structure, Company Size, and Profitability on Capital Structure. Solusi, 18(3), 99–115.https://doi.org/10.26623/slsi.v18i3.2612

Girsang, LP, & Purnasari, N. (2020). The Effect of Current Ratio, Company Size, and Net Profit Margin on Capital Structure in Sector Companies. Journal of Accounting, 8(1), 2020.

Hamdan, H., & Hartini, H. (2022). Analysis of Factors Influencing Capital Structure in Manufacturing Companies on the Indonesia Stock Exchange 2018-2020. Journal of Management, 10(3), 311–326. https://doi.org/10.36546/jm.v10i3.693

Hutabarat, MI (2022). The Effect of ROA, Sales Growth, Liquidity, and Company Size on the Capital Structure of Food and Beverage Manufacturing Companies on the IDX. Owner, 6(1), 348–358.https://doi.org/10.33395/owner.v6i1.589

Irian, B., Paranita, ES, & Ispriyahadi, H. (2022). The Effect of Financial Flexibility, Growth Opportunity, Bankruptcy Risk, and Asset Structure on Capital Structure. Journal of Applied Management and Finance, 11(04), 806–819. https://doi.org/10.22437/jmk.v11i04.21494

Junjunan, Mochammad Ilyas & Nawangsari, AT (2021). Statistical Data Processing Using EViews in Business Research. Insan Cendekia Mandiri.

Khasana, FA, & Triyonowati. (2019). The Effect of Leverage, Liquidity, and Profitability on Company Value in Property and Real Estate Companies in Indonesia. Journal of Management Science and Research, 8(1), 1–19.

Kurniasih, D., Nurulrahmatia, N., & Mundar, A. (2024). Analysis of the Influence of Net Profit Margin (NPM) and Asset Structure on Capital Structure at PT. Krakatau Steel (Persero) Tbk. Trending: Journal of Economics, Accounting and Management, Vol. 2 No. 84–105. doi:https://doi.org/10.30640/trending.v2i4.2985

Marpaung, BS, Marpaung, AM, Hasibuan, DH, & Fauzi, H. (2024). The Effect of Profitability, Asset Structure, and Liquidity on Capital Structure. Journal of Business Economics, Management, and Accounting (Jebma), 4(3), 1748–1761.https://doi.org/https://doi.org/10.47709/jebma.v4i3.4881

Miswanto, M., Setiawan, AY, & Santoso, A. (2022). Analysis of the Effect of Sales Growth, Asset Structure, and Profitability on Capital Structure. Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship, 11(2), 212. https://doi.org/10.30588/jmp.v11i2.945

Mukaromah, E., & Fauziah, F. (2020). Analysis of the Influence of Net Profit Margin and Growth Rate on Capital Structure in Islamic Banks in Indonesia. Borneo Student Research, 1(3), 1394–1402.

Sedana, IBP, & Andika, IKR (2019). The Effect of Profitability, Asset Structure, and Company Size on Capital Structure (A Study of Property and Real Estate Companies Listed on the Indonesia Stock Exchange), E-Journal of Management, Udayana University, 1(10), 7–9. doi: https://doi.org/10.24843/EJMUNUD.2019.v08.i09.p22%0AISSN

Setiawati, M., & Veronica, E. (2020). The Effect of Profitability, Asset Structure, Company Size, Business Risk, Sales Growth, Company Growth, and Liquidity on Capital Structure in Service Sector Companies in the 2016-2018 Period. Journal of Accounting, 12(2), 294–312. https://doi.org/10.28932/jam.v12i2.2538

Sugiharto, B., Putri, TE, & Luthfiani, Q. (2022). the Effect of Profitability, Cash Holdings, Sales Growth, Institutional Ownership Structure and Corporate Tax Rate on Capital Structure. Accounting Research Journal of Sutaatmadja, 06(02), 52–73.

Suherman, S. (2019). The Effect of Asset Structure, Liquidity, and Profitability on Capital Structure Moderated by Company Size. Mix: Scientific Journal of Management, 9(2), 369. https://doi.org/10.22441/mix.2019.v9i2.009

Susanto, D. (2019). Analysis of the Influence of Current Ratio, Net Profit Margin, Total Assets Turnover, and Company Size on Capital Structure. Journal of Economics and Management, 8(1), 59–70.

Susilawati, E., & Purnomo, AK (2023). The Effect of Leverage and Company Growth on Profitability. Owner, 7(2), 955–964. https://doi.org/10.33395/owner.v7i2.1417

Yunita, S., & Aji, T. Seno. (2018). The Effect of Liquidity, Tangibility, Growth Opportunity, Business Risk, and Company Size on Capital Structure. Journal of Management Science, volume 6(4), 409–416.