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The Effect of Financial Distress, Leverage, and Inventory Intensity on Tax Avoidance in Primary Consumer Goods Sector Companies

Hapsari Inawati Susanto¹, Yuniarwati Yuniarwati²

¹Universitas Tarumanagara, Jakarta, Indonesia, hapsari.125249261@stu.untar.ac.id

²Universitas Tarumanagara, Jakarta, Indonesia, yuniarwati@fe.untar.ac.id

Corresponding Author: hapsari.125249261@stu.untar.ac.id¹

Abstract: This study aims to analyze the effect of financial distress, leverage, and inventory intensity on tax avoidance, with the research object being primary consumer goods sector companies listed on the Indonesia Stock Exchange (IDX) during the period 2021–2024, totaling 132 companies. The sample was selected using a purposive sampling technique, resulting in 103 companies. The analysis method used is multiple linear regression with the EViews application. The results of the study indicate that financial distress and inventory intensity do not have a significant effect on tax avoidance, while leverage has a positive and significant effect on tax avoidance. Simultaneously, financial distress, leverage, and inventory intensity have an effect on tax avoidance; however, the influence is relatively weak. The implication of this study is that in evaluating a company, one should not only consider financial aspects but also its compliance with legal regulations.

Keyword: Consumer, Financial Distress, Inventory Intensity, Leverage, Tax Avoidance.

INTRODUCTION

Tax is the main pillar of state revenue as it contributes the largest proportion in the State Budget (APBN) compared to other sources of government income. Tax revenue is utilized to carry out government activities, including in crucial sectors such as infrastructure development, healthcare financing, education funding, public facility development, payment of civil servant salaries, and other activities related to state interests (Fananta & Mulya, 2023). Data from 2021 to 2025 shows that tax revenue targets consistently contribute more than 50% of total state revenue targets. This indicates that state revenue is highly dependent on tax income. Therefore, the government establishes various tax regulations to increase taxpayer compliance in fulfilling their tax obligations. However, from the taxpayers' perspective, interests differ. Paying taxes reduces business profits. This condition encourages management to arrange strategies in order to minimize tax payments without violating tax regulations. The difference in interests between the government and taxpayers makes tax avoidance an important issue to consider, as it can hinder the achievement of tax revenue realization.

Several public companies have been involved in tax avoidance cases, including PT Indofood Sukses Makmur Tbk, PT Toyota Manufacturing Indonesia, and PT Adaro Energy Tbk. The methods used vary. PT Indofood Sukses Makmur Tbk was allegedly involved in tax avoidance amounting to Rp 1.3 billion by transferring assets, liabilities, and operations to its subsidiary. PT Toyota Manufacturing Indonesia and PT Adaro Energy Tbk were allegedly involved in tax avoidance through transfer pricing with related parties to make company profits appear smaller, thereby reducing their tax burden (Hanif, Silalahi & Odiatma, 2023).

In consumption activities, there are certain goods that are indispensable and play a crucial role for consumers. These goods belong to the primary consumer goods category, such as food and medicine. Companies in this sector tend to have stable cash flows because even during economic downturns, people continue to need these products. However, companies may still experience financial difficulties, commonly referred to as financial distress. Companies experiencing financial distress tend to face difficulties in fulfilling their financial obligations, such as paying debts and taxes. Therefore, companies will attempt to manage earnings so that the tax burden they must bear becomes smaller. In addition, tax planning can also be carried out through leverage and inventory levels. This study aims to analyze the effect of financial distress, leverage, and inventory intensity on tax avoidance, with the research subject being companies in the primary consumer goods sector.

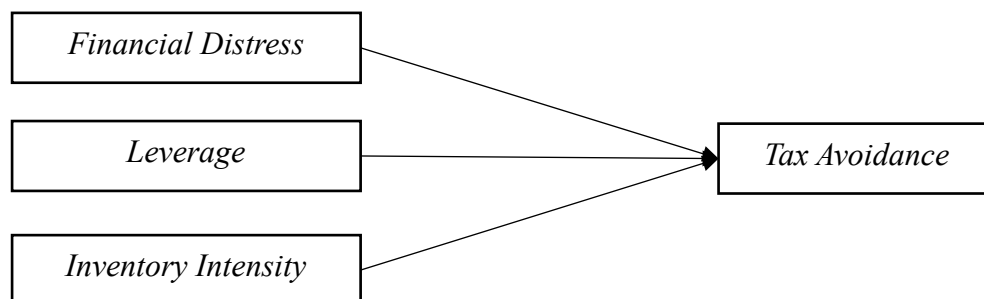
Hypothesis Development

Financial distress is a deterioration in a company’s financial condition, characterized by its inability to meet short-term obligations. Therefore, companies will attempt to reduce cash outflows, including tax expenses. H1: Financial distress has a positive effect on tax avoidance.

Leverage is a financial ratio that indicates the level of debt within a company’s capital structure. Based on Trade-Off Theory, companies can utilize debt to finance their operational activities up to a certain level where the costs incurred to fulfill obligations in the form of interest expenses are balanced with the benefits received in the form of tax reductions. Therefore, the higher the level of leverage, the greater the likelihood of tax avoidance behavior by the company. H2: Leverage has a positive effect on tax avoidance.

Inventory intensity reflects the amount of inventory held by a company as part of its assets. Maintaining inventory requires costs, such as storage expenses and potential losses due to damaged goods during storage. These costs are deductible expenses that reduce taxable income. As a result, the tax burden paid by the company becomes lower. The higher the inventory intensity, the greater the likelihood that the company engages in tax avoidance. H3: Inventory intensity has a positive effect on tax avoidance.

Based on the hypotheses that have been formulated, a research framework is developed as illustrated in Figure 1.



Source: Author's Own Processing
Figure 1. Research Framework

METHOD

This research employs a quantitative method using secondary data obtained from the Indonesia Stock Exchange (IDX) website for the period 2021–2024. The sample selection method used is purposive sampling, with criteria including companies in the primary consumer goods sector (non-cyclicals) that consistently publish their financial statements on the IDX website, have positive equity, and maintain inventory throughout the period 2021–2024. The total sample used in this study consists of 103 companies.

The operational variables and measurements used are as follows:

Table 1. Operational Variables and Measurements

Num	Variable	Source	Measurement	Scale
1	Financial Distress	Arini (2021)	G-Score = 1,65 (Working Capital : Total Asset) + 3,404 (EBIT : Total Asset) – 0,016 (Net Income : Total Asset) + 0,057	Ratio
2	Leverage	Supiyanto et al. (2023)	DER = Liability : Equity	Ratio
3	Inventory Intensity	Sari & Indrawan (2022)	INV = Total Stock : Total Asset	Ratio
4	Tax Avoidance	Wulandari & Stiawan (2023)	ETR = Income Tax Expense : Earnings Before Tax	Ratio

RESULTS AND DISCUSSION

Model Selection Test. The model selection test begins with the Chow Test. The Prob. cross-section Chi-square value is 0.0952. This value is greater than 0.05, indicating that the Common Effect Model (CEM) is more appropriate than the Fixed Effect Model (FEM). Therefore, the next test conducted is the Lagrange Multiplier (LM) Test. Based on the LM test, the cross-section Breusch-Pagan value is 0.9664. This value is greater than 0.05, indicating that the CEM is more appropriate than the Random Effect Model (REM). Thus, CEM is considered better than both FEM and REM. Consequently, the Hausman Test, which determines the best model between FEM and REM, is not required. In conclusion, the model selection test indicates that CEM is the most appropriate model.

Classical Assumption Test. The classical assumption tests required for the CEM model include the multicollinearity test and the heteroskedasticity test (Napitupulu et al., 2021, as cited in Indriani, Sembiring, & Wigantini, 2025). The multicollinearity test results show that the correlation coefficients between financial distress and leverage, financial distress and inventory intensity, and leverage and inventory intensity are -0.40, 0.14, and 0.08, respectively. All these values are below 0.8, indicating that there is no multicollinearity among the independent variables. Meanwhile, the heteroskedasticity test results show that the residual values range between -500 and 500, indicating that there is no heteroskedasticity issue.

Results. The panel data regression model using CEM is estimated with the Panel Least Squares (PLS) method. The test results indicate that the regression model used is as follows.

$$TA = 0,38 - 0,03FD - 0,02LEV - 0,37INV$$

Explanation:

TA = tax avoidance

FD = financial distress

LEV = leverage

INV = inventory intensity

The results of the hypothesis testing using the t-test and F-test are as follows.

Table 2. T-Test Results

Dependent Variable: TA
 Method: Panel Least Squares
 Date: 03/15/26 Time: 11:14
 Sample: 2021 2024
 Periods included: 4
 Cross-sections included: 103
 Total panel (balanced) observations: 412

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.380038	0.058839	6.458971	0.0000
FD	-0.025416	0.050812	-0.500189	0.6172
LEV	-0.020131	0.008992	-2.238802	0.0257
INV	-0.369249	0.240753	-1.533725	0.1259

Source: Author's Own Processing

The t-table value is 1.96576684. The financial distress variable has a t-statistic value of 0.500189, which is smaller than the t-table value. This indicates that financial distress does not affect tax avoidance. Therefore, H1 is rejected.

The leverage variable has a t-statistic value of 2.238802, which is greater than the t-table value, indicating that leverage affects tax avoidance. The Prob. value of 0.0257 is less than 0.05, meaning the effect is significant. The coefficient value is negative, indicating that leverage has a negative effect on the measurement of tax avoidance, namely the Effective Tax Rate (ETR). The higher the ETR, the lower the likelihood that a company engages in tax avoidance. Conversely, the lower the ETR, the higher the likelihood that a company engages in tax avoidance. The results show that leverage has a negative effect on ETR. This means that the higher the leverage, the lower the ETR, and thus the higher the likelihood of tax avoidance. Conversely, the lower the leverage, the higher the ETR, and the lower the likelihood of tax avoidance. Therefore, it can be concluded that leverage has a significant positive effect on tax avoidance. Thus, H2 is accepted.

The inventory intensity variable has a t-statistic value of 1.533725, which is smaller than the t-table value. This indicates that inventory intensity does not affect tax avoidance. Therefore, H3 is rejected.

Table 3. F-Test Results

R-squared	0.020805	Mean dependent var	0.267116
Adjusted R-squared	0.013605	S.D. dependent var	0.615704
S.E. of regression	0.611502	Akaike info criterion	1.863863
Sum squared resid	152.5651	Schwarz criterion	1.902902
Log likelihood	-379.9557	Hannan-Quinn criter	1.879305
F-Statistic	2.889555	Durbin-Watson stat	1.708030
Prob (F-statistic)	0.035296		

Source: Author's Own Processing

The F-table value is 2.626774708. The calculated F-value of 2.889555 is greater than the F-table value. This indicates that financial distress, leverage, and inventory intensity simultaneously affect tax avoidance. However, the adjusted R-squared value is 0.013605 or 1.36%. This means that financial distress, leverage, and inventory intensity explain only 1.36% of the variation in tax avoidance, while the remaining 98.64% is influenced by other variables.

Discussion. The results of data testing using the CEM model indicate that the variables financial distress and inventory intensity do not affect tax avoidance. This may occur because the objects studied are companies in the primary consumer goods sector. Companies in this sector tend to have more stable cash flow, as consumers continue to purchase their products even during economic downturn. As a result, financial distress conditions can be resolved

without the need for tax avoidance planning. In addition, inventory turnover is relatively fast, making tax planning through inventory less favorable for the company's operations.

Meanwhile, the leverage variable has a significant positive effect on tax avoidance. This is consistent with Trade-Off Theory, which states that companies will continue to increase debt to reduce their tax burden up to the point where the costs incurred to pay interest are balanced with the benefits gained in the form of tax reductions. Simultaneously, financial distress, leverage, and inventory intensity affect tax avoidance, although the effect is relatively weak.

CONCLUSION

This study is limited to companies in the primary consumer goods sector listed on the Indonesia Stock Exchange (IDX). Companies listed on the IDX are subject to stricter supervision, are required to maintain transparency, and are regularly evaluated, making opportunities for tax avoidance more limited and highly risky for the company's reputation. Therefore, unusual conditions are less likely to influence corporate behavior in tax planning.

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