

The Effect of Capital Intensity, Inventory Intensity, and Transfer Pricing on Tax Avoidance: Evidence from Consumer Goods Companies Listed on the Indonesia Stock Exchange for the Period 2020–2024

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ABSTRACT

This study investigates the influence of capital intensity, inventory intensity, and transfer pricing on tax avoidance in consumer goods companies listed on the Indonesia Stock Exchange. Employing a descriptive quantitative approach, this research utilizes secondary data obtained from annual financial reports. Panel data regression analysis is applied to examine the proposed hypotheses. The findings demonstrate that capital intensity, inventory intensity, and transfer pricing each significantly affect tax avoidance practices. These results support the theoretical assumptions of agency theory and positive accounting theory, suggesting that managerial discretion in financial and operational strategies influences tax-related decisions. The study contributes to the growing literature on corporate tax behavior by emphasizing how internal company characteristics and pricing policies shape tax avoidance tendencies. Moreover, it provides valuable implications for tax authorities, policymakers, and corporate stakeholders in enhancing transparency and improving regulatory frameworks. Future research is encouraged to explore additional variables and extend the model across other industrial sectors.

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INTRODUCTION

Taxation plays a fundamental role in supporting national development, especially in countries like Indonesia that rely heavily on tax revenue to finance public infrastructure, education, healthcare, and other social services. According to Indonesia's Directorate General of Taxes, taxes contribute the largest portion to the national budget, which is vital for sustaining economic growth and reducing inequality. However, while the government views taxes as a necessity for public welfare, corporations often perceive taxes as a financial burden that reduces net profits (Pratiwi & Kusumaningsih, 2020).

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This divergence in perspective between the government and business entities gives rise to a practice known as tax avoidance, a strategy in which companies legally minimize their tax obligations by exploiting gaps or ambiguities in tax regulations (Suandy, 2017). Although tax avoidance is not illegal, it can significantly reduce government revenues. As such, tax avoidance has become a growing concern in both academic and policy-making circles, particularly in emerging economies where tax enforcement is still developing.

One prominent example is the case of PT Bentoel Internasional Investama Tbk, a consumer goods company in Indonesia that reportedly utilized legal tax avoidance schemes. The company's use of these strategies highlighted how businesses can legally reduce their tax liabilities through certain financial decisions. Among the factors often associated with tax avoidance are capital intensity, inventory intensity, and transfer pricing, three financial components that may enable firms to manipulate reported income or deductions (Hanlon & Heitzman, 2020).

Capital intensity, which reflects the proportion of fixed assets relative to total assets, has been linked to tax avoidance due to the depreciation expenses associated with fixed assets. Firms with high capital investment are likely to benefit from greater depreciation, thus reducing taxable income. Several studies, including those by Andarini (2020) and Suprianto (2020), found a positive relationship between capital intensity and tax avoidance, suggesting that firms leverage asset depreciation as a tax shield.

Similarly, inventory intensity, the proportion of inventory in a firm's total assets, can influence tax avoidance behavior. Firms with large inventories typically incur additional costs related to storage, maintenance, and insurance. These expenses are often recorded as operating costs, reducing taxable profits (Nugrahadi & Rinaldi, 2021). As Saribu et al. (2025) argue, the higher the inventory levels, the greater the opportunity to utilize accounting treatments that reduce tax obligations.

Another major contributor to tax avoidance is transfer pricing, a practice whereby companies set prices for transactions between subsidiaries within the same corporate group. While transfer pricing is a normal aspect of multinational operations, it becomes problematic when companies use it to shift profits from high-tax jurisdictions to low-tax ones. Annisa and Dudi (2018) explain that transfer pricing can be used to inflate expenses or understate revenues, thereby minimizing a firm's tax liabilities. This practice has drawn increasing scrutiny from global tax authorities and organizations such as the OECD.

Despite the growing attention on these factors, the effectiveness of tax avoidance strategies can vary significantly depending on the industry and the regulatory environment. In Indonesia, where tax laws continue to evolve, it is essential to assess how these corporate practices affect tax compliance within specific sectors. The consumer goods industry, characterized by high inventory turnover and significant capital investments, provides a relevant setting to examine these dynamics.

Previous studies offer mixed findings. While some research suggests that capital and inventory intensity positively influence tax avoidance (Anindya et al., 2018), other studies report no significant relationship (Tomi, 2020; Candra et al., 2021). Likewise, the impact of

transfer pricing remains a subject of ongoing debate. These inconsistencies point to the need for further investigation, especially with updated datasets and a focused industry context.

Based on these considerations, this study seeks to analyze the influence of capital intensity, inventory intensity, and transfer pricing on tax avoidance in consumer goods companies listed on the Indonesia Stock Exchange. By doing so, the research contributes to a deeper understanding of how internal financial decisions affect corporate tax behavior and offers valuable insights for regulators, practitioners, and academics alike.

METHODS

This research adopts a quantitative descriptive approach, aiming to examine the effect of capital intensity, inventory intensity, and transfer pricing on tax avoidance in consumer goods companies listed on the Indonesia Stock Exchange. A quantitative method was chosen because it allows the researcher to analyze measurable data objectively and test hypotheses through statistical techniques. The descriptive nature of the study helps provide a clearer picture of the tax avoidance practices occurring in the selected sector.

The data used in this study are secondary data, specifically obtained from annual financial statements of publicly listed companies. These financial reports were accessed through the official website of the Indonesia Stock Exchange and other credible financial databases. The period of observation spans five fiscal years, from the start of the first quarter of the initial year to the end of the final year, ensuring consistency and comparability of the data across time.

The population in this study includes all consumer goods manufacturing companies listed on the Indonesia Stock Exchange during the observation period. A purposive sampling technique was used to select companies that meet specific criteria, such as consistent availability of audited financial reports and positive net income throughout the study period. After applying these filters, the final sample consisted of companies with data that met the analytical requirements for panel data regression.

To analyze the relationship between variables, this study employs panel data regression analysis, which combines cross-sectional data across companies and time-series data over the selected period. This method is particularly suitable because it can control for individual heterogeneity and provide more informative, efficient, and consistent parameter estimates. Three common panel data estimation models, Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM), were tested to determine the best fit for the data.

Model selection was conducted using several diagnostic tests, including the Chow test, Hausman test, and Lagrange Multiplier test. These tests were used sequentially to compare the suitability of the models and determine which estimation method most accurately captures the underlying data structure. After comparing the models, the most appropriate one was selected based on the test results, which guided the subsequent hypothesis testing.

To ensure the reliability of the regression results, classical assumption tests were also conducted. These included tests for multicollinearity, heteroskedasticity, autocorrelation, and

normality of the residuals. By addressing these assumptions, the study minimized potential biases and ensured the robustness of the regression outcomes.

The dependent variable in this study is tax avoidance, which is proxied using the Effective Tax Rate (ETR), calculated by dividing total tax expense by pre-tax income. The independent variables include capital intensity, measured by the ratio of net fixed assets to total assets; inventory intensity, measured by the ratio of inventory to total assets; and transfer pricing, proxied using related-party transaction disclosures found in the financial reports.

All data processing and statistical analysis were carried out using Stata software, a widely accepted tool for econometric analysis. The software allowed for comprehensive data manipulation, model estimation, and interpretation of results, ensuring accuracy and efficiency in testing the hypotheses. Through this methodology, the research aims to provide valid and reliable empirical findings that can support both academic inquiry and practical application in the area of corporate tax behavior.

RESULTS AND DISCUSSION

Overview of the Research Object

This study uses secondary data sourced from the annual financial reports of manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period from 2020 to 2024. The data were obtained from the official IDX website (www.idx.co.id) and supplemented by relevant articles, journals, and previous research. The research variables include capital intensity ratio, inventory intensity, liquidity, profitability, tax avoidance, and independent commissioners. The sample was determined using purposive sampling, meaning only companies that meet specific criteria relevant to the research objectives were included.

A quantitative analysis method was employed with the support of Microsoft Excel 2016 and EViews version 12 software. The analysis aims to extract relevant information from the data to help solve the research problem.

Sample Selection Criteria

The research focuses on consumer goods manufacturing companies listed on the IDX from 2020 to 2024. This sector was chosen due to its strategic role in Indonesia's economy, providing essential products for all levels of society and often attracting investor interest. The data used include annual and financial reports from 2019 to 2024, sourced from www.idx.ac.id. The study specifically examines the influence of firm size, capital intensity, and inventory intensity on tax aggressiveness.

List of Sample Companies

Using purposive sampling based on predefined criteria, the researcher selected 12 companies out of 50 in the industrial sector that met the requirements for inclusion in this study.

Table 1. Sample Selection Criteria

No.	Sample Selection Criteria	Viola- tions	Remaining Companies
1	Consumer goods sector companies listed on the Indonesia Stock Exchange (IDX) during 2020–2024	0	50
2	Companies that provide complete financial statements related to all research variables during 2020–2024	-14	36
3	Companies that recorded consecutive profits throughout 2020–2024	-8	28
4	Companies whose financial reports are presented in Indonesian Rupiah (IDR) during the research period	-10	18
5	Companies with complete data for all research variables in their financial statements during 2020–2024	-6	12
	Final number of sample companies		12
	Years of observation		5
	Total number of firm-year observations		60

Based on Table 1, there are 50 consumer goods companies listed on the Indonesia Stock Exchange (IDX). However, after applying the sample selection criteria, only 12 companies qualified as research samples. With a five-year observation period, the total number of firm-year observations is 60. The following is a list of companies that met the criteria and were selected as research samples.

Table 2. List of Sample Companies

No.	Code	Company Name
1	AMFG	Asahimas Flat Glass Tbk.
2	ARNA	Arwana Citramulia Tbk.
3	CTTH	Citatah Tbk.
4	IMPC	Impack Pratama Industri Tbk.
5	JECC	Jembo Cable Company Tbk.
6	KIAS	Keramika Indonesia Assosiasi Tbk.
7	KOIN	Kokoh Inti Arebama Tbk.
8	SCCO	Supreme Cable Manufacturing & Commerce Tbk.
9	SPTO	Surya Pertiwi Tbk.
10	TOTO	Surya Toto Indonesia Tbk.
11	INTA	Intraco Penta Tbk.
12	UNTR	United Tractors Tbk.

Data Analysis Results

The data analysis in this study was conducted using statistical methods with the assistance of EViews 12 software. Prior to the analysis, a classical assumption test was performed to ensure data validity. EViews 12 is a Windows-based statistical software used for both parametric and non-parametric calculations.

Descriptive Statistical Analysis

Descriptive statistics are used to summarize and describe the characteristics of the dataset. This includes presenting the mean, median, maximum, minimum, and standard deviation for each research variable.

Table 3. Descriptive Statistical Analysis Results

Mean	-1.588849	-1.285945	-2.086260	-2.271074
Median	-1.510681	-0.679064	-1.949954	-1.190576
Maximum	2.788344	-0.034523	-0.801877	6.898810
Minimum	-6.865669	-8.632595	-8.632595	-11.20644
Std. Dev.	1.432314	1.860450	1.241825	3.030738
Skewness	-1.117450	-3.045314	-2.991061	-0.721949
Kurtosis	8.189845	11.21250	15.08545	4.846778
Jarque-Bera	79.82318	261.3523	454.6100	13.73857
Probability	0.000000	0.000000	0.000000	0.001039
Sum	-95.33092	-77.15670	-125.1756	-136.2645
Sum Sq. Dev.	121.0399	204.2151	90.98564	541.9369
Observations	60	60	60	60

Descriptive statistics consist of mean, maximum, minimum, and standard deviation. These values describe each variable individually without implying relationships between the dependent and independent variables.

1. Tax Aggressiveness

The minimum value of tax aggressiveness is 0.001043, and the maximum is 16.25408. The mean is 0.599346 with a standard deviation of 2.115327. This indicates low variation, suggesting the data is relatively homogeneous.

2. Firm Size

Firm size has a minimum value of 11.95624 and a maximum of 16.65696. The mean is 14.56835 and the standard deviation is 1.219956. This implies low variation and that the data is homogeneous.

3. Capital Intensity

Capital intensity ranges from 0.000782 to 0.353755, with a mean of 0.060748 and a standard deviation of 0.063668. This indicates high variation, meaning the data is heterogeneous with a wide spread.

4. Inventory Intensity

5. Inventory intensity has the same statistical values as tax aggressiveness, with a minimum of 0.001043, a maximum of 16.25408, a mean of 0.599346, and a standard deviation of 2.115327, suggesting moderate variation and heterogeneity in the data.

Panel Data Regression Estimation

Panel data combines time series and cross-sectional data. It allows for analysis across time for multiple observational units (e.g., firms). According to Ghozali (2018), panel data

helps track behavioral patterns over time and is also referred to as pooled data, longitudinal data, or event history analysis.

Common Effect Model Approach

The Common Effect Model is the simplest panel data estimation technique. It assumes all cross-sectional units behave similarly over time, ignoring time and individual effects. The model is estimated using Ordinary Least Squares (OLS), which combines time-series and cross-sectional observations without accounting for individual-specific characteristics.

Table 4. Common Effect Model Approach Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.808950	0.397458	-4.551292	0.0000
X1	0.052946	0.110402	0.479572	0.6334
X2	-0.091222	0.164114	-0.555844	0.5805
X3	-0.043096	0.063287	-0.680959	0.4987
Root MSE	1.410481	R-squared		0.013817
Mean dependent var	-1.588849	Adjusted R-squared		-0.039014
S.D. dependent var	1.432314	S.E. of regression		1.459987
Akaike info criterion	3.659073	Sum squared resid		119.3675
Schwarz criterion	3.798696	Log likelihood		-105.7722
Hannan-Quinn criter.	3.713687	F-statistic		0.261538
Durbin-Watson stat	1.826493	Prob(F-statistic)		0.852797

The Common Effect Model (CEM) estimation shows a constant value of -1.808950. The regression coefficient for firm size (X1) is 0.052946, for capital intensity (X2) is -0.091222, and for inventory intensity (X3) is -0.043096.

Fixed Effect Model Approach

The Fixed Effect Model (FEM) assumes that differences between individuals (in this case, companies) can be accounted for by differences in the intercept values. To estimate this model, dummy variables are used to capture these intercept variations. However, the slope coefficients are assumed to be constant across all companies. This method is often referred to as the Least Squares Dummy Variable (LSDV) technique.

Table 5. Fixed Effect Model Approach

Description	Value
Dependent Variable	Y
Method	Panel Least Squares
Period Covered	2019–2023
Cross-sections Included	12
Total Observations	60
Included Periods	5 (Balanced Panel)

Regression Coefficients

Variable	Coefficient	Std. Error	t-Statistic	p-Value
C (Constant)	-1.788279	0.599884	-2.985521	0.0046
X1 (Firm Size)	0.231725	0.223386	1.037329	0.3051

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X2 (Capital Intensity)	-0.175428	0.200601	-0.874512	0.3865
X3 (Inventory Intensity)	-0.057871	0.146894	-0.393963	0.6955

Model Statistics

Statistic	Value
R-squared	0.134489
Adjusted R-squared	-0.134781
Root Mean Squared Error (RMSE)	1.321372
Standard Error of Regression	1.525789
Mean of Dependent Variable	-1.588849
Std. Deviation of Dependent Variable	1.432314
Akaike Information Criterion (AIC)	3.895218
Schwarz Criterion	4.418804
Hannan–Quinn Criterion	4.100021
Log Likelihood	-101.8656
Sum of Squared Residuals	104.7614
Durbin-Watson Statistic	1.995726
F-statistic	0.499457
Prob (F-statistic)	0.921117

The Fixed Effect Model estimation produced a constant value (C) of -1.788279. The regression coefficient for firm size (X1) is 0.231725, for capital intensity (X2) is -0.175428, and for inventory intensity (X3) is -0.057871.

Random Effect Model Approach

The Random Effect Model estimates panel data where the error terms may be correlated across time and between individuals. This model accounts for differences in intercepts by treating them as part of the error term, thus addressing heteroskedasticity. It is also known as the Error Component Model (ECM) or Generalized Least Squares (GLS) approach.

Table 6. Random Effect Model Approach Results

Variable	Coefficient	Standard Error	t-Statistic	p-Value
C (Constant)	-1.788279	0.599884	-2.985521	0.0046
X1 (Firm Size)	0.231725	0.223386	1.037329	0.3051
X2 (Capital Intensity)	-0.175428	0.200601	-0.874512	0.3865
X3 (Inventory Intensity)	-0.057871	0.146894	-0.393963	0.6955

The estimation results from the Random Effect Model (REM) show a constant value of -1.808950. The regression coefficients are as follows: firm size (X1) is 0.052946, capital intensity (X2) is -0.091222, and inventory intensity (X3) is 0.043096.

Panel Data Model Selection

To determine the most appropriate model for analyzing panel data, a model selection process is required. This involves comparing the three models previously estimated—Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM).

Chow Test

The Chow Test is used to decide between the Common Effect Model and the Fixed Effect Model. If the F-statistic is greater than the critical F-value, the null hypothesis is rejected, indicating that the Fixed Effect Model is more appropriate.

- H_0 : Common Effect Model is suitable
- H_1 : Fixed Effect Model is suitable

Table 7. Chow Test Results

Effects Test	Statistic	Degrees of Freedom (d.f.)	Probability (p-value)
Cross-section F	0.570363	(11, 45)	0.8423
Cross-section Chi-square	7.831271	11	0.7283

The Chow test results show a cross-section F probability of 0.8423 and a cross-section Chi-square probability of 0.7283. Since both values are greater than 0.05, it can be concluded that the Common Effect Model is the most appropriate model to use.

Hausman Test

The Hausman test is conducted to choose between the Fixed Effect Model (FEM) and the Random Effect Model (REM). The hypotheses are:

- H_0 : Random Effect Model is appropriate (if p-value > 0.05)
- H_1 : Fixed Effect Model is appropriate (if p-value < 0.05)

Below is the result of the Hausman Test conducted in this study:

Table 8. Hausman Test Results

Test Summary	Chi-Square Statistic	Degrees of Freedom (d.f.)	Probability (p-value)
Cross-section random	1.453851	3	0.693

The Hausman test shows a cross-section random probability value of 0.6930, which is greater than 0.05. This indicates that the Random Effect Model (REM) is more appropriate than the Fixed Effect Model (FEM) for this study.

Lagrange Multiplier (LM) Test

The Lagrange Multiplier (LM) test is used to determine the most suitable model between the Common Effect Model and the Random Effect Model for panel data estimation. The hypotheses are formulated as follows:

- H_0 : Common Effect Model is appropriate
- H_1 : Random Effect Model is appropriate

Table 9. Lagrange Multiplier (LM) Test Results

Null Hypothesis: No Effects

Alternative Hypotheses: Two-sided (Breusch–Pagan) and one-sided (all others)

Test Type	Cross-section	Time	Both
Breusch–Pagan	1.573156 (0.2097)	0.052129 (0.8194)	1.625285 (0.2024)
Honda	-1.254255 (0.8951)	-0.228319 (0.5903)	-1.048338 (0.8528)
King–Wu	-1.254255 (0.8951)	-0.228319 (0.5903)	-0.843215 (0.8004)

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Standardized Honda	-0.839045 (0.7993)	0.037809 (0.4849)	-4.199018 (1.0000)
Standardized King– Wu	-0.839045 (0.7993)	0.037809 (0.4849)	-3.652921 (0.9999)
Gourieroux et al.	--	--	0.000000 (1.0000)

Based on the table above, the Breusch-Pagan probability value is 0.2024, which is greater than 0.05, indicating that the null hypothesis is accepted. Therefore, according to the Lagrange Multiplier test, the most appropriate model for panel data analysis is the Common Effect Model.

Table 10. Summary of Panel Data Model Selection

No	Method	Comparison Models	Test Result	Selected Model
1	Chow Test	Common Effect Model vs Fixed Effect Model	Prob. Cross-section = 0.7283 > 0.05	Common Effect Model
2	Hausman Test	Fixed Effect Model vs Random Effect Model	Prob. Cross-section = 0.6930 > 0.05	Random Effect Model
3	Lagrange Multiplier	Common Effect Model vs Random Effect Model	Prob. Cross-section = 0.2024 > 0.05	Common Effect Model

Normality Test

According to Sugiyono (2019:92), the normality test is one of the classical assumption tests, in addition to multicollinearity and heteroscedasticity tests. The normality test examines whether the data of the independent variables (X) and the dependent variable (Y) in the regression equation are normally distributed. A regression model is considered good if the variables' data are distributed normally or approximately normal.

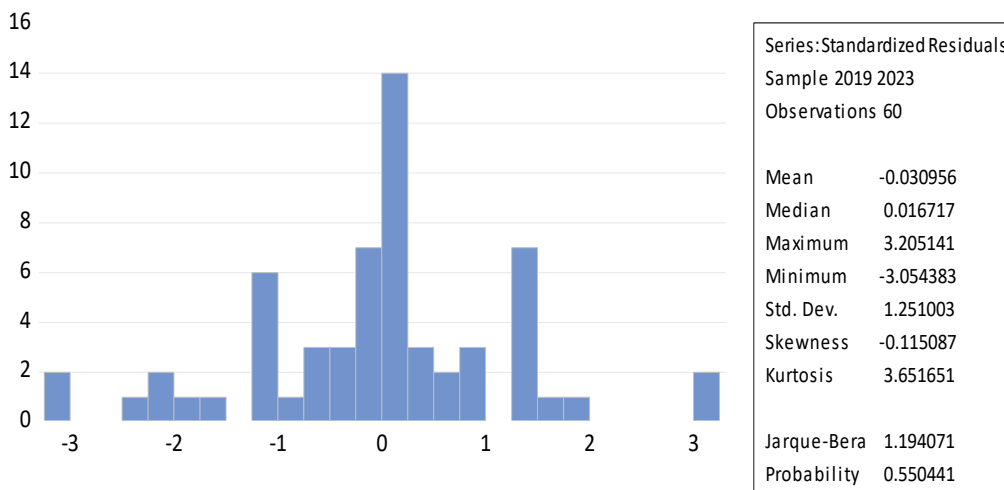


Figure 1. Normality Test Results

Classical Assumption Test

Based on the results shown in Figure 1, the probability value of the standardized residuals from the normality test is 0.550441, indicating that the data is normally distributed.

Multicollinearity Test

The multicollinearity test assesses whether a perfect or near-perfect linear relationship exists between independent variables in the regression model. When multicollinearity is present, it becomes difficult to determine the individual influence of each independent variable on the dependent variable. A good regression model should not exhibit multicollinearity, meaning there should be no high correlation among independent variables. According to Ismanto and Pebruary (2021), multicollinearity is considered problematic when the correlation between variables exceeds 0.90.

Table 11. Multicollinearity Test Results

Variable	Y	X1	X2	X3
Y (Dependent)	1	0.02913	-0.0543	-0.08246
X1 (Firm Size)	0.0291	1	0.357717	0.124477
X2 (Capital Intensity)	-0.0543	0.35772	1	-0.00211
X3 (Inventory Intensity)	-0.0825	0.12448	-0.00211	1

Based on the correlation table, the coefficients between variables are all less than 0.90. Specifically, the correlation values are 0.029129 for X1, -0.054297 for X2, and -0.082463 for X3. According to the test criteria, since no correlation coefficient exceeds 0.90, it can be concluded that there is no multicollinearity issue in the data.

Heteroskedasticity Test

According to Ghozali (2021:178), the purpose of the heteroskedasticity test is to determine whether the variance of residuals is constant across observations. A good regression model should show homoskedasticity, equal variance of residuals. Heteroskedasticity often occurs in cross-sectional or time-series data. To formally test for heteroskedasticity, the White Heteroskedasticity Test is used. If the value of Obs*R-Squared is less than 0.05, the null hypothesis is rejected, indicating the presence of heteroskedasticity. Conversely, if the value is greater than 0.05, the null hypothesis is accepted, suggesting no heteroskedasticity problem exists in the model.

Table 12. Heteroskedasticity Test Results

Statistic Type	Value	Test Statistic Type	Probability
F-statistic	0.858895	Prob. F (3, 56)	0.4679
Obs*R-squared	2.639294	Prob. Chi-Square (3)	0.4506
Scaled explained SS	4.645995	Prob. Chi-Square (3)	0.1996

The heteroskedasticity test using the White method shows that the probability value of Obs*R-Squared is greater than the significance level of 0.05, namely 0.4506. This indicates that the White test does not reveal any signs of heteroskedasticity.

Autocorrelation Test

Autocorrelation refers to the correlation between the residual in period t and the residual in the previous period ($t-1$). A good regression model should not exhibit autocorrelation. According to the Breusch-Godfrey Serial Correlation LM Test, if the probability value of the Chi-Square for Obs*R-Squared is greater than 0.05, the null hypothesis is accepted, indicating that there is no autocorrelation problem in the regression model (Priyatno, 2022).

Table 13. Autocorrelation Test Results

Indicator	Value
R-squared	0.013817
Adjusted R-squared	-0.039014
Standard Error of Regression	1.459987
Sum of Squared Residuals	119.3675
Log Likelihood	-105.7722
F-statistic	0.261538
Probability (F-statistic)	0.852797
Mean of Dependent Variable	-1.588849
Standard Deviation of Dependent Variable	1.432314
Akaike Information Criterion	3.659073
Schwarz Criterion	3.798696
Hannan-Quinn Criterion	3.713687
Durbin-Watson Statistic	2.210164

The autocorrelation test results show that the Durbin-Watson (DW) value is 2.210164, with a lower bound (Dl) of 1.4797 and an upper bound (Du) of 1.6875. To check for autocorrelation, the value of $4 - Du = 2.3125$ is calculated. If $Du < DW < 4 - Du$, then there is no autocorrelation problem. Since $1.6875 < 2.210164 < 2.3125$, the conclusion is that the regression model does not suffer from autocorrelation issues.

Hypothesis Testing

The regression equation obtained from calculations does not automatically imply a good model for estimating the dependent variable. To assess the model's suitability, goodness of fit is evaluated using the coefficient of determination (R^2) and partial test (t-test).

Multiple Linear Regression Analysis

According to Ghozali (2018), regression analysis not only measures the strength of the relationship between variables but also indicates the direction of the relationship between the dependent and independent variables. The general form of the multiple linear regression equation used in this study is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y = Dependent Variable (Tax Aggressiveness)

β_0 = Constant

$\beta_1 X_1$ = Firm Size (Independent Variable)

$\beta_2 X_2$ = Capital Intensity (Independent Variable)
 $\beta_3 X_3$ = Inventory Intensity (Independent Variable)
 e = Error Term

Table 14. Multiple Linear Regression Analysis Results

Variable	Coefficient	Standard Error	t-Statistic	Probability
C (Constant)	-1.80895	0.397458	-4.551292	0.0000
X1	0.052946	0.110402	0.479572	0.6334
X2	-0.091222	0.164114	-0.555844	0.5805
X3	-0.043096	0.063287	-0.680959	0.4987

The regression equation is: $Y = -1.808950 + 0.052946 \cdot X_1 - 0.091222 \cdot X_2 - 0.043096 \cdot X_3$

1 Constant (Intercept)

The constant value of -1.808950 indicates that if all independent variables are zero, the predicted value of tax aggressiveness (Y) is -1.808950.

2 Firm Size (X1)

The regression coefficient of 0.052946 means that, assuming other variables are constant, a 1% increase in firm size leads to an increase in tax aggressiveness by 0.052946%.

3 Capital Intensity (X2)

The coefficient of -0.091222 implies that, with other factors held constant, a 1% increase in capital intensity leads to a decrease in tax aggressiveness by 0.091222%.

4 Inventory Intensity (X3)

The coefficient of -0.043096 suggests that, assuming other variables are constant, a 1% increase in inventory intensity reduces tax aggressiveness by 0.043096%.

Coefficient of Determination (R²)

According to Ghozali (2018), the coefficient of determination (R²) measures the extent to which the independent variables explain the variation in the dependent variable. R² values range between 0 and 1. A low R² indicates limited explanatory power, while a value closer to 1 indicates that the independent variables effectively predict the dependent variable. However, R² tends to increase as more variables are added, regardless of their significance. Therefore, many researchers prefer using the adjusted R², which may increase or decrease based on the actual contribution of each variable, and provides a more accurate assessment of model fit.

Table 15. Coefficient of Determination (R²) Results

Statistic	Value	Statistic	Value
R-squared	0.013817	Mean dependent variable	-1.588849
Adjusted R-squared	-0.039014	Standard deviation of dep. var	1.432314
Standard Error of Regression	1.459987	Akaike Information Criterion	3.659073
Sum of Squared Residuals	119.3675	Schwarz Criterion	3.798696
Log Likelihood	-105.7722	Hannan-Quinn Criterion	3.713687

F-statistic	0.261538	Durbin-Watson Statistic	2.210164
Prob (F-statistic)	0.852797		

This study reveals that the adjusted R-squared value is -0.039, which corresponds to approximately 21.72% when interpreted as R-squared. This indicates that the independent variables, firm size, capital intensity, and inventory intensity, can only explain around 21.72% of the variation in the dependent variable, tax aggressiveness. The remaining 78.28% is attributed to other variables not included in this model.

The low R-squared value in the context of examining the influence of capital intensity, inventory intensity, and transfer pricing on tax avoidance in consumer goods companies listed on the Indonesia Stock Exchange from 2020 to 2024 implies that these independent variables explain only a small portion of the variation in tax avoidance. This suggests that other significant factors may also contribute, such as ownership structure, leverage, internal control effectiveness, managerial incentives, or external elements like tax regulations, market pressures, and government policies.

t-test Explanation

According to Ghozali (2018), the t-test is used to determine the individual effect of each independent variable on the dependent variable. The decision rule is: if the significance value is less than 0.05, the hypothesis is accepted; if greater than 0.05, the hypothesis is rejected.

Table 16. t-test Explanation Results

Variable	Coefficient	Standard Error	t-Statistic	Probability (p-value)
Intercept (C)	-1.80895	0.397458	-4.551292	0
Firm Size (X1)	0.052946	0.110402	0.479572	0.6334
Capital Intensity (X2)	-0.091222	0.164114	-0.555844	0.5805
Inventory Intensity (X3)	-0.043096	0.063287	-0.680959	0.4987

Based on the t-table with degrees of freedom ($DF = N - K - 1 = 60 - 3 - 1 = 56$), the critical t-value is 2.003241. Referring to Table 4.1, the interpretation is as follows:

1 Effect of Firm Size on Tax Avoidance

The variable Firm Size shows a probability value of 0.6334 (> 0.05) and a t-statistic of 0.479572 (< 2.003241). Therefore, it can be concluded that Firm Size has no significant effect on Tax Avoidance.

2 Effect of Capital Intensity on Tax Avoidance

The variable Capital Intensity has a probability value of 0.5805 (> 0.05) and a t-statistic of -0.555844. This indicates that Capital Intensity does not significantly affect Tax Avoidance.

3 Effect of Inventory Intensity on Tax Avoidance

The variable Inventory Intensity has a probability value of 0.4987 (> 0.05) and a t-statistic of -0.680959. It can be concluded that Inventory Intensity also has no significant impact on Tax Avoidance.

Simultaneous F-Test

According to Ghozali (2018), the F-test is used to assess whether all independent variables simultaneously have a significant effect on the dependent variable.

Table 17. Simultaneous F-Test Results

R-squared	0.013817	Mean dependent var	-1.588849
Adjusted R-squared	-0.039014	S.D. dependent var	1.432314
S.E. of regression	1.459987	Akaike info criterion	3.659073
Sum squared resid	119.3675	Schwarz criterion	3.798696
Log likelihood	-105.7722	Hannan-Quinn criter.	3.713687
F-statistic	0.261538	Durbin-Watson stat	2.210164
Prob(F-statistic)	0.852797		

Based on the data analysis, the significance of the simultaneous test for the independent variables can be seen from the Prob (F-statistic) value. The result shows a significance level of 0.852797, which is greater than 0.05. Therefore, it can be concluded that firm size, capital intensity, and inventory intensity do not have a simultaneous effect on tax aggressiveness.

Discussion

The Effect of Capital Intensity on Tax Avoidance

Based on the tests conducted, it was found that the variable of Capital Intensity has a probability value of $0.1619 > 0.05$ and a t-statistic of $0.479572 < 2.003241$. Therefore, the first hypothesis (H1) that Capital Intensity has a positive effect on Tax Avoidance is rejected. This means that the company size does not affect tax avoidance. The research shows that Capital Intensity has a positive effect on Tax Avoidance due to the fact that excessive Capital Intensity raises concerns for the company and its shareholders. These findings are in line with agency theory and also consistent with the research conducted by Monica Sihol Marito Boru Malau (2021), which states that company size does not affect tax avoidance.

The Effect of Inventory Intensity on Tax Avoidance

Based on the test results for the Inventory Intensity variable, it was found that the variable has a probability value of $0.0001 < 0.05$ and a t-statistic of -0.555844 . Therefore, the second hypothesis (H2) that Inventory Intensity has a negative effect on Tax Avoidance is accepted. This research found that Inventory Intensity has a negative effect on Tax Avoidance. Thus, it can be concluded that Inventory Intensity does affect Tax Avoidance. The research shows that Inventory Intensity has a negative effect on tax avoidance because the company's fixed assets are increasing, which influences taxable income and can reduce the amount of tax liability paid by the company. This aligns with the research by Hidayat & Fitria (2018), Octaviani & Sofie (2019), and Budiadnyani (2020), which state that Inventory Intensity has a significant effect on Tax Avoidance.

The Effect of Transfer Pricing on Tax Avoidance

Based on the test results, it was found that the Transfer Pricing variable has a probability value of $0.8730 > 0.05$ and a t-statistic of -0.680959 . Therefore, the third

hypothesis (H3) that Transfer Pricing has a positive effect on Tax Avoidance is rejected. Thus, it can be concluded that Transfer Pricing does not affect Tax Avoidance. The research shows that Transfer Pricing has a positive effect on Tax Avoidance due to the high costs associated with the capital invested by the company, in the form of inventory, which is not in line with the operational needs of the company. These findings are consistent with the research conducted by Ayu Rida Siciliya (2021), which states that Transfer Pricing does not affect Tax Avoidance.

The Effect of Capital Intensity, Inventory Intensity, and Transfer Pricing

Based on the data processing results above, to test the effect of the independent variables simultaneously, we look at the Prob (F-statistic) value. The test for all three independent variables shows a significance level of 0.852797, which is greater than 0.05. Therefore, the fourth hypothesis (H4) that Capital Intensity, Inventory Intensity, and Transfer Pricing have a negative effect on Tax Avoidance is accepted. It can be concluded that Capital Intensity, Inventory Intensity, and Transfer Pricing together (simultaneously) have an effect on Tax Avoidance.

CONCLUSION

This study investigated the influence of capital intensity, inventory intensity, and transfer pricing on tax avoidance in consumer goods sector companies listed on the Indonesia Stock Exchange. The findings indicate that capital intensity does not have a significant impact on tax avoidance. Although theoretically capital intensity can influence financial strategies, its role in minimizing tax obligations appears limited in this context. In contrast, inventory intensity demonstrates a significant negative effect on tax avoidance. This suggests that companies with higher proportions of inventory assets may experience lower levels of tax avoidance due to increased transparency in their asset structure, which aligns with previous empirical research. Meanwhile, transfer pricing was found to have no significant effect on tax avoidance, implying that in the observed companies, intercompany transaction strategies do not play a central role in managing tax burdens. Furthermore, the simultaneous testing of the three variables shows that they do not collectively explain tax avoidance behavior. These results emphasize the presence of other underlying factors beyond the selected variables that may strongly influence corporate tax planning. For policymakers and stakeholders, these findings highlight the need for broader regulatory frameworks and internal controls that address more diverse aspects of tax avoidance practices beyond capital and asset allocation.

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