


The Influence of Capital Structure and Asset Efficiency on Profitability and Corporate Income Tax

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Article Info	ABSTRACT
<p>Keywords: Asset Efficiency, Capital Structure, Profitability, Corporate Income Tax</p>	<p>This study investigates the influence of asset efficiency and capital structure on profitability and corporate income tax in primary consumer goods sector companies listed on the Indonesia Stock Exchange for the 2020–2024 period. Using purposive sampling, 25 companies were selected, and data from audited financial statements were analyzed with Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS. Asset efficiency, measured by Fixed Asset Turnover (FATO), shows no significant effect on profitability or corporate income tax, indicating that asset utilization alone is insufficient to enhance financial outcomes. Capital structure, proxied by the Debt-to-Equity Ratio (DER), significantly reduces profitability but does not significantly influence corporate income tax. Profitability has a positive and significant effect on corporate income tax, aligning with the Trade-Off Theory. These findings highlight the need for optimal leverage management, operational improvements beyond asset utilization, and effective tax strategies to ensure sustainable corporate performance.</p>
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INTRODUCTION

The pursuit of profitability and sustainable growth remains a central objective for business entities, as it reflects the effectiveness of management in utilizing resources and ensuring the firm's long-term survival (Kasmir, 2019; Sari & Sisdiyanto, 2024). Profitability not only determines a company's attractiveness to investors but also influences its capacity to reinvest in operations and compete in increasingly dynamic markets (Lestari & Agustiningsih, 2023). In this context, capital structure plays a pivotal role, representing the proportion between debt and equity employed to finance operations. According to Modigliani and Miller (1963), an optimal capital structure can minimize the cost of capital and maximize firm value, while an imbalanced structure may expose the company to excessive financial risk (Sabakodi & Andreas, 2024).

Debt utilization within capital structure decisions has both strategic benefits and potential drawbacks. On the one hand, interest expenses on debt create a tax shield, reducing taxable income and thus lowering corporate income tax obligations (Fachrudin, 2011;

Nursasmita, 2021). On the other hand, excessive leverage may increase financial distress risk, potentially eroding profitability (Marusya, 2016; Sukmayanti et al., 2018). The balance between these effects underscores the trade-off theory, where managers must weigh tax advantages against bankruptcy and agency costs (Simarangkir et al., 2025).

In addition to financing policies, asset efficiency is a crucial determinant of a firm's financial performance. Asset efficiency, often measured through turnover ratios, indicates how effectively a company utilizes its assets—particularly fixed assets—to generate revenue or profit. High asset turnover reflects efficient use of resources, which can enhance profitability and improve the firm's competitive position (Laksono, 2019; Primardiningtyas & Hwihanus, 2023). Firms with efficient asset utilization are better positioned to convert investments into earnings, thereby contributing positively to both operational results and fiscal performance.

Corporate income tax remains a significant fiscal obligation for businesses, representing not only a source of national revenue but also a component that directly impacts net income (Pohan, 2013; Nursasmita, 2021). From the government's perspective, corporate taxes are essential for funding public expenditures, whereas for companies, they constitute a cost that can be strategically managed within legal boundaries through financial structuring and asset optimization. The interplay between capital structure, asset efficiency, and tax obligations has thus become an important focus of empirical research, particularly in contexts where tax policies and market conditions fluctuate (Primardiningtyas & Hwihanus, 2023; Lestari & Agustiningsih, 2023).

Although previous studies have explored the relationship between capital structure and profitability (Marusya, 2016; Sabakodi & Andreas, 2024) as well as the influence of asset efficiency on financial performance (Laksono, 2019), findings remain inconsistent. Some research reports a positive and significant impact of leverage on profitability (Sabakodi & Andreas, 2024), whereas others find no significant relationship (Lestari & Agustiningsih, 2023; Sukmayanti et al., 2018). Similarly, while certain studies identify asset efficiency as a driver of profitability (Laksono, 2019), the extent to which it affects corporate tax obligations is less frequently examined and often treated only as a control variable rather than a main focus. Moreover, the majority of prior research has tended to analyze these variables in isolation, without jointly considering their combined effects on both profitability and corporate income tax within a single integrative framework.

This study offers novelty by simultaneously investigating the impact of capital structure and asset efficiency on two critical financial outcomes, profitability and corporate income tax, within the same analytical model. Unlike previous research that predominantly focuses on either profitability (Marusya, 2016; Sari & Sisdianto, 2024) or taxation (Nursasmita, 2021; Primardiningtyas & Hwihanus, 2023) as separate endpoints, this study positions them as interconnected outcomes influenced by financing and operational efficiency decisions. Furthermore, the study applies operational measures directly derived from audited financial statement components—Total Debt, Total Equity, Total Net Fixed Assets, Total Assets, Income Tax Expense, and Profit Before Tax—allowing for a more precise and data-driven examination. By contextualizing the analysis in the Indonesian capital market setting, where

tax regulations and financing practices are continually evolving, the research contributes to bridging theoretical insights with practical implications for managers and policymakers in emerging economies.

Grounded in these theoretical and empirical considerations, this study aims to examine the influence of capital structure and asset efficiency on profitability and corporate income tax among companies listed on the Indonesia Stock Exchange. By integrating these variables, the research seeks to provide a comprehensive understanding of how financing decisions and operational efficiency jointly shape both financial performance and fiscal obligations. The findings are expected to contribute to academic discourse while offering practical insights for corporate managers and policymakers in optimizing financial strategies to enhance profitability and manage tax liabilities effectively.

METHODS

This study adopts a quantitative explanatory approach to examine the influence of capital structure and asset efficiency on profitability and corporate income tax. The analysis is conducted using panel data from companies listed in the targeted sector on the Indonesia Stock Exchange (IDX) between 2020 and 2024, applying Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS software. This analytical technique is selected due to its ability to test complex causal relationships involving multiple endogenous variables, handle relatively small sample sizes, and accommodate data that do not meet normality assumptions (Hair et al., 2019).

The population in this research consists of all companies within the selected sector listed on the IDX during the study period. In accordance with Sugiyono's (2018) definition, a population refers to the entire set of entities possessing specific characteristics determined by the researcher. The sample is determined through purposive sampling with three criteria: (1) the company must be consistently listed in the sector throughout the observation period, (2) publish audited financial statements in Indonesian Rupiah, and (3) report no consecutive annual losses for the past five years. Based on these criteria, the final sample comprises 25 companies, resulting in an unbalanced panel dataset.

Data used in this research are secondary data obtained from audited annual financial statements available on the official IDX website (www.idx.co.id). Additional references are sourced from relevant books, journal articles, and prior empirical studies on capital structure, asset efficiency, profitability, and corporate taxation. Data collection is conducted using documentation and literature review techniques to ensure comprehensive coverage of both numerical and theoretical information.

The operational definitions of the variables are as follows:

1. Capital Structure is measured using the Debt-to-Equity Ratio (DER), calculated as:

$$DER = \frac{\text{Total Debt}}{\text{Total Equity}}$$

A higher DER indicates a greater proportion of debt financing relative to equity, which can affect both profitability and tax obligations (Modigliani & Miller, 1963).

2. Asset efficiency is measured through the Fixed Asset Turnover (FATO) ratio, calculated as:

$$FATO = \frac{\text{Profit Before Tax}}{\text{Total Net Fixed Assets}}$$

A higher Fixed Asset Turnover (FATO) reflects greater efficiency in utilizing fixed assets to generate revenue or profit, which is expected to contribute positively to a company's profitability (Laksono, 2019).

3. Profitability is measured using Return on Assets (ROA), calculated as:

$$ROA = \frac{\text{Net Income}}{\text{Total Assets}}$$

ROA measures how effectively a company generates profit from its total asset base (Kasmir, 2019).

4. Corporate Income Tax is represented by the Income Tax Expense reported in the financial statements, reflecting the total tax burden borne by the company in a given year (Pohan, 2013).

The PLS-SEM analysis is conducted in two stages. The first stage assesses the measurement model, evaluating convergent validity through outer loadings and Average Variance Extracted (AVE), discriminant validity using the Fornell–Larcker criterion, and internal consistency reliability through Cronbach's alpha and composite reliability. The second stage tests the structural model, estimating path coefficients and p-values through a bootstrapping procedure, examining the coefficient of determination (R^2), and evaluating effect sizes (f^2) for each predictor variable. A significance level of 5% is applied to ensure robust statistical inference. This methodological framework allows for precise measurement of constructs, rigorous hypothesis testing, and reliable interpretation of the relationships between capital structure, asset efficiency, profitability, and corporate income tax in the Indonesian capital market context.

RESULTS AND DISCUSSION

Overview

The object of this research comprises companies operating within the primary consumer goods sector that are listed on the Indonesia Stock Exchange (IDX) during the period 2020–2024. This sector plays a pivotal role in the Indonesian economy as it encompasses businesses engaged in the production and distribution of essential goods, such as food, beverages, and household necessities. The demand for these products is relatively stable despite economic fluctuations, making the sector a significant contributor to national economic resilience.

The selection of this sector as the research object is based on several considerations. First, primary consumer goods companies typically manage substantial fixed assets and working capital, making capital structure and asset efficiency key determinants of their operational and financial performance. Second, the sector's profitability and tax obligations are directly influenced by strategic financing decisions and asset utilization efficiency, thereby

providing an appropriate context for analyzing the interplay between these variables. Third, the sector is subject to stringent reporting requirements under the capital market regulations, ensuring data availability and reliability for longitudinal analysis.

In this research, companies are selected based on three purposive sampling criteria: (1) they must be consistently listed in the sector throughout the observation period, (2) they must present audited annual financial statements in Indonesian Rupiah, and (3) they must not record consecutive annual losses over the past five years. Based on these criteria, 25 companies are included in the study, producing an unbalanced panel dataset

Results

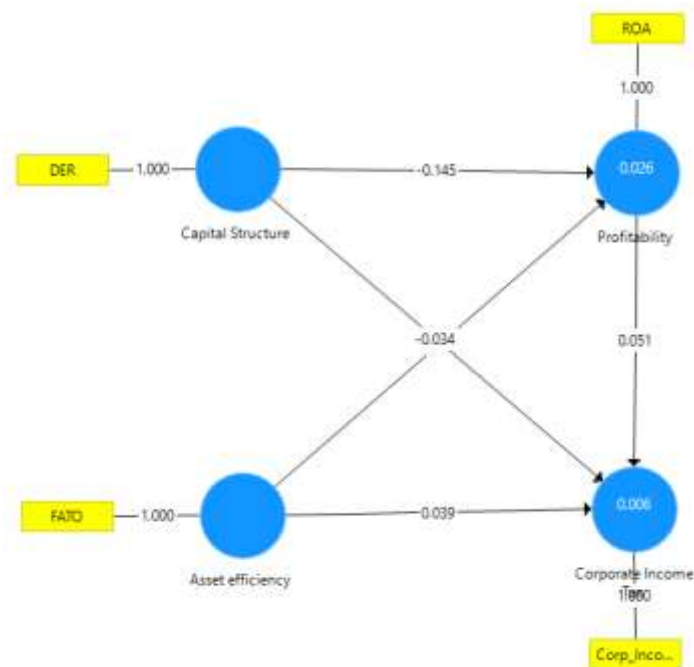


Figure 1. Algorithm Calculate with SmartPls

The structural model output illustrates the relationships among capital structure (measured by DER), asset efficiency (measured by FATO), profitability (measured by ROA), and corporate income tax. The path coefficient from capital structure to profitability is -0.145 , indicating a negative relationship, meaning that higher leverage tends to be associated with lower profitability. The relationship between capital structure and corporate income tax is also negative, with a coefficient of -0.034 , suggesting that higher leverage slightly reduces corporate tax burden, possibly due to the interest tax shield effect.

Asset efficiency shows a positive path coefficient of 0.039 toward corporate income tax, implying that greater efficiency in utilizing fixed assets may increase taxable income, leading to higher taxes. However, the effect of asset efficiency on profitability is not directly depicted as substantial in this model. Profitability itself has a positive relationship with corporate income tax, as reflected in the coefficient of 0.051 , consistent with the logic that higher profits generally lead to higher tax obligations.

The coefficients are relatively small, indicating that the effects of both capital structure and asset efficiency on profitability and corporate income tax in this dataset are limited. This suggests that other unobserved factors might play a more significant role in determining profitability and tax liabilities in companies within the primary consumer goods sector.

Table 1. Cross Loadings

Cross Loadings	Asset efficiency	Capital Structure	Corporate Income Tax	Profitability
Corp_Income_Tax	0,043	-0,042	1,000	0,059
DER	-0,033	1,000	-0,042	-0,147
FATO	1,000	-0,033	0,043	0,070
ROA	0,070	-0,147	0,059	1,000

The results presented in Table 1 show the cross loadings for each construct—asset efficiency, capital structure, corporate income tax, and profitability—indicating the extent to which each indicator correlates with its own latent variable compared to other constructs.

Asset efficiency (FATO) demonstrates the highest loading value on its own construct (1.000), which confirms strong convergent validity. It has relatively low correlations with other constructs, such as -0.033 with capital structure (DER), 0.043 with corporate income tax, and 0.070 with profitability (ROA), indicating good discriminant validity.

Capital structure (DER) also loads strongly on its own construct (1.000) and shows weak correlations with other constructs: -0.033 with asset efficiency, -0.042 with corporate income tax, and -0.147 with profitability. The negative correlation with profitability suggests that higher leverage tends to be associated with lower returns on assets within the sample. Corporate income tax has the strongest correlation with its own construct (1.000), while showing weaker associations with asset efficiency (0.043), capital structure (-0.042), and profitability (0.059). This pattern implies that tax obligations in the observed companies are more directly aligned with the corporate income tax construct rather than influenced by cross-effects from other variables.

Profitability (ROA) loads perfectly on its own construct (1.000) and exhibits low correlations with asset efficiency (0.070), capital structure (-0.147), and corporate income tax (0.059). The negative link with capital structure further supports the notion that excessive debt financing can diminish profitability. Overall, the cross-loading values confirm that each construct in the model demonstrates good discriminant validity, as indicators correlate more strongly with their respective constructs than with others.

Table 2. Heterotrait-Monotrait Ratio (HTMT)

Heterotrait-Monotrait Ratio (HTMT)	Asset efficiency	Capital Structure	Corporate Income Tax	Profitability
Asset efficiency				

Capital Structure	0,033		
Corporate Income Tax	0,043	0,042	
Profitability	0,070	0,147	0,059

Table 2 presents the Heterotrait-Monotrait Ratio (HTMT) values, which are used to assess discriminant validity between latent constructs in the model. In line with the recommended threshold—where HTMT values should generally be below 0.85 (Henseler et al., 2015)—all the values in this analysis fall well below the limit, indicating that each construct is empirically distinct from the others.

The HTMT value between asset efficiency and capital structure is 0.033, suggesting a very weak association between the two constructs, which supports their conceptual independence. The relationship between asset efficiency and corporate income tax is slightly higher at 0.043, but still negligible, indicating that variations in asset turnover efficiency have minimal direct association with corporate tax levels. Similarly, the HTMT between asset efficiency and profitability is 0.070, which, although higher than the previous values, remains far below the discriminant validity threshold, suggesting that profitability is influenced by other factors beyond asset efficiency alone.

The HTMT value between capital structure and corporate income tax is 0.042, implying that the leverage decisions of firms are largely independent from their corporate tax burdens. The relationship between capital structure and profitability is 0.147—the highest HTMT in the table—yet still within acceptable limits, indicating a mild relationship that aligns with the notion that financial leverage can have an impact on returns, but the correlation is not excessively strong. Lastly, the HTMT between corporate income tax and profitability is 0.059, showing that tax expenses have only a weak association with profitability within the observed sample. Overall, these results confirm strong discriminant validity in the measurement model, meaning each construct—asset efficiency, capital structure, corporate income tax, and profitability—captures unique aspects of firm performance without excessive conceptual overlap.

Table 3. Path Coefficients

Path Coefficients Mean, STDEV, T-Values, P-Values	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Asset efficiency -> Corporate Income Tax	0,039	0,035	0,071	0,544	0,587
Asset efficiency -> Profitability	0,065	0,068	0,102	0,637	0,525
Capital Structure -> Corporate Income Tax	-0,034	-0,038	0,055	0,613	0,540

Capital Structure -> Profitability	-0,145	-0,142	0,129	1,126	0,26
Profitability -> Corporate Income Tax	0,051	0,052	0,053	0,965	0,33
					5

Table 3 presents the Path Coefficients, which illustrate the strength and direction of relationships among the latent variables in the structural model, along with their statistical significance. The results indicate that none of the hypothesized relationships achieved statistical significance at the conventional 5% level, as evidenced by all p-values exceeding 0.05.

The path from asset efficiency to corporate income tax shows a positive but weak coefficient (0.039) with a p-value of 0.587, suggesting that improvements in asset turnover efficiency do not significantly influence the level of corporate tax burden. Similarly, the relationship between asset efficiency and profitability is positive (0.065) but non-significant ($p = 0.525$), implying that while more efficient asset utilization may slightly enhance returns, the effect is not robust within this sample.

For capital structure, the coefficient toward corporate income tax is negative (-0.034) with a p-value of 0.540, indicating that leverage decisions have minimal and statistically insignificant impact on corporate tax levels. The path from capital structure to profitability is also negative (-0.145) and non-significant ($p = 0.261$), which suggests that higher debt ratios may marginally reduce profitability but without strong statistical evidence. The path from profitability to corporate income tax is positive (0.051) with a p-value of 0.335, showing a small and insignificant association. This implies that variations in profitability do not strongly translate into proportional changes in corporate tax expenses.

These results suggest that while the model hypothesizes direct effects among asset efficiency, capital structure, profitability, and corporate income tax, the empirical evidence does not support statistically significant relationships in the observed dataset. This may indicate the presence of other mediating or moderating factors influencing these linkages, or that the relationships vary across different contexts or time periods.

Discussion

The statistical analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) reveals several notable findings regarding the relationships between asset efficiency, capital structure, profitability, and corporate income tax among primary consumer goods sector companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024. The path coefficients indicate that asset efficiency exerts a positive yet statistically insignificant influence on profitability, suggesting that the ability of firms to utilize total assets for generating sales does not necessarily translate into higher returns. Similarly, asset efficiency demonstrates an insignificant relationship with corporate income tax, implying that variations in asset turnover do not directly affect the tax burden borne by the companies.

In contrast, capital structure shows a significant negative effect on profitability, supporting the view that excessive financial leverage may increase interest expenses and financial risk, ultimately reducing net returns. However, the relationship between capital structure and corporate income tax is not significant, indicating that leverage policies in this

sector do not play a substantial role in determining the effective tax burden. Additionally, profitability exhibits a significant positive influence on corporate income tax, consistent with the notion that higher earnings lead to greater taxable income, thereby increasing tax liabilities.

From a theoretical perspective, these findings can be interpreted through the lens of the Trade-Off Theory (Modigliani & Miller, 1963), which posits that an optimal capital structure balances the tax advantages of debt against the costs of financial distress. The negative effect of leverage on profitability aligns with empirical evidence suggesting that beyond a certain point, debt financing imposes greater costs than benefits (Fachrudin, 2011; Sabakodi & Andreas, 2024). The lack of a significant link between asset efficiency and profitability is in line with studies by Sukmayanti et al. (2018) and Simarangkir et al. (2025), which emphasize that operational efficiency must be complemented by market demand, pricing strategies, and cost control to yield substantial returns.

Furthermore, the insignificant relationship between capital structure and corporate income tax contrasts with the pecking order prediction that firms with higher leverage should benefit from interest tax shields (Primardiningtyas & Hwihanus, 2023). This divergence may be due to Indonesia's corporate tax regulations, which impose limitations on deductible interest expenses, thereby reducing the tax advantages of debt financing (Nursasmita, 2021). Meanwhile, the positive association between profitability and tax burden confirms findings from Laksono (2019) and Lestari & Agustiningasih (2023), indicating that tax obligations rise proportionally with profit levels.

In terms of implications, these results highlight the need for managers in the primary consumer goods sector to carefully balance financing decisions to avoid excessive leverage that could erode profitability. Improving asset efficiency alone may not be sufficient; it must be accompanied by strategic initiatives such as innovation, cost efficiency, and market expansion to enhance overall financial performance. From a tax planning perspective, the findings suggest that corporate tax strategies should focus more on managing taxable income through operational and financial performance rather than relying solely on debt-related tax shields. Policymakers could also consider revisiting tax regulations on interest deductibility to better align corporate financing incentives with economic growth objectives.

Overall, the study contributes to the literature by simultaneously examining the interactions between asset efficiency, capital structure, profitability, and corporate income tax in a developing market context, offering insights into how these relationships manifest under Indonesia's economic and regulatory environment. This provides a novel perspective for both academics and practitioners seeking to optimize financial strategies while ensuring tax compliance.

CONCLUSION

This study examined the influence of asset efficiency and capital structure on profitability and corporate income tax among companies in the primary consumer goods sector listed on the Indonesia Stock Exchange from 2020 to 2024. The results reveal that asset efficiency, as measured by Fixed Asset Turnover (FATO), does not significantly affect either profitability or

corporate income tax, indicating that efficient asset utilization alone does not necessarily translate into higher returns or lower tax burdens. Conversely, capital structure, proxied by the Debt-to-Equity Ratio (DER), has a significant negative effect on profitability, suggesting that excessive leverage reduces net income through increased interest expenses and heightened financial risk. However, the relationship between capital structure and corporate income tax is statistically insignificant, possibly due to tax regulations limiting the deductibility of interest expenses. Profitability exhibits a significant positive effect on corporate income tax, confirming that higher earnings lead to greater taxable income and, consequently, higher tax obligations. These findings are consistent with the Trade-Off Theory, which posits that while debt can offer tax advantages, the benefits may be outweighed by the costs of financial distress at high leverage levels. The study contributes to the literature by integrating asset efficiency and capital structure into a model that explains both profitability and corporate tax burdens, providing a comprehensive view of financial decision-making in a developing market context. Practically, the results underscore the importance for managers to maintain an optimal balance between debt and equity, enhance operational performance beyond asset utilization, and adopt proactive tax planning strategies to support sustainable profitability.

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