

The Influence Of Profitability, Leverage, And Company Size On Tax Avoidance Practices In Public Companies

Ilham Teruna Bakti^{1*}, Yudi Budi Yuniarso², Wening Estiningsih³, Saripah⁴

^{1,2,3,4}Economic Education, FIPPS, Indraprasta PGRI University, Jl. Raya Tengah, Gedong, Jakarta, Indonesia

E-mail: ^{1*)}ilhamteruna@gmail.com, ²⁾Yudibudi.yuniarso@unindra.ac.id,
³⁾wening.nextgen007@gmail.com, ⁴⁾Saripah@unindra.ac.id

Submitted:
23 April 2026

Revised:
19 June 2026

Accepted:
13 July 2026

Abstract

This study investigates the relationship between profitability, leverage, and firm size and tax avoidance practices in publicly listed consumer sector firms during the 2020–2024 period. A quantitative approach was applied using panel data regression analysis, with a sample of six companies selected through purposive sampling. Tax avoidance was measured using the Effective Tax Rate (ETR), while profitability, leverage, and firm size were proxied by Return on Assets (ROA), Debt to Equity Ratio (DER), and the natural logarithm of total assets, respectively. Based on model selection procedures, the Random Effect Model (REM) was identified as the most appropriate specification. The results indicate that, both individually and jointly, profitability, leverage, and firm size do not exhibit a statistically significant effect on tax avoidance. Additionally, the coefficient of determination suggests that the model explains only a limited proportion of the variation in tax avoidance behavior. These findings imply that tax avoidance is likely influenced by factors beyond the financial indicators examined, highlighting the need for future research to incorporate broader determinants, including governance and regulatory aspects.

Keywords: Tax Avoidance, Profitability, Leverage, Firm Size, Panel Regression.

1. INTRODUCTION

Taxes are a primary source of state revenue and play a strategic role in financing national development, providing public services, and stabilizing the economy. Optimizing tax revenues is a government priority due to their significant contribution to the State Budget. However, the effectiveness of the tax system often faces challenges in the form of tax avoidance practices by companies through tax planning strategies that remain within the legal framework (Dyrenge et al., 2022).

Tax avoidance is a critical issue in accounting and taxation studies because it can significantly reduce potential state revenue. This practice is generally carried out by exploiting loopholes in tax regulations or differing interpretations of rules, allowing companies to minimize their tax liabilities without explicitly violating legal provisions

(Richardson & Lanis, 2011). The complexity of this practice often makes it difficult for tax authorities to detect and control it.

Corporate tax avoidance behavior is influenced by various factors, both internal and external. Internal factors include company characteristics such as financial performance, funding structure, company size, and governance mechanisms. Research shows that company characteristics play a significant role in determining a company's propensity to engage in tax avoidance (Kovermann & Velte, 2019).

Profitability is a key indicator of corporate performance, often linked to tax policy. Companies with high profitability generally have a higher tax burden, potentially creating an incentive to engage in tax avoidance strategies. However, more profitable companies also tend to receive stricter regulatory oversight, so the relationship between profitability and tax avoidance is not always consistent (Nguyen & & Pham, 2021).

Leverage is also an important variable in explaining tax avoidance behavior. A debt-based financing structure allows companies to utilize interest expenses as a taxable income deduction. Therefore, companies with high leverage theoretically have a greater opportunity to reduce their tax burden through financing strategies (Salaudeen & Ejeh, 2018).

In addition to profitability and leverage, company size is another factor suspected of influencing tax avoidance practices. Larger companies generally have greater resources, including access to professional tax consultants and the ability to design more complex tax planning strategies. However, on the other hand, larger companies also face reputational pressures and stricter public scrutiny, which can limit aggressive tax avoidance practices (Zeng, 2019).

The relationship between company size and tax avoidance continues to show mixed results in empirical research. Some studies find that larger companies are more aggressive in avoiding taxes, while others suggest that larger companies are actually more compliant with tax obligations due to considerations of reputational risks and political costs. These inconsistencies in results suggest the need for further research with different data sets and contexts. From a corporate governance perspective, internal oversight structures also influence tax decisions. Strong oversight can limit tax avoidance practices because management will be more cautious in making decisions that risk tax penalties or damage the company's reputation (Hoseini et al., 2019).

Thus, tax avoidance practices are influenced not only by financial conditions but also by organizational oversight mechanisms. In addition to internal factors, tax systems and regulatory environments also influence corporate tax strategies. Differences in tax systems between countries, particularly for multinational corporations, can be exploited to shift profits to minimize global tax liabilities (Atwood et al., 2012).

This demonstrates that tax avoidance is a multidimensional phenomenon. Other research has found that complex corporate structures, such as the existence of subsidiaries

or affiliates, can increase the opportunity for companies to engage in tax avoidance strategies by shifting income or expenses between entities (De Simone et al., 2017).

This organizational complexity expands the scope for companies to design tax strategies. Ownership structure has also been shown to influence corporate tax behavior. Different types of ownership, such as family, institutional, or public ownership, can influence the level of oversight of management, thus impacting corporate tax policy (Gaaya et al., 2017).

Therefore, ownership is a key determinant of tax avoidance. Research on the determinants of tax avoidance continues to grow because this phenomenon is influenced by various interacting factors. Empirical studies show that company characteristics, governance, and the regulatory environment collectively influence corporate tax decisions. This shows that tax avoidance cannot be explained by a single variable. This research focuses

2. RESEARCH METHOD

Based on theoretical studies and previous research, tax avoidance practices are influenced by a company's financial characteristics, which reflect its operational conditions and funding structure. Profitability indicates a company's ability to generate profits, potentially increasing its tax burden and thus influencing tax planning strategies. Leverage reflects a company's financing structure, which can be used to reduce taxable income through interest expense. Meanwhile, company size reflects the scale of operations and resources a company possesses, which can influence its ability to conduct tax planning. The conceptual relationships between the research variables are presented in the following conceptual framework.

CONCEPTUAL FRAMEWORK

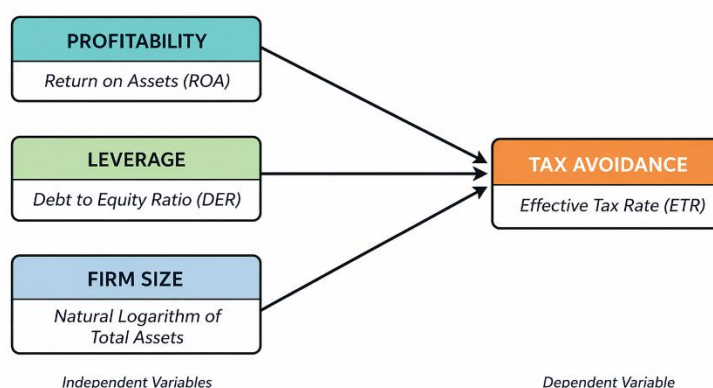


Figure 1. Conceptual Thinking Framework

Figure 1 shows the conceptual model, which shows that profitability, leverage, and company size are independent variables assumed to influence tax avoidance, which is the

dependent variable. This relationship will be tested empirically to determine the partial and simultaneous effects between the variables. This study uses a quantitative approach with an associative design to examine the relationship between the independent and dependent variables. The data used is secondary data in the form of annual financial reports of public companies in the consumer goods industry sector for the period 2020–2024.

The study sample consists of six companies: Tempo Scan Pacific Tbk, Gudang Garam Tbk, Kalbe Farma Tbk, Mayora Indah Tbk, Indofood Sukses Makmur Tbk, and HM Sampoerna Tbk, selected using a purposive sampling technique based on the availability of complete data during the study period. The dependent variable in this study is tax avoidance, proxied by the Effective Tax Rate (ETR).

The independent variables include profitability, measured by Return on Assets (ROA), leverage, measured by the Debt to Equity Ratio (DER), and company size, measured by the natural logarithm of total assets. Data analysis was performed using panel data regression with the aid of econometric software. Panel model selection was performed using the Chow and Hausman tests to determine the best model among the Common Effect, Fixed Effect, and Random Effect models.

Hypothesis testing was performed using partial tests (t-tests) to determine the effect of each independent variable on tax avoidance and simultaneous tests (F-tests) to determine the effect of the independent variables collectively. Furthermore, the coefficient of determination was used to measure the model's ability to explain variation in the dependent variable. All tests were conducted at a 5% significance level.

3. RESULTS AND DISCUSSION

3.1 Results

Descriptive Statistics

Table 1. Descriptive Statistics

	LEVERAGE_D ER	PROFITABILIT AS_ROA	TAX_AVOIDA NCE_Y_ETR	UKURAN_PER USAHAAN
Mean	0.568667	0.093567	0.228167	18.89400
Median	0.525000	0.102000	0.229000	17.68000
Maximum	1.070000	0.173000	0.296000	31.63000
Minimum	0.020000	0.012000	0.207000	10.81000
Std. Dev.	0.286141	0.037761	0.016332	5.910172
Skewness	0.012040	-0.130675	2.397002	1.029698
Kurtosis	1.946610	2.412590	11.154137	3.358761
Jarque-Bera	1.387761	0.516692	111.8405	5.462273
Probability	0.499633	0.772327	5.177615	0.065145
Sum	17.06000	2.807000	6.845000	566.8200
Sum Sq. Dev.	2.374422	0.041351	0.007736	1012.973
Observations	30	30	30	30

Source: Eviews 13 data processing

Descriptive statistics for the 2020–2024 period, with 30 observations, show that the leverage variable has an average value of 0.5687 with a standard deviation of 0.2861, indicating relatively stable and normally distributed data. Profitability has an average of 0.0936 and a standard deviation of 0.0378, indicating homogeneous and normal data conditions. Tax avoidance has an average of 0.2282 with a standard deviation of 0.0163, indicating small variations but not normally distributed. Meanwhile, company size has an average of 18.894 with a standard deviation of 5.910, indicating considerable variation but still normal. In general, the data is suitable for use in panel regression analysis.

Panel Regression Model Selection

Chow Test

Table 2. Chow Test

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.0537036	(5,21)	0.1122258
Cross-section Chi-square	11.942680	5	0.0355816

Source: Eviews 13 data processing

The Chi-square probability value of $0.0356 < 0.05$ indicates that the Fixed Effect model is superior to the Common Effect model. This means there are significant differences in characteristics between companies.

Hausman test

Table 3. Hausman test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.547310	3	0.314677

Source: Eviews 13 data processing

A probability value of $0.3147 > 0.05$ indicates that the Random Effects model is more appropriate than the Fixed Effects model. Based on the results of the panel regression model selection test using the Chow and Hausman tests, it was concluded that the most appropriate model for use in this study was the Random Effects Model (REM). The Chow test indicated

that the Fixed Effects model was superior to the Common Effects model due to differences in characteristics between companies. However, the Hausman test results indicated a probability value greater than the 0.05 significance level, thus the Random Effects model was deemed more efficient than the Fixed Effects model. Therefore, the panel regression model used as the basis for analysis in this study was the Random Effects Model because it was able to provide more accurate estimates according to the structure and characteristics of the panel data used.

Random Effect Model Estimation Results

The results of panel data regression estimation using the Random Effect Model show the following regression equation:

$$ETR = 0,243231 - 0,166132ROA + 0,005445DER - 0,000138SIZE$$

The constant value of 0.243231 indicates that when profitability, leverage, and firm size are held constant, the tax avoidance value, proxied by the Effective Tax Rate (ETR), is 0.2432. The profitability coefficient (ROA) of -0.166132 indicates that increasing profitability tends to decrease the ETR value, indicating that companies with higher profits tend to employ more efficient tax management strategies, although this effect is not statistically significant. The leverage coefficient (DER) of 0.005445 indicates that increasing corporate debt tends to increase the ETR value, indicating that the financing structure is not being optimally utilized as a tax savings tool.

Meanwhile, the firm size coefficient of -0.000138 indicates that the ETR value tends to decrease with increasing firm size, although this effect is very small and insignificant. Overall, the estimation results of the Random Effects model indicate that the direction of the relationship between variables is consistent with theoretical predictions for some variables, but the strength of the effect is weak and therefore does not demonstrate statistical significance. This finding indicates that variations in tax avoidance in sample companies are likely to be more influenced by other factors outside the research variables used.

Partial Test (t-Test)

Table 4. Partial Test (t-Test)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.243231	0.020116	12.090883	0.000000
PROFITABILITAS_ROA	-0.166132	0.093343	-1.779790	0.086802
LEVERAGE_DER	0.005445	0.012429	0.438156	0.664892
UKURAN_PERUSAHAAN	-0.000138	0.000572	-0.242057	0.810635

Source: Eviews 13 data processing

All independent variables do not have a significant effect on tax avoidance partially.

Simultaneous Test (F Test)

Table 5. Simultaneous Test (F Test)

R-squared	0.137270	Mean dependent var	0.153384
Adjusted R-squared	0.037724	S.D. dependent var	0.014475
S.E. of regression	0.014199	Sum squared resid	0.005242
F-statistic	1.378967	Durbin-Watson stat	2.028582
Prob(F-statistic)	0.271263		

Source: Eviews 13 data processing

Profitability, leverage, and company size together do not have a significant effect on tax avoidance.

Coefficient of Determination

The coefficient of determination is used to measure the regression model's ability to explain variation in the dependent variable, tax avoidance. Based on the Random Effects Model estimation results, the Adjusted R-squared value was 0.037724. This value indicates that profitability, leverage, and firm size only explain approximately 3.77% of the variation in tax avoidance in the sample companies, while the remaining 96.23% is influenced by factors outside the research model.

The relatively low coefficient of determination indicates that the research model has limited explanatory power. This suggests that tax avoidance practices are not solely influenced by internal company financial factors but are also likely influenced by other variables such as corporate governance, ownership structure, management policies, audit quality, and tax regulatory factors not included in the model. Therefore, although the

regression model meets the statistical testing requirements, the independent variables used are not strong enough to comprehensively explain variation in tax avoidance.

Autocorrelation Test

The autocorrelation test aims to determine whether there is a correlation between residuals across different observation periods in a regression model. A good regression model should be free of autocorrelation, as correlated residuals can lead to inefficient parameter estimation. Based on the results of the Random Effects Model regression on the research data, the Durbin–Watson value was 1.686560. This value is in the range of 1.5 to 2.5, indicating that the regression model does not experience autocorrelation.

Therefore, the model residuals are independent, and there is no systematic relationship between the confounding errors across different observation periods. This result indicates that one of the classical regression assumptions has been met, so the model can be considered appropriate and the regression estimation results are reliable.

The absence of autocorrelation also indicates that the model has good stability in explaining the relationship between the independent and dependent variables.

3.2. Discussion

The results of the study indicate that profitability, leverage, and company size do not significantly influence tax avoidance practices, either partially or simultaneously. This finding strongly indicates that corporate tax avoidance behavior is not solely determined by financial performance indicators, but is influenced by structural factors, internal policies, and external oversight mechanisms. Empirically, the low coefficient of determination confirms that the research model is only able to explain a small portion of the variation in tax avoidance, suggesting that other variables outside the model have a more dominant influence.

The Effect of Profitability on Tax Avoidance

Theoretically, high profitability increases the tax burden because taxes are calculated based on company profits. This should encourage companies to engage in tax planning strategies to minimize tax liabilities. However, research results show that profitability has no significant effect on tax avoidance. This finding can be explained through the perspective of political cost theory, which states that companies with high profits tend to be more cautious in making financial decisions that risk attracting regulatory attention. More profitable companies typically have a reputation to maintain, thus avoiding aggressive tax practices that could risk sanctions or erode investor confidence.

Furthermore, companies with high profitability generally have stronger internal control systems and better governance structures. These conditions can limit management's latitude in engaging in aggressive tax avoidance practices. Thus, while profitability

theoretically has the potential to increase incentives for tax avoidance, in practice, more profitable companies tend to be more compliant with tax regulations.

The Effect of Leverage on Tax Avoidance

Leverage is conceptually related to a company's financing structure, where the use of debt can provide tax benefits by reducing taxable profits due to interest expenses. Therefore, companies with high leverage theoretically have a greater opportunity to reduce their tax burden. However, the study results show that leverage has no significant effect on tax avoidance. This finding indicates that debt use in the sample companies is not utilized as a primary instrument for tax-saving strategies.

Corporate financing decisions are likely more influenced by operational needs, business expansion, or investment strategies than by tax considerations. Furthermore, public companies are typically under close scrutiny from investors, creditors, and regulators, making excessive use of debt for tax avoidance purposes less relevant. This situation explains why leverage has not been shown to significantly impact tax avoidance.

The Effect of Company Size on Tax Avoidance

Company size is often associated with a company's ability to conduct tax planning because larger companies have greater resources, including access to professional tax consultants and more sophisticated accounting technology. However, on the other hand, large companies also face high reputational pressures and stricter regulatory oversight. The results of this study indicate that company size has no significant effect on tax avoidance, meaning the two effects cancel each other out.

This finding indicates that company size does not directly determine a company's propensity to engage in tax avoidance. Larger companies are not necessarily more aggressive in their tax strategies because they must consider reputational risks, financial reporting transparency, and potential tax audits. Therefore, company size is not a dominant factor in explaining the variation in tax avoidance in the study sample.

Simultaneous Analysis of Independent Variables

The simultaneous test results indicate that profitability, leverage, and company size together have no significant effect on tax avoidance. This confirms that a company's financial characteristics are not the primary determinant of tax avoidance behavior. In other words, a company's decision-making regarding tax strategy is more influenced by non-financial factors not included in the research model.

These factors can include the quality of corporate governance, internal tax policies, ownership structure, external audit quality, management compliance level, and changes in tax regulations. These variables often have a greater influence on a company's tax policy

than financial ratios alone. Therefore, the results of this study emphasize the importance of incorporating institutional and governance variables in future research.

Model Feasibility Analysis

A low Adjusted R² value indicates that the model's ability to explain variations in tax avoidance is still limited. This condition does not necessarily indicate a weakness in the research, but rather indicates that tax avoidance is a complex phenomenon influenced by many factors. In empirical research in accounting and taxation, low coefficients of determination are often found because company behavior is influenced not only by quantitative variables but also by qualitative factors such as management policies and regulatory conditions.

Furthermore, the results of the autocorrelation test indicate that the regression model does not violate classical assumptions, so the parameter estimates can be considered reliable. This indicates that even though the influence of the independent variables is insignificant, the model still meets the statistical requirements for use as an analytical tool.

Synthesis of Discussion

Overall, the research findings confirm that tax avoidance practices in public companies are not primarily influenced by profitability, leverage, or company size. Tax avoidance behavior reflects managerial strategies and company policies rather than solely financial conditions. These findings reinforce the view that tax avoidance is a multidimensional phenomenon that requires a more comprehensive analytical approach that considers corporate governance, regulations, and institutional characteristics.

4. CONCLUSION

This study aims to analyze the influence of profitability, leverage, and company size on tax avoidance practices in public companies in the consumer goods industry sector during the 2020–2024 period using panel data regression. Based on the results of the model selection test, the best model was the Random Effects Model, thus all analyses were based on this model. The results showed that partially, the variables of profitability, leverage, and company size did not significantly influence tax avoidance. This indicates that the level of company profits, funding structure, and company scale are not the main determinants in determining tax avoidance practices in the sample companies. Simultaneously, the three independent variables also did not significantly influence tax avoidance, indicating that the company's financial characteristics are not able to comprehensively explain tax avoidance behavior. The low coefficient of determination value indicates that most of the variation in tax avoidance is influenced by factors other than the research model. This confirms that tax avoidance is a complex phenomenon influenced by various non-financial factors such as corporate governance, management policies, ownership structure, audit quality, and tax regulations. Furthermore, the results of the classical assumption test indicate that the regression model does not experience autocorrelation, so the resulting estimates can be considered reliable. Overall, this study concludes that profitability, leverage, and firm size are not the primary determinants of tax avoidance practices in the public companies in the study sample. This finding implies that the analysis of corporate tax avoidance behavior requires a broader approach that considers structural, institutional, and managerial policy factors to more accurately explain the phenomenon.

REFERENCES

- Atwood, T. J., Drake, M. S., Myers, J. N., & Myers, L. A. (2012). Home country tax system characteristics and corporate tax avoidance: International evidence. *The Accounting Review*, 87(6), 1831–1860.
- De Simone, L., Klassen, K. J., & Seidman, J. K. (2017). Unprofitable affiliates and income shifting behavior. *The Accounting Review*, 92(3), 113–136.
- Dyreng, S. D., Jacob, M., Jiang, X., & Müller, M. A. (2022). Tax incidence and tax avoidance. *Contemporary Accounting Research*, 39(4), 2622–2656.
- Gaaya, S., Lakhal, N., & Lakhal, F. (2017). Does family ownership reduce corporate tax avoidance? The moderating effect of audit quality. *Managerial Auditing Journal*, 32(7), 731–744.
- Hoseini, M., Safari Gerayli, M., & Valiyan, H. (2019). Demographic characteristics of the board of directors' structure and tax avoidance: Evidence from Tehran Stock Exchange. *International Journal of Social Economics*, 46(2), 199–212.
- Kovermann, J., & Velte, P. (2019). Journal of International Accounting, Auditing and Taxation. *Journal of International Accounting, Auditing and Taxation*, 36, 100270.
- Nguyen, T. T. , & & Pham, N. M. (2021). Effectiveness of Monetary Policy in Emerging Markets: Evidence from Vietnam. *International Journal of Economics and Financial Issues*, , 11(1), 10–19.
- Richardson, G., & Lanis, R. (2011). Corporate social responsibility and tax aggressiveness. *2011 American Accounting Association Annual Meeting-Tax Concurrent Sessions*.
- Salaudeen, Y. M., & Ejeh, B. U. (2018). Equity ownership structure and corporate tax aggressiveness: the Nigerian context. *Research Journal of Business and Management*, 5(2), 90–99.
- Zeng, T. (2019). Relationship between corporate social responsibility and tax avoidance: international evidence. *Social Responsibility Journal*, 15(2), 244–257.