

The Effect of Fixed Asset Intensity and Sales Growth on Tax Avoidance With Leverage as a Moderating Variable Manufacturing

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The purpose of this study was to analyze the effect of fixed asset intensity and sales growth on tax avoidance with leverage as a moderating variable in The manufacturing companies listed on the IDX for the 2021-2023 period. population used in the study were all industrial goods sub-sector companies. The sample in this study used purposive sampling technique involving 12 companies with certain criteria.

The research data collection technique uses secondary data. Data analysis in the study used a quantitative approach with the analysis techniques used were descriptive statistical analysis, f test, t test, and Moderated Regression Analysis (MRA). The data in this study were processed and analyzed using the SPSS 30 statistical program. The results of data analysis of this study indicate that: partially fixed asset intensity and sales growth have an effect but not significant on tax avoidance, while leverage moderation on the relationship between fixed asset intensity on tax avoidance and leverage moderation on the relationship between sales growth on tax avoidance has a significant effect. Simultaneously, fixed asset intensity and sales growth variables simultaneously or together affect tax avoidance with leverage as moderation.

1. Introduction

Tax avoidance has become an increasingly complex and challenging issue for tax authorities around the world. This phenomenon is of particular concern in Indonesia, given the crucial role of taxes in supporting national development. Understanding the factors that influence tax avoidance behavior is essential for developing effective policies and regulations to ensure optimal tax revenue collection.

1.1 Background

Taxes play a very important role in the development and economy in Indonesia. As the main source of state revenue, taxes account for 78% of total revenue in the state budget (APBN) [1]. Based on data from the Ministry of Finance of the Republic of Indonesia, the realization of tax revenue in 2023 reached Rp1,869.2 trillion or 108.8% of the state budget target [2]. Although

this represents a significant increase of 8.9% compared to the previous year, Indonesia's tax ratio is still relatively low.

Indonesia's TR in 2023 is 10.21 percent and has only moved in the range of 9-12 percent during the last 5 years of government. According to the IMF (International Monetary Fund), ideally a country's TR is 15 percent and the average TR of developed countries is above 30 percent. When compared to ASEAN countries, Indonesia's TR is also the lowest. This low tax ratio indicates the potential for tax revenue that has not been optimized.

1.2 Problem Statement

Based on an international report, the Tax Justice Network in its publication "The State of Tax in Justice 2020: Tax Justice in the time of COVID-19" revealed that Indonesia suffered a loss of US\$ 4.86 billion per year or equivalent to IDR 68.7 due to tax evasion. It was also stated that Indonesia's position in the case of tax evasion by corporate and individual taxpayers is ranked fourth Asia after China, India and Japan [3]. This figure shows the amount of potential state revenue lost and emphasizes the urgency to address the problem of tax evasion more systematically.

1.3 Objectives and Scope

This study aims to analyze the effect of fixed asset intensity and sales growth on tax avoidance with leverage as a moderating variable in manufacturing companies listed on the IDX for the 2021-2023 period. The scope of this research is limited to industrial goods sub-sector companies that meet specific criteria including complete financial reporting, profitability during the study period, and normal Effective Tax Rate values.

2. Literature Review

This section provides a comprehensive review of existing literature on tax avoidance, its determinants, and the theoretical framework underlying this research.

2.1 Related Work

2.1.1. Agency Theory

Agency theory developed by Jensen and Meckling (1976) explains the agency relationship as a contract in which one or more people (principals) involve other people (agents) to perform services on their behalf which involves delegating some decision-making authority to the agent. The difference in thinking between managers and shareholders in controlling the company causes management to act not in accordance with the wishes of the principal, giving rise to agency conflicts [4].

2.1.2. Tax Avoidance

Tax avoidance is a taxpayer's effort to reduce, avoid, minimize or ease the tax burden by maximizing applicable rules that are legal and carried out in a manner permitted by tax laws and

regulations [4]. Avoidance activities result in many risks, but this risk is usually considered not worth what the company gets, namely the low amount of tax payable which affects the amount of company profits.

2.1.3. Fixed Asset Intensity

Fixed asset intensity is the ratio of total fixed assets to total company assets referred to as fixed asset intensity. Buildings, workshops, equipment, machinery, and property are examples of fixed assets [5]. With a high level of fixed assets, managers can maximize depreciation expense, time the purchase and sale of fixed assets, and choose favorable depreciation techniques for tax avoidance.

2.1.4. Sales Growth

Sales growth is the increase in the number of sales from year to year or the comparison between the increase in the number of sales in the current year compared to the number of sales in the previous year [6]. With increasing sales growth, it allows the company further increase its operating capacity so that it can increase company value.

2.1.5 Leverage

Leverage is a proportion or comparison in determining the fulfillment of the company's spending needs, whether it is through debt, equity, or issuing shares [7]. Leverage measurement is determined by the percentage of the company's total debt compared to its total assets, known as the Debt-to-Asset Ratio (DAR) [5].

2.2 *Research Gap*

Previous research has shown mixed results regarding the relationship between fixed asset intensity, sales growth, and tax avoidance. Some studies found significant positive effects, while others found no significant relationship. Additionally, the moderating role of leverage in these relationships has not been extensively studied in the Indonesian context, particularly in the industrial goods sector. This study aims to fill this gap by examining these relationships with leverage as a moderating variable in Indonesian manufacturing companies.

3. Methodology

This research employs a quantitative approach to examine the relationships between variables and test the proposed hypotheses.

3.1 *Data Collection*

The method used in this research is a quantitative method. The type of data used in this study is quantitative data in the form of numbers or statistics. The data source used in this study is secondary data, namely the financial statements of manufacturing companies in the industrial

goods sector listed on the IDX for the period 2021 - 2023. The data is sourced from the representative office of the Indonesia Stock Exchange (www.idx.co.id).

The sampling technique in this study was carried out using purposive sampling technique, with several criteria:

- a) Industrial Goods sector manufacturing companies listed on the Indonesia Stock Exchange during 2021-2023
- b) Companies that publish and publish their annual reports and financial reports in full during the period 2021-2023
- c) Companies that do not experience losses during 2021 - 2023, because companies that experience losses are not required to pay taxes so they are not relevant to this research
- d) Companies that have income tax expense
- e) Companies that have a normal ETR (Effective Tax Rate) value, namely the range between 0 -1 or 0 -100% (to avoid outlier data)
- f) Companies that present financial statements in rupiah units

3.2 Analysis Techniques

In this study, the data analysis method used multiple linear regression analysis which was processed using the SPSS 30 (Statistical Package for the Social Science) program. The data analysis techniques used in this study are:

1. Descriptive Statistical Analysis
2. MRA Test (Moderated Regression Analysis)
3. Simultaneous test (F)
4. Partial test (T)
5. Multiple determination coefficient test (R^2)

3.3 Validation

The research employs several validation methods to ensure reliability and validity of results, including normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests as prerequisites for regression analysis

4. Results and Discussion

This section presents the empirical findings and their interpretation based on the statistical analysis conducted.

4.1 Key Findings

4.1.1. Descriptive Statistical Test

Based on the descriptive statistical analysis, tax avoidance (Y) of industrial goods sub-sector companies listed on the IDX in 2021-2024 has an average value (mean) of 0.2168 and the standard deviation is 0.04149. The fixed asset intensity value (X1) has an average value

(mean) of 0.5158 and the standard deviation is 0.12286. The sales growth value (X2) has an average value (mean) of 0.1652 and the standard deviation is 0.38687. The leverage value (Z) has an average value (mean) of 0.3446 and the standard deviation is 0.18455.

4.1.2. MRA Test Results

The moderated regression analysis results show:

1. Fixed asset intensity has an effect but is not significant on tax avoidance ($t = 1.484 < 2.036$, $\text{sig} = 0.148 > 0.05$)
2. Sales growth has an effect but is not significant on tax avoidance ($t = 1.611 < 2.036$, $\text{sig} = 0.118 > 0.05$)
3. Leverage has a partially significant positive effect on tax avoidance ($\text{sig} = 0.034 < 0.05$)
4. Leverage moderates the effect of fixed asset intensity on tax avoidance ($\text{sig} = 0.031 < 0.05$)
5. Leverage moderates the effect of sales growth on tax avoidance ($\text{sig} = 0.016 < 0.05$)

4.1.3. F Test Results

The simultaneous test shows that leverage has a significant effect in moderating the effect of fixed asset intensity and sales growth on tax avoidance ($F = 2.829$, $\text{sig} = 0.033 < 0.05$).

4.1.4. Coefficient of Determination

The R Square value is 0.320, indicating that 32% of the variation in tax avoidance is explained by the independent variables with leverage as moderation, while 68% is explained by other variables not included in this research model.

4.2 Interpretation of Results

H1: Fixed Asset Intensity and Tax Avoidance

The results show that fixed asset intensity partially affects but is not significant to tax avoidance. This finding suggests that the proportion of fixed assets owned by companies does not directly influence tax avoidance practices. The insignificance may be due to stricter supervision from tax authorities regarding fixed asset intensity in industrial goods companies, causing companies to be more careful and comply with tax provisions.

H2: Sales Growth and Tax Avoidance

Sales growth affects but is not significant to tax avoidance. This indicates that high or low sales growth does not significantly affect tax avoidance practices. Companies in the industrial goods subsector generally have high production cost structures, so even with sales increases, profits may not necessarily increase proportionally.

H3: Leverage Moderating Fixed Asset Intensity

Leverage can strengthen the influence of fixed asset intensity on tax avoidance. This shows that companies with high leverage tend to have greater ability to avoid taxes through fixed asset utilization, particularly through depreciation expenses.

H4: Leverage Moderating Sales Growth

Leverage can strengthen the effect of sales growth on tax avoidance. Companies with high leverage levels tend to have greater ability to avoid taxes through sales growth optimization.

5. Discussion

5.1 Comparison with Prior Research

The results regarding fixed asset intensity align with research by Husada (2024) [8], Lukito & Oktaviani [9], and Mustikasari et al. [10], which also found that fixed asset intensity has an effect but is not significant on tax avoidance. However, these findings contradict Alamsjah [11] who found a significant positive effect.

For sales growth, the results are consistent with Suyanto & Kurniawati [12], Kurniawan & Andoko [13] and Suteja [14] who found no significant effect, but differ from Sisi & Djuharni [15] who found significant positive influence.

The moderating effects of leverage are consistent with Husada [8], Winarto & Oktaria [16], and Trisianto & Oktaviani [17], strengthening the theoretical argument about leverage's role in corporate tax strategies.

5.2 Limitations

Several limitations may have affected this research:

1. Limited sample size (12 companies over 3 years)
2. Focus only on industrial goods sub-sector
3. Use of secondary data only
4. Limited time period (2021-2023)
5. Other variables not included may influence tax avoidance

5.3 Future Research

Future research could consider:

1. Expanding the sample to include other manufacturing sectors
2. Incorporating additional variables such as corporate governance measures
3. Using longer time series data
4. Employing mixed-methods approach combining quantitative and qualitative analysis
5. Investigating the role of regulatory changes on tax avoidance behavior

6. Conclusion

Based on the research results, several conclusions can be drawn. First, fixed asset intensity partially affects but is not significant to tax avoidance, indicating that the proportion of fixed assets does not directly influence tax avoidance practices. Second, sales growth partially affects but is not

significant to tax avoidance, suggesting that sales growth rate has no direct influence on tax avoidance practices.

Third, leverage can partially strengthen the influence of fixed asset intensity on tax avoidance, allowing companies to utilize depreciation expense for tax optimization. Fourth, leverage can partially strengthen the effect of sales growth on tax avoidance, providing companies with higher leverage greater ability to avoid taxes through sales growth strategies.

The findings contribute to the understanding of tax avoidance determinants in Indonesian manufacturing companies and provide insights for policymakers and corporate managers in developing appropriate strategies for tax compliance and optimization.

7. Recommendation

Based on the research findings, several recommendations can be made:

Based on the conclusions obtained in the study, the suggestions can be given by researchers. First, future researchers should add other variables such as inventory intensity and asset revaluation. Second, Industrial goods companies should consider managing leverage more optimally, given its significant role in moderating tax avoidance practices. Third, for investors, this study suggests the need for in-depth analysis of the company's financial performance.

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