



The Effect of Leverage, Sales Growth, and Capital Intensity on Tax Avoidance

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ARTICLE INFO	ABSTRACT
<p>Keywords Leverage, Sales Growth, Capital Intensity, Tax Avoidance</p> <p>Article history Received: 9 March 2026 Revised: 26 April 2026 Accepted: 30 May 2026 Available online: 30 June 2026</p> <p>To cite in APA style Sholehah, F. A., Yulianto, K. I., & Rahmadi, Z. T. (2026). The effect of leverage, sales growth, and capital intensity on tax avoidance. <i>Qualéum: Journal of Quality in Humanistic Economics and Organizational Dynamics</i>, 1(1), 58-65.</p>	<p>This study seeks to determine the influence of leverage, sales growth, and capital intensity on tax avoidance. This study focused on the food and beverage manufacturing businesses listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023. The researchers selected fourteen companies for the study using a purposive selection method. The study uses multiple linear regression analysis with SPSS Version 26 as the data analysis technique. According to the findings of this study, leverage has a considerable effect on tax avoidance. In contrast, it has been found that sales growth is a significant factor in reducing tax avoidance, while capital intensity has been found to have little impact. Think about the overall impact of capital intensity, sales growth, and leverage on tax avoidance.</p>

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Introduction

As a developing nation, Indonesia depends largely on taxes as its main source of government income. Maintaining economic stability, guaranteeing the availability of public amenities, and funding national development are all heavily dependent on taxes.

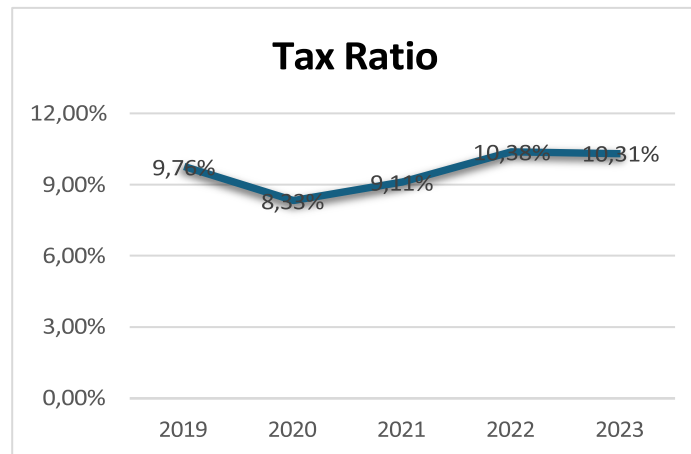


Figure 1. Indonesia's Tax Ratio

Source: www.kemenkeu.go.id

Information from the Ministry of Finance indicates a rise in state income and tax collections from 2019 to 2023, even though there was a drop in 2020 because of the pandemic. However, Indonesia's tax revenues have not yet reached their maximum potential, reflected in the low tax ratio, which in the last five years (2019– 2023) has not been able to reach 11%, with a peak of 10,38% in 2022. This figure is relatively low compared to the global average of 15,06% according to the World Bank, even though Indonesia's tax potential is large in line with its large population and continued growth in business activity (Setiawan & Sunarmi, 2024).

State revenue from taxes is crucial for financing development and economic growth, but tax avoidance practices by companies and individual taxpayers remain a major obstacle to tax optimization. Differing interests between the government, which seeks to maximize revenue, and companies, which view taxes as a burden, lead to non-compliance, as explained in agency theory (Suranta et al., 2021). In a corporate context, tax avoidance can be considered a legitimate strategy for reducing tax liabilities by exploiting legal loopholes. However, it still has a negative impact on state revenues. The assertion is supported by the findings of a report published by the Tax Justice Network, Indonesia loses approximately Rp68.7 trillion in tax revenue annually due to this practice, which is largely carried out by multinational companies through profit-shifting strategies to countries with low tax rates (Amelia, 2023).

Indonesia's food and drink production industry is one of the biggest. It also brings in a lot of tax money. But many companies in this industry do not pay the full amount of tax they should. For example, PT Indofood Sukses Makmur Tbk is suspected of evading Rp1.3 billion in taxes by transferring assets and business activities to subsidiaries. PT Unilever Indonesia Tbk (Nestle) also reduced its tax burden by up to Rp800 billion by utilizing transfer pricing. Meanwhile, it is believed that PT Coca-Cola Indonesia evaded paying Rp49. 24 billion in taxes between 2002 and 2006 by raising marketing costs, which in turn decreased taxable income. These instances show that tax evasion strategies that hurt state income are still widely used (Febriyanti, 2022).

Tax avoidance is influenced by a variety of factors, including capital intensity, leverage, and sales growth. The term leverage refers to the amount of debt a firm uses to cover its costs. Companies are constantly looking for ways to lower their tax bills by lowering net sales, as interest on loans can serve as an opportunity to reduce tax burdens, and higher debt indicates a stronger tax avoidance effort. Furthermore, sales growth, while bringing greater profits, also increases tax liabilities, prompting companies to seek ways to reduce their tax obligations, for example by utilizing sales returns to reduce net sales. Lastly,

capital intensity, which indicates a company's investment in fixed assets, gives it the ability to deduct asset depreciation costs from its income, which lowers its tax burden and turns out to be a successful tax avoidance tactic.

Research Gap & Novelty

This research is based on earlier research that looked at how leverage, sales growth, and capital intensity affect tax avoidance. Research conducted by Prayoga & Sumantri (2023) and Pratiwi et al., (2021), found that leverage has a positive effect on tax avoidance. Research conducted by Susan & Amir Faizal (2023), Alfarasi & Muid (2022), and Pratiwi et al., (2021) found that sales growth has a positive effect on tax avoidance. Research conducted by Susan & Amir Faizal (2023), Ilyas Rahmadani et al., (2023), and Rasyid et al., (2023) states that capital intensity has a positive effect on tax avoidance.

In contrast, research conducted by Susan & Amir Faizal (2023), Lauren Angelina & Melatnebar (2024), Tobing et al., (2022), and Gumono (2021) indicate that leverage has no effect on tax avoidance. Research conducted by Prayoga & Sumantri, (2023), Firmansyah & Bahri (2023), and Rasyid et al., (2023) indicates that sales growth has no effect on tax avoidance. Research conducted by Dila Ismawati & Fauzan (2022), Firmansyah & Bahri (2023), and Dewi & Oktaviani (2021) indicates that capital intensity has no effect on tax avoidance.

Based on the above background, the researcher wants to conduct a study entitled "The Effect of Leverage, Sales Growth, and Capital Intensity on Tax Avoidance (Empirical Study on Food and Beverage Sub-Sector Manufacturing Companies Listed on the Indonesia Stock Exchange for the 2019-2023 Period)"

Method

The system used in this study is a way of measuring things in numbers. It works out how asset benefits, sales growth, company profits and depreciation expenses affect tax payments. The study's secondary data was obtained from the websites of the Indonesia Stock Exchange (IDX) (www.idx.go.id) and from each individual firm. "Food and beverage manufacturing companies listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023 were analyzed in the study."

The study's technique for measuring the independent and dependent variables is covered in detail in the next section.

Table 1. Variable Measurement

Variable	Definition	Indicator	Measuring Scale
<i>Tax Avoidance</i>	This is an activity that aims to reduce or minimize tax obligations by carefully exploiting loopholes in tax laws.	$CETR = \frac{\text{Tax Payment}}{\text{Profit before tax}}$	Ratio
<i>Leverage</i>	The ratio between current liabilities, long-term liabilities, and total equity is known. This ratio indicates what portion of total capital is derived from debt. Leverage reflects the sources of funds for operational activities and illustrates the risks the company faces.	$\text{Debt to Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Asset}}$	Ratio
<i>Sales Growth</i>	Sales growth indicates the year-over-year increase in sales. Increased growth allows a company to further expand its operating capacity.	$\text{Sales Growth} = \frac{\text{Net Sales } t - \text{Net Sales } (t - 1)}{\text{Net Sales } (t - 1)}$	Ratio
<i>Capital Intensity</i>	This indicates capital investment in the form of fixed assets used for operational activities efficiently. The higher the fixed assets a company has, the higher the potential for tax avoidance.	$\text{Capital Intensity} = \frac{\text{Total Fixed Assets}}{\text{Total Asset}}$	Ratio

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Source: Data processed by researchers, 2024

Results

For this study, the 2019–2023 annual reports and financial statements of food and beverage companies listed on the Indonesia Stock Exchange were used as secondary data sources. Specifically, the sample was selected based on characteristics relevant to the research objectives, a purposive sampling method. The following are the results of these criteria, with a sample size of 14 companies and a total of 70 data points processed.

Table 2. Sample Criteria

No	Criteria	Company
1	Manufacturing companies in the food and beverage sub-sector listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period	95
2	Manufacturing companies in the food and beverage sub-sector listed on the Indonesia Stock Exchange (IDX) consecutively during the 2019–2023 period	(70)
3	Companies that published financial reports during 2019–2023 in currencies other than the rupiah	(0)
4	Companies that did not experience losses during the 2019–2023 period	(7)
5	Outlier Data	(4)
Number of company samples		14
Number of years of research		5
Total data processed		70

Source: Data processed by researchers, 2025

Results of Multiple Linear Regression Analysis

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.225	.022		10.246	.000
	Leverage	.169	.062	.354	2.748	.008
	Sales Growth	-.192	.056	-.375	-3.431	.001
	Capital Intensity	-.085	.047	-.234	-1.791	.078

a. Dependent Variable: Tax Avoidance

Source: Data processed by researchers using SPSS v.26

The following linear regression equation can be derived from this table by utilizing the coefficient values shown in column B:

$$Y = 0,225 + 0,169 (X1) - 0,192 (X2) - 0,085 (X3) + \varepsilon$$

Information:

- Y = Tax Avoidance
- X1 = Leverage
- X2 = Sales Growth
- X3 = Capital Intensity

ε = error

Multiple linear regression results can therefore be understood as follows:

1. The constant (α) value of 0,225 indicates that the leverage, sales growth, and capital intensity variables are zero, thus the tax avoidance variable is 0,225.
2. The leverage regression coefficient (X1) of 0,169 indicates that for every one-unit increase in leverage, tax reductions will increase by 0,169, assuming that the other independent variables in the regression model remain constant.
3. The sales growth regression coefficient (X2) of -0,192 indicates that for every one-unit decrease in sales growth, tax avoidance will decrease by -0,192, assuming that the other independent variables in the regression model remain constant.
4. The capital intensity regression coefficient (X3) of -0,085 suggests that, holding the other independent variables in the regression model constant, tax avoidance would decrease by -0,085 for every one unit drop in capital intensity.

T-Test Results (Partial)

		Coefficients^a				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.225	.022		10.246	.000
	Leverage	.169	.062	.354	2.748	.008
	Sales Growth	-.192	.056	-.375	-3.431	.001
	Capital Intensity	-.085	.047	-.234	-1.791	.078

a. Dependent Variable: Tax Avoidance

Source: Data processed by researchers using SPSS v.26

The t-test (partial) shows the following results:

- a. The test results show a calculated t-value of 2,748 and a table t-value of 1,99656, meaning $2,748 > 1,99656$, with a significance level of 0,008, which is less than 0,05. This demonstrates that leverage is a useful and effective tool for avoiding taxes. **H1 is accepted.**
- b. The test results show a calculated t-value of -3,431 and a table t-value of 1,99656, meaning $3,431 > 1,99656$, with a significance level of 0,001, which is lower than 0,05. This indicates that increased sales have a significant negative impact on tax avoidance. **H2 is rejected.**
- c. The test results show a calculated t-value of -1,791 and a table t-value of 1,99656, meaning $1,791 < 1,99656$, with a significance level of 0,78, which is greater than 0,05. This shows that capital intensity and tax avoidance tactics are not well correlated. **H3 is rejected.**

Discussion

The effect of leverage on tax avoidance

According to the test findings, tax evasion is made easier by leverage. “The Debt to Asset Ratio (DAR)” a financial measure, is used to determine a company's leverage. This is because interest expenses resulting from increased debt financing can be used to reduce taxable income. Under Law No. 36 of 2008, a business entity can deduct interest on loans to

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unaffiliated third parties from its taxable income. The more debt an organization has, the greater the opportunity to avoid taxes. The utilisation of interest expenses has been demonstrated to serve two principal purposes. First, it has been shown that it increases the Debt to Asset Ratio. Second, it has been proven to help in taking advantage of existing tax incentives.

The results of this study are in accordance with research Prayoga & Sumantri (2023) and Pratiwi et al., (2021), which states that leverage has a significant positive effect on tax avoidance. However, this research contradicts the results of research conducted by Susan & Amir Faizal (2023), Lauren Angelina & Melatnebar (2024), Tobing et al., (2022), and Gumono (2021) states that leverage has no effect on tax avoidance.

The effect of sales growth on tax avoidance

The results of the study show that when a company's sales grow quickly, it tends to pay less tax. Companies that sell more tend to make more profit, so they can pay their taxes and follow tax rules. Also, companies that do well financially and have a good future tend to be more reputable and more careful about legal risks, including taxes. Additionally, tax avoidance tactics are discouraged by the higher likelihood of examination by tax and governmental officials. The impetus for this is the desire to preserve a favorable image and prevent potential repercussions of being audited by these agencies.

The results of this study are in accordance with research Tobing et al., (2022), Ilyas Rahmadani et al., (2023), and Amelia (2023) which states that sales growth has a significant negative effect on tax avoidance. Due to their desire to preserve their reputation and positive connections with stakeholders, including the government, firms with strong financial results often steer clear of tax avoidance tactics. However, research contradicts the findings of research conducted by Susan & Amir Faizal (2023), Alfarasi & Muid (2022), and Pratiwi et al., (2021) states that sales growth has a positive effect on tax avoidance.

The effect of capital intensity on tax avoidance

According to the study's results, the amount of fixed assets a business owns has little bearing on whether it chooses to pay taxes or not. Capital intensity can reduce the tax burden through depreciation of fixed assets, but companies prefer to use them to support operations to increase profits. Investments in fixed assets such as buildings, machinery, and equipment are made to support smooth operations and increase production capacity, ultimately maximizing corporate profits. Although the depreciation of fixed assets might lower taxes, businesses often employ them for operational needs and depreciate them in accordance with relevant accounting standards, rather than aggressively exploiting them to lower taxes. Additionally, firms tend to steer clear of the reputational and legal hazards associated with excessive tax evasion because it may jeopardize stakeholder ties and negatively impact the company's future worth.

The results of this study are in accordance with research Dila Ismawati & Fauzan (2022), Firmansyah & Bahri (2023), and Dewi & Oktaviani (2021) which states that capital intensity does not have a significant effect on tax avoidance. However, this research contradicts the results of research conducted by Susan & Amir Faizal (2023), Ilyas Rahmadani et al., (2023), and Rasyid et al., (2023) states that capital intensity has a positive effect on tax avoidance.

The effect of leverage, sales growth, and capital intensity on tax avoidance

Research testing shows that the variables “leverage (X1), sales growth (X2), and capital intensity (X3) have a significant influence on the variable tax avoidance (Y).” As a result, hypothesis 4 may be said to be supported by the evidence. In conclusion, the study's results suggest that these three independent factors work together to determine how the businesses in the sample engage in tax avoidance.

Conclusion and Recommendation

Based on the research results and discussion, the following conclusions can be drawn:

1. Leverage has a significant positive effect on tax avoidance, therefore H1 is accepted.
2. Sales growth has a significant negative effect on tax avoidance, therefore H2 is rejected.
3. Capital intensity does not have a significant effect on tax avoidance, therefore H3 is rejected.
4. Simultaneously, leverage, sales growth, and capital intensity have a significant effect on tax avoidance, therefore H4 is accepted.

Future researchers should look at more things and add them to the analysis. In the future, researchers should also look at other types of companies. This will help them understand how tax avoidance affects different companies. This could include finance, industry, and so on. What's more, if we look at this for longer, we'll get better results about what makes some businesses more successful than others.

Authors' Declaration

The authors made substantial contributions to the conception and design of the study. The authors took responsibility for data analysis, interpretation and discussion of results. The authors read and approved the final manuscript.

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