TRANSPUBLIKA
Precise. Resilience. Felicitous.

Journal of Management, Accounting, General Finance and International Economic Issues
https://ojs.transpublika.com/index.php/MARGINAL
Online ISSN 2809-8013 | Print ISSN 2809-9222

https://doi.org/10.55047/marginal.v5i3.2172

Original Article

Profitability, Sales Growth, Leverage, and Tax Avoidance: The Moderating Role of Firm Size

Alya Budiantini[1*], Flora Septiani[2], Rima Anjalani[3], Tito Sumarsono[4]
[1-4]Universitas Pamulang, South Tangerang, Indonesia
Email: [1)] doseno02766@unpam.ac.id, [2)] floraseptiani12@gmail.com, [3)] rima22rks@gmail.com, [4)] doseno02738@unpam.ac.id

Received : 17 February - 2026
Accepted : 04 June - 2026
Published online : 25 June - 2026

Abstract

Corporate tax avoidance constitutes a persistent challenge in financial management, especially within emerging economies characterized by inconsistent regulatory frameworks and enforcement mechanisms. Within the Indonesian context, food and beverage enterprises listed on the Indonesia Stock Exchange (IDX) occupy a strategically significant position in the national economy; however, the tax compliance behavior of firms within this sector remains insufficiently examined in the existing literature. Accordingly, this study seeks to investigate the influence of profitability, sales growth, and leverage on tax avoidance, while simultaneously exploring the extent to which firm size moderates these relationships. The research is delimited to food and beverage companies listed on the IDX over the 2020-2024 observation period, employing a quantitative research design grounded in agency theory as the primary theoretical lens through which the relationships between the independent variables and tax avoidance are interpreted, with firm size serving as the moderating variable. Secondary data were collected from the audited financial statements of the sampled companies, with a total of 70 observations selected through purposive sampling. Moderated Regression Analysis (MRA) was employed as the primary analytical technique, executed using Eviews 12 software. The findings show that profitability and sales growth have a meaningful impact on tax avoidance. However, leverage does not produce a statistically significant effect. Moreover, the findings confirm that firm size acts as an important moderator, influencing how profitability, sales growth, and leverage each relate to tax avoidance.

Keywords: Firm Size, Leverage, Profitability, Sales Growth, Tax Avoidance.

1. Introduction

Taxes are the primary source of state revenue used to fund national development. The contribution of taxes to the State Revenue and Expenditure Budget (APBN) has always been paramount; thus, the sustainability of development is highly dependent on the level of taxpayer compliance, including corporations. In reality, however, many companies attempt to reduce their tax burden by implementing tax avoidance strategies. Okolo (2024) asserts that taxation serves as a fundamental pillar of state revenue, providing the primary financial basis through which governments fund public expenditure and sustain national development initiatives. In the Indonesian taxation system, a self-assessment mechanism is applied, whereby corporate and individual taxpayers bear the independent responsibility of computing, remitting, and declaring their respective tax obligations to the relevant authorities.

Tax revenue represents one of the most critical components of state income, serving as the primary mechanism through which the government finances national development programs and enhances public welfare (Norisa et al., 2022). The dominance of tax

contributions within the State Revenue and Expenditure Budget (APBN) underscores the degree to which the continuity of national development is contingent upon the effectiveness of tax collection and the compliance behavior of taxpayers, including corporate entities (Mardiasmo, 2016). Empirical data reported by the Directorate General of Taxes (DGT) indicate that tax revenue in 2020 amounted to Rp1,072.11 trillion, reflecting a contraction of 25.23% relative to the preceding year. This downturn was primarily attributable to the adverse economic consequences of the COVID-19 pandemic, which severely disrupted economic activity and eroded the government's fiscal receipts from the taxation sector. A subsequent recovery was recorded in 2021, with tax revenue rising to Rp1,278.63 trillion, representing a year-on-year growth of 19.26%, driven by the gradual restoration of national economic conditions following the pandemic. This upward trajectory gained further momentum in 2022, during which tax revenue expanded by 34.27% to reach Rp1,716.77 trillion, reflecting the effectiveness of government-led economic recovery policies and intensified efforts to optimize national tax collection (Directorate General of Taxes, 2022).

Furthermore, in 2023, tax revenue continued to increase by 8.80% to Rp1,867.87 trillion. Nevertheless, this growth rate showed a slowdown compared to the previous year. This condition became more apparent in 2024, where based on temporary realization, tax revenue was recorded at Rp1,932.4 trillion, with a growth of only 3.46% (Directorate General of Taxes, 2024). Further data released by the Ministry of Finance revealed that the cumulative realization of tax revenue through the end of December 2025 stood at Rp1,917.6 trillion, equivalent to 87.6 percent of the fiscal year 2025 APBN target of Rp2,189.3 trillion, thereby indicating that the government's tax revenue objective for that period remained unmet (Ministry of Finance, 2026).

Table 1. Tax Revenue 2021-2025

Years	Realized	Achievement (%)
2020	1,072.11	25.23%
2021	1,278.63	19.26%
2022	1,716.77	34.27%
2023	1,867.87	8.80%
2024	1,932.40	3.46%
2025	2,189.31	13.27%

Source: Ministry of Finance: Financial Note and the State Budget for Fiscal Year 2025

Extant literature has explored numerous determinants of corporate tax avoidance, encompassing profitability, sales growth, leverage, and firm size. Nevertheless, the accumulated empirical evidence remains inconclusive and contextually inconsistent. As a notable example, Dewinta and Setiawan (2016) document a positive association between sales growth and tax avoidance, whereas Swingly and Sukartha (2015) report an absence of any significant relationship. Analogous inconsistencies are observed with respect to leverage, as certain studies indicate that elevated debt levels diminish the incentive for tax avoidance, while others yield no statistically meaningful findings. Moreover, the preponderance of prior research has positioned firm size exclusively as an independent or control variable, leaving its potential moderating function in the relationship between financial performance indicators and tax avoidance substantially underexplored, particularly within the food and beverage sector in Indonesia. This literature gap provides the key motivation behind the present research. The study seeks to explore not only how profitability, sales growth, and leverage directly affect tax avoidance, but also the degree of moderation that firm size exerts on each of these relationships.

Given the background information presented earlier, this study poses research questions concerning what influences corporate tax avoidance. The investigation asks whether profitability, sales growth, and leverage collectively exert a simultaneous effect on tax avoidance. It also asks whether each variable by itself yields a positive effect on these practices. Finally, the research examines whether firm size moderates the link between each independent variable and tax avoidance.

This study aligns its primary objective with the previously stated research questions. The aim is to produce empirical findings on the determinants of corporate tax avoidance. To achieve this, the study examines how profitability, sales growth, and leverage influence tax avoidance both simultaneously and individually. The research also investigates the moderating role of firm size, specifically whether it strengthens or weakens these relationships.

The findings of this study are anticipated to yield both theoretical and practical contributions. From a theoretical standpoint, the study enriches the existing academic discourse on corporate tax behavior and extends the literature on the applicability of agency theory within the Indonesian taxation context. It is further expected to serve as a substantive reference for future scholarly inquiries into tax avoidance phenomena. From a practical perspective, the results are intended to assist corporate management in maintaining tax practices within legally and ethically permissible boundaries, support investors in evaluating tax-related risks associated with their investment portfolios, and provide the Directorate General of Taxes with empirically grounded insights to enhance regulatory oversight and strengthen national tax compliance mechanisms.

2. Literature Review

2.1. Agency Theory

The present study is anchored in agency theory, originally formulated by Meckling and Jensen (1976), which serves as the foundational theoretical framework for examining corporate tax avoidance behavior. The theory delineates the contractual relationship between principals, represented by shareholders, and agents, represented by corporate managers, wherein the latter are entrusted with decision-making authority on behalf of the former. This delegation of authority, however, inherently gives rise to conflicts of interest, as managers may be inclined to pursue personal objectives that diverge from the wealth-maximizing interests of shareholders. In the field of corporate taxation, these agency conflicts appear when managers show a tendency to use tax avoidance tactics (Brigham & Houston, 2022). They may do this either to manipulate how financial performance is reported or to reduce the company's total tax burden. Both approaches ultimately affect how financial resources are distributed between the corporation and the government. Therefore, agency theory offers a useful framework for understanding and examining the reasons behind corporate tax avoidance behavior.

2.2. Tax Avoidance

Tax avoidance encompasses legally permissible measures adopted by corporate entities to reduce their tax liabilities through the exploitation of existing gaps and ambiguities within prevailing tax regulations, without constituting a direct violation of applicable statutory provisions. Okolo (2024) emphasizes that taxation fulfills an indispensable function as the principal source of government revenue, underpinning the financing of public services and the advancement of national development agendas. In the Indonesian fiscal context, the self-assessment system confers upon taxpayers, including corporate entities, the autonomous

responsibility to compute, remit, and declare their tax obligations, a mechanism that simultaneously creates conditions conducive to tax avoidance behavior (Yasmin & Fitriyah, 2024). Tax avoidance levels are traditionally assessed through the Effective Tax Rate (ETR). A lower ETR is interpreted as reflecting a higher likelihood that a company is practicing tax avoidance. The macroeconomic significance of corporate tax avoidance is evidenced by the considerable fluctuations in annual tax revenue realizations documented by the Directorate General of Taxes throughout the 2020-2025 period, underscoring the broader fiscal implications of such corporate behavior for the sustainability of state revenues.

2.3. Profitability and Tax Avoidance

Profitability denotes a company's capacity to generate earnings in relation to its available resources, and is most commonly operationalized through the Return on Assets (ROA) ratio. A higher ROA value signifies a greater degree of efficiency in the utilization of corporate assets to produce financial returns. From the perspective of agency theory, managerial agents are inherently motivated to maximize corporate profitability; however, the attainment of higher profit levels simultaneously engenders proportionally greater income tax obligations, thereby incentivizing companies to pursue tax avoidance strategies as a means of mitigating their escalating fiscal burden. Tanjaya and Nazir (2021) contend that elevated profitability is closely associated with heightened tax avoidance tendencies among corporate entities. This assertion is corroborated by Niandari and Novelia (2022), whose findings indicate that firms exhibiting high ROA values are more predisposed to engaging in tax avoidance practices in order to curtail their overall tax expenditures. Paramita et al. (2023) further affirm this relationship, reinforcing the notion that profitable firms actively seek mechanisms to reduce their effective tax burden. Premised upon this theoretical and empirical reasoning, the following hypothesis is proposed:

H1: Profitability has a positive and significant effect on tax avoidance.

2.4. Sales Growth and Tax Avoidance

Sales growth represents the rate at which a company's revenue increases over a defined period, functioning as a key indicator of business expansion and overall operational performance. As revenue expands, operating profits tend to rise in a commensurate manner, consequently amplifying the company's income tax obligations. In order to sustain profit margins and preserve cash flow efficiency, companies experiencing rapid revenue growth are increasingly predisposed to adopting aggressive tax planning strategies. Consistent with the tenets of agency theory, corporate managers may deploy various financial mechanisms to project strong organizational performance to principals while concurrently seeking to minimize fiscal obligations to the state. Empirical support for a positive relationship between sales growth and tax avoidance is provided by Dewinta and Setiawan (2016), whose findings confirm that revenue expansion is associated with heightened tax avoidance behavior. Notwithstanding this evidence, contradictory results have been documented in the literature, as Swingly and Sukartha (2015) and Christy and Subagyo (2019) both report an absence of any statistically significant relationship between sales growth and tax avoidance. Drawing upon the prevailing theoretical rationale and the weight of empirical evidence, the following hypothesis is advanced:

H2: Sales growth has a positive and significant effect on tax avoidance.

2.5. Leverage and Tax Avoidance

Leverage refers to the extent to which a company finances its operations through debt, commonly measured by the Debt-to-Asset Ratio (DAR). From a tax perspective, interest expenses arising from debt obligations are tax-deductible, meaning that highly leveraged companies already benefit from a natural tax shield, potentially reducing their incentive to engage in further tax avoidance (Azizah, 2025). Graham (2000) notes that the existence of a debt tax shield diminishes the marginal benefit of additional tax avoidance strategies. Furthermore, Hidayat (2018) argues that higher debt levels expose companies to tighter oversight from creditors. Such oversight reduces management's freedom to adopt aggressive or risky approaches to tax planning. On the basis of this theoretical grounding, the hypothesis is as follows:

H3: Leverage does not have a significant effect on tax avoidance.

2.6. Firm Size and Tax Avoidance

Firm size is a widely recognized determinant of corporate tax behavior, typically proxied by the natural logarithm of total assets. Larger firms are generally characterized by greater operational complexity, more extensive resources, and better access to sophisticated tax planning mechanisms. According to Watts and Zimmerman (1990), large companies are more visible to regulators and tax authorities, which may either deter or stimulate tax avoidance depending on their risk tolerance and institutional capacity. Dewinta and Setiawan (2016) point out that large companies enjoy greater stability and higher profit potential, making them likely subjects of close tax monitoring. As a moderating variable, firm size is predicted to alter both the magnitude and the orientation of the relationships between profitability, sales growth, leverage, and tax avoidance.

2.7. The Moderating Role of Firm Size

Several earlier studies have investigated how firm size moderates the connection between financial variables and tax avoidance. Utomo and Fitria (2021) demonstrate that firm size strengthens the impact of profitability on tax avoidance, as larger and more profitable firms attract greater attention from tax authorities, incentivizing more intensive tax planning. In the context of sales growth, large firms experiencing rapid revenue expansion may exercise greater restraint in tax avoidance to protect their corporate reputation and avoid political costs associated with aggressive fiscal behavior. With respect to leverage, Saputra et al. (2020) and Hutapea and Herawaty (2020) provide evidence that firm size reinforces the constraining effect of leverage on tax avoidance, as large firms with significant debt burdens face heightened scrutiny from both creditors and regulators. Based on these arguments, the following hypotheses are proposed:

H4: Firm size significantly moderates the effect of profitability on tax avoidance.
H5: Firm size significantly moderates the effect of sales growth on tax avoidance.
H6: Firm size significantly moderates the effect of leverage on tax avoidance.

2.8. Conceptual Framework

Based on the theoretical foundations and empirical evidence reviewed above, this study proposes a conceptual framework in which profitability, sales growth, and leverage influence tax avoidance, with firm size as a moderating variable. Agency theory underpins this framework, explaining managers' tax avoidance behavior under conditions of information asymmetry and divergent interests between principals and agents. The framework also recognizes that firm size shapes the strength of these relationships, as larger firms possess

characteristics that can amplify or attenuate the influence of financial performance indicators on tax avoidance.

3. Methods

A quantitative research design guides this study. Secondary data were taken from the audited financial statements of IDX listed companies during the 2020-2024 observation window. The population covers 14 food and beverage companies. By applying purposive sampling as the selection method, the study obtained 70 firm year observations in total. The following inclusion and exclusion criteria were applied in the sample selection process:

A. Inclusion criteria: (1) food and beverage companies continuously listed on the IDX throughout the 2020-2024 period; (2) companies that published complete audited financial statements for all five observation years; and (3) companies that reported positive equity and did not experience net losses for more than two consecutive years during the observation period.
B. Exclusion criteria: (1) companies that were newly listed or delisted during the observation period; (2) companies with incomplete or restated financial data; and (3) companies operating as holding entities without primary food and beverage operations.

These selection criteria assured that only companies with enough, stable, and comparable financial data formed part of the study. As a result, the reliability and validity of the analysis improved. The data analysis employed both multiple linear regression and Moderated Regression Analysis (MRA). Researchers used Eviews 12 software to run all classical assumption tests, which included testing for normality, multicollinearity, heteroscedasticity, and autocorrelation.

4. Results and Discussion

4.1. Research Results

The research findings and analysis in this section explain the relationships between the research variables through a series of testing stages, including descriptive statistical analysis, selection of an appropriate panel data model, testing of model assumptions, and interpretation of the regression estimation results, in order to draw research conclusions.

Table 2. Descriptive Statistics Results

	ETR	ROA	SG	DER	SIZE
Mean	0.083151	0.050849	0.149808	0.314633	26.85201
Median	0.014606	0.046692	0.107627	0.309584	28.51518
Maximum	0.949495	0.199723	4.565403	0.635443	31.96206
Minimum	5.29E-05	0.000140	-0.908214	0.002312	15.59595
Std. Dev.	0.175250	0.042337	0.626927	0.171672	4.356823
Skewness	3.076443	1.603312	5.030228	-0.113814	-1.211.422
Kurtosis	12.57695	6.115058	36.60925	2.026838	3.732845
Jarque-Bera	377.9302	58.29255	3589.816	2.913337	18.68778
Probability	0.000000	0.000000	0.000000	0.233011	0.000087
Sum	5.820572	3.559415	10.48657	22.02430	1879.641
Sum Sq. Dev.	2.119168	0.123679	27.11962	2.033525	1309.751
Observations	70	70	70	70	70

Source: Processed data, 2026

The descriptive statistics for the 70 observations shown in Table 2 indicate that the variables ETR, ROA, SG, DER and SIZE exhibit diverse data characteristics. The SG variable has the highest level of variation, as indicated by a standard deviation of 0.626927 and a fairly wide range of values, whilst ROA shows a relatively more stable distribution of data. The skewness and kurtosis values indicate that most variables have an asymmetric distribution with a tendency for outliers, a finding reinforced by the Jarque-Bera test results, where the variables ETR, ROA, SG, and SIZE have a probability < 0.05 and are therefore not normally distributed, whereas only DER is normally distributed with a probability value of 0.233011 (>0.05). In general, the research data show varying levels of variation across each variable, with a predominance of non-normal distributions.

Table 3. Results of the Chow Test

Redundant Fixed Effects Tests
Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	3.335.441	-13,49	0.0011
Cross-section Chi-square	44.371.713	13	0.0000

Cross-section fixed effects test equation:
Dependent Variable: ETR
Method: Panel Least Squares
Date: 01/27/26 Time: 07:18
Sample: 2020 2024
Periods included: 5
Cross-sections included: 14
Total panel (balanced) observations: 70

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.994.260	0.725310	2.749.526	0.0078
ROA	-1.841.521	6.855.777	-2.686.087	0.0093
SG	0.338367	0.633860	0.533819	0.5954
DER	-3.080.295	1.433.041	-2.149.482	0.0355
SIZE	-0.063761	0.026480	-2.407.880	0.0190
ROA*SIZE	0.582877	0.241862	2.409.958	0.0189
SG*SIZE	-0.013070	0.022039	-0.593041	0.5553
DER*SIZE	0.107697	0.052526	2.050.353	0.0446
R-squared	0.302715	Mean dependent var		0.083151
Adjusted R-squared	0.223989	S.D. dependent var		0.175250
S.E. of regression	0.154380	Akaike info criterion		-0.791584
Sum squared resid	1.477.664	Schwarz criterion		-0.534613
Log likelihood	3.570.545	Hannan-Quinn criter.		-0.689512
F-statistic	3.845.183	Durbin-Watson stat		1.582.531
Prob(F-statistic)	0.001561			

Source: Processed data, 2026

Table 3 presents the Chow test results. The probability for the cross section F statistic is 0.0011, and for the cross section chi square statistic it is 0.0000. Because both probabilities are less than the 0.05 threshold, H0 is rejected. This rejection indicates that the Fixed Effects Model (FEM) is a more appropriate selection than the Common Effects Model (CEM). Thus, to accommodate variations in firm characteristics within the panel data, the study adopts a fixed effects approach and proceeds with FEM for the remaining analysis.

Table 4. Results of the 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	26.933.192	7	0.0003

Cross-section random effects test comparisons:				
Variable	**Fixed**	**Random**	**Var(Diff.)**	**Prob.**
ROA	-19.566.451	-17.744.449	133.370.729	0.8746
SG	0.284239	0.374904	0.279486	0.8638
DER	-2.684.740	-2.935.802	9.677.995	0.9357
SIZE	0.284711	-0.060487	0.059230	0.1561
ROA*SIZE	0.593546	0.558436	0.160763	0.9302
SG*SIZE	-0.012180	-0.014577	0.000334	0.8956
DER*SIZE	0.096908	0.102535	0.013845	0.9619

Cross-section random effects test equation:
Dependent Variable: ETR
Method: Panel Least Squares
Date: 01/27/26 Time: 07:19
Sample: 2020 2024
Periods included: 5
Cross-sections included: 14
Total panel (balanced) observations: 70

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-7.347.875	6.491.237	-1.131.968	0.2632
ROA	-1.956.645	1.312.953	-1.490.263	0.1426
SG	0.284239	0.751033	0.378464	0.7067
DER	-2.684.740	3.380.196	-0.794256	0.4309
SIZE	0.284711	0.244563	1.164.163	0.2500
ROA*SIZE	0.593546	0.457504	1.297.357	0.2006
SG*SIZE	-0.012180	0.026033	-0.467863	0.6420
DER*SIZE	0.096908	0.127257	0.761515	0.4500

Effects Specification			
Cross-section fixed (dummy variables)			
R-squared	0.630070	Mean dependent var	0.083151
Adjusted R-squared	0.479079	S.D. dependent var	0.175250
S.E. of regression	0.126486	Akaike info criterion	-1.054.037
Sum squared resid	0.783943	Schwarz criterion	-0.379489
Log likelihood	5.789.131	Hannan-Quinn criter.	-0.786098
F-statistic	4.172.882	Durbin-Watson stat	2.780.017
Prob(F-statistic)	0.000023		

Source: Processed data, 2026

According to Table 4, the Hausman test gives a probability of 0.0003 for the cross sectional random hypothesis. Since this figure falls under the 0.05 significance level, Ho is rejected. The Fixed Effects Model (FEM) is consequently preferred over the Random Effects Model (REM). As a result, the research adopts FEM as the optimal model. The FEM is capable of handling variations in characteristics across firms in the panel data used for the study.

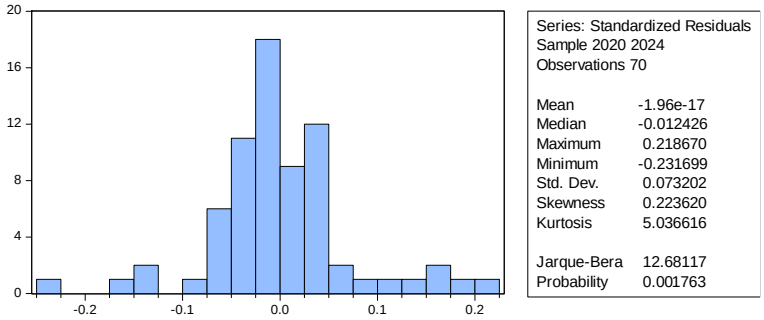

Figure 1. Results of the Normality Test
Source: Processed data, 2026

The normality test analysis based on Figure 1's residual histogram gives a Jarque-Bera value of 12.68117 and a probability of 0.001763. Since the probability falls below 0.05, the model's residuals are not normally distributed. A skewness value of 0.223620 shows the residual distribution has a mild rightward tilt, while a kurtosis value of 5.036616 reveals a distribution that is more peaked than a normal one. Nevertheless, when working with panel data that has 70 observations and employs a Fixed Effects Model (FEM) with White cross section standard errors, residual non normality is typically not a major problem provided the remaining assumptions are satisfied.

Table 5. Results of the Heteroscedasticity Test

Heteroscedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.007.523	Prob. F(7,62)	0.4348
Obs*R-squared	7.149.414	Prob. Chi-Square(7)	0.4135
Scaled explained SS	3.366.248	Prob. Chi-Square(7)	0.0000
Test Equation:			
Dependent Variable: RESID^2			
Method: Least Squares			
Date: 01/27/26 Time: 07:21			
Sample: 2020 2024			
Included observations: 70			
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.278531	0.345961	0.805092	0.4238
ROA	-2.914.376	3.270.095	-0.891220	0.3763
SG	-0.100531	0.302341	-0.332507	0.7406
DER	-0.363110	0.683537	-0.531222	0.5972
SIZE	-0.008924	0.012631	-0.706535	0.4825
ROA*SIZE	0.090227	0.115364	0.782107	0.4371
SG*SIZE	0.002859	0.010512	0.271938	0.7866
DER*SIZE	0.014696	0.025054	0.586578	0.5596
R-squared	0.102134	Mean dependent var		0.021109
Adjusted R-squared	0.000763	S.D. dependent var		0.073665
S.E. of regression	0.073637	Akaike info criterion		-2.272.130
Sum squared resid	0.336189	Schwarz criterion		-2.015.159
Log likelihood	8.752.453	Hannan-Quinn criter.		-2.170.058
F-statistic	1.007.523	Durbin-Watson stat		2.072.820
Prob(F-statistic)	0.434801			

Source: Processed data, 2026

Table 5 presents the heteroscedasticity test outcomes using the Breusch Pagan Godfrey method. The probability for Obs*R squared is 0.4135, and the Prob. F value is 0.4348. Both figures exceed the 0.05 significance level. These results lead to the acceptance of H0, which

means the research model has no heteroscedasticity problem. Therefore, the residual variance within the regression model remains relatively constant, and the model satisfies the homoscedasticity assumption. This allows the regression estimates to be used for further analysis.

Table 6. Results of the Multicollinearity Test

	ROA	SG	DER
ROA	1	-0.06426866142356204	-0.377335592070049
SG	-0.06426866142356204	1	0.06846611449245426
DER	-0.377335592070049	0.06846611449245426	1

Source: Processed data, 2026

According to the multicollinearity test outcomes in Table 6, all correlation coefficients among the independent variables fall below the 0.80 threshold. Specifically, ROA correlates with SG at -0.0643, ROA correlates with DER at -0.3773, and SG correlates with DER at 0.0685. Since no correlation value surpasses 0.80, the study concludes that multicollinearity is absent from the research model. This means the independent variables are not strongly related to one another, and the regression model can proceed to further analysis.

Table 7. Results of FEM Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.762501	0.602029	-1.266.551	0.2113
ROA	-5.662.445	0.911082	-6.215.077	0.0000
SG	0.172743	0.087510	1.973.980	0.0540
DER	-1.620.243	0.536088	-3.022.347	0.0040
SIZE	0.033751	0.022051	1.530.572	0.1323
ROA*SIZE	0.177872	0.027452	6.479.445	0.0000
SG*SIZE	-0.007419	0.002921	-2.539.755	0.0143
DER*SIZE	0.058910	0.017718	3.324.841	0.0017
Effects Specification				
Cross-section fixed (dummy variables)				
Weighted Statistics				
R-squared	0.777631	Mean dependent var		0.103525
Adjusted R-squared	0.686868	S.D. dependent var		0.139928
S.E. of regression	0.086865	Sum squared resid		0.369735
F-statistic	8.567.731	Durbin-Watson stat		2.527.344
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.586220	Mean dependent var		0.083151
Sum squared resid	0.876869	Durbin-Watson stat		2.847.858

Source: Processed data, 2026

The results of the estimation using the Fixed Effects Model (FEM) in Table 7 show that:

A. The Simultaneous Effect of Profitability, Sales Growth, and Leverage on Tax Avoidance

The findings derived from the simultaneous F-test demonstrate that the computed F-statistic yielded a value of 8.567731. With reference to the statistical distribution table at a significance threshold of 0.05, utilizing degrees of freedom df1 = 4 and df2 = 65 (derived from 70 observations minus 5 parameters), the corresponding F-table value was established at 2.51304. The F computed value (8.567731) greatly exceeds the F table value (2.51304), and the accompanying probability of 0.000000 lies far beneath the 0.05 threshold. These results firmly establish that the three independent variables, namely profitability, sales growth, and

leverage, collectively exert a significant simultaneous influence on tax avoidance behavior. As a result, the first hypothesis (H1) is empirically confirmed and accepted.

B. The Positive Effect of Profitability on Tax Avoidance

According to the t test outcomes, the profitability variable generates a t statistic of 6.215077, higher than the t table threshold of 1.99656. The corresponding probability value is 0.0000, well under the 0.05 cutoff. This evidence verifies that profitability positively and significantly influences tax avoidance. The positive directional relationship observed implies that an elevation in a firm's profitability level is systematically accompanied by a corresponding intensification of tax avoidance practices. This pattern suggests that financially high-performing enterprises demonstrate a greater propensity toward strategic tax planning as a mechanism for minimizing their fiscal obligations to the government.

Within the framework of financial analysis, profitability ratios serve as instrumental measures for evaluating a firm's capacity to generate earnings. In the present study, profitability is operationalized through the Return on Assets (ROA) metric, which quantifies a company's efficiency in generating profit relative to its total asset base. A higher ROA value is therefore indicative of superior earnings performance. From the perspective of Agency Theory, managerial agents are inherently motivated to maximize corporate profitability; however, as earnings escalate, the corresponding income tax liabilities also increase proportionally, thereby incentivizing firms to pursue tax avoidance strategies as a countermeasure. This finding is consistent with Tanjaya and Nazir (2021), who state that high profitability indicates a high level of tax avoidance. Furthermore, Paramita et al. (2023) and Niandari and Novelia (2022) also support this, concluding that companies with high ROA tend to practice tax avoidance to reduce high tax expenses.

C. The Positive Effect of Sales Growth on Tax Avoidance

According to the t test findings, the sales growth variable yields a t statistic of 3.022347, exceeding the critical value of 1.99656 from the t table. Because the associated probability of 0.0040 sits substantially below the 0.05 cutoff, the study establishes that sales growth exerts a statistically significant positive effect on tax avoidance. The positive nature of this association suggests that upward trajectories in sales performance tend to coincide with increased engagement in tax avoidance activities. This phenomenon is attributable to the fact that revenue expansion is typically proportional to the growth of operating profits, which consequently amplifies income tax obligations. In an effort to preserve profit margins and optimize cash flow efficiency, firms experiencing accelerated growth demonstrate a heightened inclination toward more assertive tax planning strategies.

The revenue performance of a business entity is subject to periodic fluctuations. An upward trend in sales growth signifies a concurrent increase in organizational earnings, which in turn magnifies the corresponding tax liabilities. Within the theoretical context of Agency Theory, organizational entities may employ diverse strategies to project favorable performance outcomes. Accordingly, firms exhibiting sustained sales growth are more predisposed to adopting tax avoidance mechanisms as a means of curtailing their tax burden. This claim finds support in the work of Dewinta and Setiawan (2016) who reported that sales growth positively affects tax avoidance. Nevertheless, this finding contrasts with studies by Swingly and Sukartha (2015) as well as Christy and Subagyo (2019), both of which concluded that sales growth does not influence tax avoidance.

D. The Effect of Leverage on Tax Avoidance

According to the t test results, the Leverage variable produces a t statistic of 1.973980, which falls below the critical t table value of 1.99656. The probability value of 0.0540 is greater than the 0.05 significance threshold, leading to the conclusion that leverage does not affect tax

avoidance. This lack of effect suggests that the amount of debt a company holds does not serve as a main consideration for management when engaging in tax avoidance. Therefore, the tax deductible interest expenses from debt may not be substantial enough to drive tax planning decisions in the sample studied. This outcome is consistent with Hidayat (2018) who notes that high debt levels invite tighter scrutiny from creditors, thereby reducing management's flexibility to perform aggressive or risky tax actions.

E. The Effect of Firm Size in Moderating the Relationship Between Profitability and Tax Avoidance

The MRA results show that Firm Size significantly strengthens the positive effect of Profitability on Tax Avoidance. This is statistically proven by a t statistic of 6.479445, which is well above the 1.99656 threshold, and a probability of 0.0000, which is far below 0.05. These findings indicate that among larger companies, the relationship between strong profitability and tax avoidance becomes even more powerful. Thus, firm size operates as an amplifying factor, reinforcing the tendency of profitable businesses to lower their tax payments.

Profitability measures management's performance in obtaining profit from operations (Indira Yuni & Setiawan, 2019). While higher profits lead to higher taxes, many companies desire high profits with low taxes (Nursehah & Yusnita, 2019). Firm size, viewed through total assets, reflects the ease of operational activities and innovation. Large companies are more stable and capable of generating profits compared to small companies (Dewinta & Setiawan, 2016). This attracts the attention of both investors and tax authorities (fiscus). Consequently, large companies generating high profits often become targets of tax scrutiny, leading them to engage more heavily in tax avoidance (Putra & Jati, 2018). This study is further supported by Utomo and Fitria (2021), who argue that firm size strengthens the impact of profitability on tax avoidance

F. The Effect of Firm Size in Moderating the Relationship Between Sales Growth and Tax Avoidance

According to the t test outcomes, the moderation variable of firm size produces a t statistic of 3.324841, higher than the 1.99656 threshold, with a probability of 0.0017, lower than 0.05. This proves that firm size significantly moderates the link between sales growth and tax avoidance. Without moderation, sales growth positively influences tax avoidance, as growing revenues lead to higher tax obligations and motivate companies to seek tax minimization. Yet when firm size serves as a moderating variable, the nature of this relationship changes direction. This indicates that firm size functions as a quasi moderator, one that not only diminishes but also reverses the positive effect of sales growth on tax avoidance for larger companies.

This reversal can be explained through the lens of political cost theory (Watts & Zimmerman, 1986), which posits that larger companies are subject to greater public scrutiny, regulatory oversight, and reputational pressure. Consequently, when a large firm experiences high sales growth, management becomes more cautious about engaging in aggressive tax avoidance, as the potential reputational and political costs outweigh the fiscal benefits. Large firms with expanding revenues are more visible to tax authorities and other stakeholders, making aggressive tax planning a reputationally risky strategy. Therefore, firm size acts as a moderating factor that transforms the otherwise positive relationship between sales growth and tax avoidance into a negative one, as larger companies prioritize institutional legitimacy and regulatory compliance over short-term tax savings during periods of sales expansion. This finding is consistent with the notion that corporate size introduces accountability constraints that temper tax aggressiveness even under conditions of strong revenue growth.

G. The Effect of Firm Size in Moderating the Relationship Between Leverage and Tax Avoidance.

According to the t test outcomes, the t statistic stands at 2.539755, higher than the 1.99656 threshold, with a probability of 0.0143, lower than 0.05. This proves that Firm Size significantly strengthens the negative influence of leverage on tax avoidance. The finding suggests that among companies with larger assets, the relationship between how much debt a firm holds and the suppression of tax avoidance grows stronger. Large firm size bolsters the company's commitment to refrain from aggressive tax avoidance, regardless of its existing debt load.

Leverage is a source of funds with fixed costs, used with the hope of providing returns greater than those costs. Large companies generally require more funds to increase production and often use debt to finance assets, as they have easier access to external credit (Dewi & Noviari, 2017). Thus, larger companies tend to have higher leverage levels. This study tests how Firm Size reinforces the influence of leverage on tax avoidance, supported by research from Saputra et al. (2020) and Hutapea and Herawaty (2020).

4.2. Discussion

The simultaneous significance of profitability, sales growth, and leverage on tax avoidance suggests that corporate tax planning decisions are shaped by multiple financial pressures at once, consistent with agency theory wherein managers respond to combined earnings, growth, and debt-related incentives simultaneously. Tax authorities should therefore adopt a holistic approach when assessing corporate tax compliance rather than focusing on individual indicators in isolation.

Profitability, measured by ROA, positively and significantly affects tax avoidance. As profits rise, income tax obligations increase proportionally, motivating management to engage in tax minimization strategies. This aligns with agency theory and is consistent with findings by Tanjaya and Nazir (2021), Paramita et al. (2023), and Niandari and Novelia (2022), who confirm that high-ROA companies are more inclined to practice tax avoidance. The financial capacity of profitable food and beverage companies to invest in sophisticated tax planning further reinforces this tendency, highlighting the need for more rigorous regulatory monitoring of high-profit firms.

Sales growth also positively and significantly affects tax avoidance, as expanding revenues raise taxable income, creating stronger incentives for tax minimization to preserve cash flows and profit margins. Based on agency theory, managers under pressure to sustain growth performance exploit available tax planning opportunities to demonstrate financial efficiency to shareholders. This is supported by Dewinta and Setiawan (2016), though it contradicts Swingly and Sukartha (2015) and Christy and Subagyo (2019), who found no significant relationship. The post-pandemic revenue recovery among food and beverage companies during 2020-2024 further intensified these incentives.

Leverage does not significantly affect tax avoidance, suggesting that debt levels are not a primary driver of tax planning in this sector. The interest tax shield already provided by debt likely reduces the marginal incentive for additional avoidance strategies, while closer creditor monitoring limits management's flexibility for aggressive tax actions, consistent with Hidayat (2018). This result reflects the context-dependent nature of the leverage-tax avoidance relationship across different industries and regulatory environments.

Firm size significantly strengthens the positive effect of profitability on tax avoidance, as larger companies possess greater resources, dedicated tax departments, and sophisticated planning capabilities that are increasingly deployed as profits grow. This compounding effect is supported by Utomo & Fitria (2021) and Putra & Jati (2018), confirming that large, highly

profitable firms present the highest risk of systematic tax avoidance. In contrast, firm size reverses the positive effect of sales growth on tax avoidance, acting as a quasi-moderator explained by political cost theory (Watts & Zimmerman, 1986), whereby larger firms facing greater public scrutiny and reputational pressure prioritize institutional legitimacy over aggressive tax planning during periods of revenue expansion. Finally, firm size strengthens the negative effect of leverage on tax avoidance, as large highly leveraged firms face rigorous creditor monitoring and already benefit from substantial interest tax deductions, creating a dual constraint mechanism that discourages tax aggressiveness, supported by Saputra et al. (2020) and Hutapea and Herawaty (2020).

5. Conclusion

This study examines how profitability, sales growth, and leverage affect tax avoidance in food and beverage companies listed on the Indonesia Stock Exchange (IDX) between 2020 and 2024, and investigates the moderating role of firm size in these relationships. Based on the analysis of 70 observations, the following conclusions are presented.

The findings confirm that profitability, sales growth, and leverage jointly have a statistically significant effect on tax avoidance. Profitability has a positive and significant effect, indicating that more profitable firms are more inclined toward tax minimization strategies to reduce their growing tax burdens. Sales growth also has a positive and significant effect, suggesting that firms experiencing revenue growth tend to adopt more aggressive tax planning to protect profit margins and liquidity. Leverage, however, shows no significant effect, suggesting that debt levels are not a major determinant of tax avoidance, likely because interest expenses already provide a sufficient tax shield. Regarding firm size as a moderating variable, the results show that it significantly strengthens the positive effect of profitability, as well as the negative effects of sales growth and leverage, on tax avoidance.

These findings proffer noteworthy contributions to extant scholarship. Theoretically, this inquiry buttresses the salience of agency theory in explicated corporate tax avoidance proclivities, particularly within nascent market economies such as Indonesia. Practically, the findings furnish cogent intelligence for the Directorate General of Taxes in delineating the fiscal profiles of enterprises most susceptible to tax avoidance, undergirding the crafting of more incisive compliance instruments. For investors, the results accentuate the pertinence of firm size and profitability as harbingers of tax-related exposure in appraising governance integrity.

Notwithstanding, this study harbors several delimitations. The sample is circumscribed to IDX-listed food and beverage companies, curtailing cross-sectoral generalizability. The 2020-2024 timeframe subsumes the COVID-19 pandemic, which may have engendered atypical perturbations in corporate financial comportment. Moreover, exclusive reliance on secondary financial data may inadequately encompass the qualitative vicissitudes of managerial tax planning deliberations. Prospective inquiries are thus exhorted to broaden sectoral coverage, assimilate governance-oriented variables such as audit quality and institutional ownership, and deploy alternative tax avoidance gauges including the Book-Tax Difference (BTD) or Cash Effective Tax Rate (CETR), alongside variegated moderating constructs, to engender a more perspicacious comprehension of corporate tax behavior in Indonesia.

6. References

Azizah, A. N. (2025). Pengaruh Leverage, Struktur Modal, Likuiditas Terhadap Tax Avoidance Pada Perusahaan Pertambangan Di Industri Minyak Dan Gas Yang Terdaftar Di Bursa Efek Indonesia. *J-CEKI : Jurnal Cendekia Ilmiah*, *4*(4), 1156–1166. https://doi.org/10.56799/jceki.v4i4.9851

Brigham, E. F., & Houston, J. F. (2022). *Fundamentals of financial management* (16th ed.). Cengage Learning.

Christy, J., & Subagyo, S. (2019). Pengaruh Firm Size, Sales Growth, dan ROA terhadap Penghindaran Pajak dengan Komite Audit sebagai Variabel Moderasi. *Jurnal Akuntansi*, *19*(2), 139–150. https://doi.org/10.36452/akunukd.v19i2.1805

Dewi, N., & Noviari, N. (2017). Pengaruh Ukuran Perusahaan, Leverage, Profitabilitas, dan Corporate Responsibility Terhadap Penghindaran Pajak (Tax Avoidance). *E-Jurnal Akuntansi Universitas Udayana*, *21*(2), 882–911.

Dewinta, I. A. R., & Setiawan, P. E. (2016). Pengaruh ukuran perusahaan, umur perusahaan, profitabilitas, leverage, dan pertumbuhan penjualan terhadap tax avoidance. *E-Jurnal Akuntansi Universitas Udayana*, *14*(3), 1584–1615.

Graham, J. R. (2000). How big are the tax benefits of debt? *The Journal of Finance*, *55*(5), 1901–1941. https://doi.org/10.1111/0022-1082.00277

Hidayat, W. W. (2018). Pengaruh Profitabilitas, Leverage dan Pertumbuhan Penjualan Terhadap Penghindaran Pajak. *Jurnal Riset Manajemen Dan Bisnis (JRMB) Fakultas Ekonomi UNIAT*, *3*(1), 19–26. https://doi.org/10.36226/jrmb.v3i1.82

Hutapea, I. V. R., & Herawaty, V. (2020). Pengaruh Manajemen Laba, Leverage dan Profitabilitas terhadap Tax Avoidance dengan Ukuran Perusahaan sebagai Variabel Moderasi (Studi Empiris pada Perusahaan Sektor Manufaktur yang terdaftar di Bursa Efek Indonesia 2016-2018). *Prosiding Seminar Nasional Pakar*. https://doi.org/10.25105/pakar.v0i0.6840

Indira Yuni, N. P. A., & Setiawan, P. E. (2019). Pengaruh Corporate Governance dan Profitabilitas terhadap Penghindaran Pajak dengan Ukuran Perusahaan Sebagai Variabel Pemoderasi. *E-Jurnal Akuntansi Universitas Udayana*, *29*(1), 128–144. https://doi.org/10.24843/EJA.2019.v29.i01.p09

Jensen, M. C., & Meckling, W. H. (1998). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.94043

Mardiasmo. (2016). *Akuntansi Sektor Publik*. Andi.

Niandari, N., & Novelia, F. (2022). Profitabilitas, Leverage, Inventory Intensity Ratio, dan Praktik Penghindaran Pajak. *Owner: Riset Dan Jurnal Akuntansi*, *6*(3), 2304–2314. https://doi.org/10.33395/owner.v6i3.911

Norisa, I., Dewi, R. R., & Wijayanti, A. (2022). Pengaruh Profitabilitas, Leverage, Likuiditas, dan Sales Growth terhadap Tax Avoidance. *Transekonomika: Akuntansi, Bisnis Dan Keuangan*, *2*(4), 107–118. https://doi.org/10.55047/transekonomika.v2i4.146

Nursehah, P., & Yusnita, H. (2019). Analisis Pengaruh Profitabilitas, Ukuran Perusahaan, Dan Kompensasi Rugi Fiskal Terhadap Tax Avoidance (Studi Empiris Pada Perusahaan Manufaktur Sub Sektor Industri Logam Yang Terdaftar Di Bursa Efek Indonesia Periode 2013-2017). *Jurnal Akuntansi Dan Bisnis Krisnadwipayana*, *6*(3), 41–51. https://doi.org/10.35137/jabk.v6i3.456

Okolo, M. N. (2024). Tax Revenues, Government Expenditures, and Economic Development in Nigeria. *International Journal of Intellectual Discourse*, *7*(2), 244–255. https://ijidjournal.org/index.php/ijid/article/view/565

Paramita, A. S., Ardiansah, M. N., Delyuzar, R. A., & Dzulfikar, A. (2023). The Analysis of Leverage, Return on Assets, and Firm Size on Tax Avoidance. *Accounting Analysis Journal*, *11*(3), 186–195. https://doi.org/10.15294/aaj.v11i3.61617

Putra, N. T., & Jati, I. K. (2018). Ukuran Perusahaan Sebagai Variabel Pemoderasi Pengaruh Profitabilitas pada Penghindaran Pajak. *E-Jurnal Akuntansi Universitas Udayana*, *25*(2), 1234–1257. https://doi.org/10.24843/EJA.2018.v25.i02.p16

Saputra, A. W., Suwandi, M., & Suhartono, S. (2020). Pengaruh Leverage dan Capital Intensity terhadap Tax Avoidance dengan Ukuran Perusahaan sebagai Variabel Moderasi (Studi pada Perusahaan Tambang yang Terdaftar di Bursa Efek Indonesia Tahun 2017–2019). *ISAFIR: Islamic Accounting and Finance Review*, *1*(2), 29–47. https://doi.org/10.24252/isafir.v1i2.17587

Swingly, C., & Sukartha, I. M. (2015). Pengaruh karakter eksekutif, komite audit, ukuran perusahaan, leverage dan sales growth pada tax avoidance. *E-Jurnal Akuntansi Universitas Udayana*, *10*(1), 47–62.

Tanjaya, C., & Nazir, N. (2021). Pengaruh Profitabilitas, Leverage, Pertumbuhan Penjualan, dan Ukuran Perusahaan terhadap Penghindaran Pajak pada Perusahaan Manufaktur Sektor Barang Konsumsi yang Terdaftar di BEI Tahun 2015–2019. *Jurnal Akuntansi Trisakti*, *8*(2), 189–208. https://doi.org/10.25105/jat.v8i2.9260

Utomo, A. B., & Fitria, G. N. (2021). Ukuran Perusahaan Memoderasi Pengaruh Capital Intensity dan Profitabilitas Terhadap Agresivitas Pajak. *Esensi: Jurnal Bisnis Dan Manajemen*, *10*(2), 231–246. https://doi.org/10.15408/ess.v10i2.18800

Watts, R. L., & Zimmerman, J. L. (1990). Positive Accounting Theory : A Ten Year Perspective. *The Accounting Review*, *65*(1), 131–158. https://doi.org/10.2308/tar-9603274032

Yasmin, A. O., & Fitriyah, F. (2024). The Effect of Sales Growth, Capital Intensity, and Leverage on Tax Avoidance. *Transekonomika: Akuntansi, Bisnis Dan Keuangan*, *4*(3), 359–373. https://doi.org/10.55047/transekonomika.v4i3.676