

TAX AVOIDANCE AS A MODERATOR OF TAX RATE, LEVERAGE, DIVIDEND POLICY, FIRM SIZE, AND FIRM VALUE

Miladi Sutanti^{*1}, Darmawati Muchtar², Rico Nur Ilham³, Ghazali Syamni⁴, Husaini⁵, Jummaini⁶

Master of Management Science Program, Faculty of Economics and Business, Universitas Malikussaleh,
Lhokseumawe, Indonesia

E-mail: darmawati@unimal.ac.id

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Abstract

This study examines the effects of effective tax rate, leverage, dividend policy, and firm size on firm value, with tax avoidance as a moderating variable, among food and beverage companies listed on the Indonesia Stock Exchange during 2020–2024. A quantitative panel-data design was applied to 57 companies selected through purposive sampling, producing 285 firm-year observations. Secondary data were obtained from annual financial reports and analyzed using EViews. Random effects models were selected for the direct-effect specifications, whereas the interaction model used fixed effects. The findings show that tax rate, dividend policy, firm size, and tax avoidance do not have significant direct effects on firm value. Leverage has a negative and significant effect at the 10% level. Tax avoidance does not moderate the relationship between tax rate and firm value, but it significantly weakens the relationships of leverage, dividend policy, and firm size with firm value. The results indicate that debt and tax-planning decisions should be evaluated jointly because aggressive tax avoidance can intensify the adverse market implications of financing and corporate-scale decisions.

Keywords: dividend policy; firm size; firm value; leverage; tax avoidance

INTRODUCTION

Manufacturing companies transform raw materials into finished goods through machinery, equipment, technology, and labor. Their activities contribute to economic growth through production, employment, investment, and tax revenue. Within manufacturing, the food and beverage subsector has a strategic position because its products are continuously demanded and because the industry remains relatively resilient during changes in the business cycle. The subsector also requires substantial financing to maintain production capacity, distribution networks, and product development. These conditions make corporate financing, taxation, dividend policy, and asset scale relevant to market valuation. Firm value reflects investors' assessment of corporate performance and future prospects. For listed companies, the measure is commonly represented by market-based indicators such as Tobin's Q or price-to-book value. A high market valuation indicates that investors expect the company to generate sustainable returns and to allocate its resources effectively (Hardiyansah et al., 2021; Larasati Br Tarigan et al., 2024). Firm value is therefore not determined only by accounting profit. It also depends on how the market interprets financial risk, tax efficiency, dividend signals, and the company's ability to use its assets productively.

Tax rate is one factor that may influence firm value. An effective tax rate describes the proportion of tax expense relative to pre-tax income and provides an indication of the effectiveness of corporate tax management. A lower effective tax rate may indicate efficient tax planning, whereas a higher rate can reduce cash available for investment and distribution. However, the market may not always treat the tax rate as a primary valuation signal, particularly when investors focus more strongly on profitability, growth, and stock performance. Previous evidence remains inconsistent. Wulandari and Stiawan (2023) emphasize the role of the effective tax rate in tax management, while other studies show that tax variables do not always affect market performance. Leverage represents the use of debt to finance corporate assets and operations. Debt may create a tax shield because interest expense reduces taxable income, but excessive debt increases financial risk and the probability of distress. The trade-off between tax benefits and distress costs implies that leverage can raise firm value only up to an optimal level. When debt exceeds the

company's capacity to generate stable cash flow, investors may interpret it as a negative signal. Empirical studies report both positive and negative effects, although evidence from emerging markets frequently shows that high leverage can reduce firm value (Evianti *et al.*, 2024; Ibrahim & Isiaka, 2020). Dividend policy concerns the proportion of earnings distributed to shareholders and the portion retained for reinvestment. Regular dividends may communicate earnings stability and reduce agency problems by limiting funds under managerial discretion. Conversely, retained earnings can support expansion and reduce reliance on external financing. The market response therefore depends on the amount of the dividend, the company's growth opportunities, and the credibility of management's signal. Studies of Indonesian companies show that dividend policy can influence firm value, but other research supports dividend irrelevance under particular market conditions (Enjelina *et al.*, 2024; Rajverma *et al.*, 2019; Tandrio & Handoyo, 2023). Firm size is generally measured by the natural logarithm of total assets. Large companies usually have broader access to financing, stronger market recognition, and more diversified operations. These advantages can improve stability and investor confidence. Nevertheless, asset size does not automatically create market value. Large assets may produce weak returns, create operational inefficiency, or increase monitoring costs. Consequently, studies have documented both positive and insignificant relationships between firm size and firm value (Ben & Chouaibi, 2023; Gharaibeh & Qader, 2017; Setiadharmha & Machali, 2017).

Tax avoidance is a legal effort to reduce tax obligations by using alternatives permitted within tax regulations. It may increase after-tax cash flow and provide resources for investment or dividend payments. At the same time, complex or aggressive tax strategies can generate legal uncertainty, reputational risk, and agency costs. Investors may regard tax savings as value-enhancing when the practices are transparent and controlled, but they may discount firm value when tax avoidance signals managerial opportunism or future tax exposure (Chen *et al.*, 2014; Guedrib & Marouani, 2023; Minh Ha *et al.*, 2021; Nebie & Cheng, 2023). The present study investigates food and beverage companies listed on the Indonesia Stock Exchange from 2020 to 2024. It analyzes the direct effects of tax rate, leverage, dividend policy, firm size, and tax avoidance on firm value and tests whether tax avoidance changes the relationships between the four financial determinants and firm value. The study responds to inconsistent empirical findings and to the limited evidence concerning tax avoidance as a moderator in the Indonesian food and beverage subsector.

LITERATURE REVIEW

Theoretical Foundation

Agency theory explains the relationship between owners as principals and managers as agents. Managers possess more detailed information about corporate conditions and may select financial or tax strategies that do not fully align with shareholder interests. Tax avoidance can increase cash flow, but it can also create opportunities for managerial discretion and hidden risk. This framework suggests that the valuation effect of tax avoidance depends on governance, transparency, and the extent to which tax savings benefit shareholders rather than managers (Chen *et al.*, 2014; Setyaningsih *et al.*, 2023).

Signaling theory holds that corporate decisions and financial reports communicate private information to investors. Dividend payments, debt levels, tax expense, and asset growth may be interpreted as signals of profitability, risk, or future prospects. Pecking order theory further predicts that companies prefer internal funds, followed by debt and then new equity because external investors face information asymmetry. Excessive dependence on debt may therefore indicate inadequate internal financing and increase perceived risk (Myers & Majluf, 1984). Trade-off reasoning adds that firms balance the tax benefits of debt against bankruptcy and agency costs. The optimal structure is reached when the marginal tax benefit equals the marginal expected cost of financial distress (Modigliani & Miller, 1958).

Relationships among Variables

Tax rate may affect firm value through after-tax income and the value of tax shields. A higher effective tax burden reduces cash retained by the company, although investors may disregard tax-rate variation when it does not materially change operating performance. Leverage can increase value through interest tax shields, but high debt raises default risk and can reduce market confidence. Dividend policy may increase value by signaling stable earnings and limiting free-cash-flow problems, yet the effect may be weak when dividends are small or when investors prioritize capital gains. Firm size may improve value through market power and financing access, but the relationship becomes insignificant when additional assets do not generate higher returns (Adi *et al.*, 2024; Hartanti *et al.*, 2025; Rantika *et al.*, 2022).

Tax avoidance may have a direct positive effect because lower tax payments increase after-tax cash flow. However, it may also be neutral or negative when legal, reputational, and monitoring costs offset the tax savings. As a moderator, tax avoidance can alter how investors interpret tax rates, debt, dividends, and firm size. Debt-based tax planning may intensify the negative effect of leverage because investors observe both higher financial risk and a stronger reliance on interest deductions. Tax avoidance can also change the credibility of dividend and size signals when distributions or large asset bases are supported by tax strategies that the market considers risky (Amalia & Yuniarwati, 2023; Shaukat *et al.*, 2025; Shubita, 2024). Based on these arguments, the study tests nine hypotheses: tax rate, leverage, dividend policy, firm size, and tax avoidance affect firm value; and tax avoidance moderates the relationships of tax rate, leverage, dividend policy, and firm size with firm value. The expected direction in the original research framework is positive for the direct relationships and for the moderating effects, although the empirical estimates determine whether each hypothesis is supported.

Agency, Signaling, and Capital-Structure Perspectives

Agency theory provides the main explanation for why corporate tax and financing decisions may affect firm value. Managers control detailed information about operating performance, financing needs, and tax positions, while shareholders observe these decisions mainly through financial statements and market disclosures. This information asymmetry creates room for managers to pursue strategies that improve reported earnings or private benefits but do not necessarily maximize shareholder wealth. In the taxation context, legal tax avoidance can preserve cash, yet it may also increase monitoring costs and expose the company to reputational or regulatory risk. The ultimate valuation effect therefore depends on whether investors regard tax planning as efficient resource management or as an indicator of managerial opportunism (Budi *et al.*, 2023; Latuconsin & Darmawati, 2024; Setyaningsih *et al.*, 2023).

Signaling theory complements the agency perspective because tax payments, debt choices, dividend distributions, and asset growth convey information to the capital market. A stable dividend may indicate confidence in future cash flow, while a sudden reduction may be interpreted as financial caution or declining profitability. Debt can signal confidence when used to finance productive investment, but high leverage can also signal financial distress. Similarly, an effective tax rate below the statutory rate may indicate efficient tax planning, although investors can react negatively when the difference appears aggressive or difficult to explain. The market interpretation of these signals determines whether corporate policies create or destroy value (Waluya & Muchtar, 2022; Andriyani & Hutabarat, 2023).

The pecking order and trade-off theories explain the expected effect of leverage. The pecking order view states that firms prefer retained earnings, followed by debt, and issue new equity only when internal funds and borrowing capacity are insufficient. This order reflects information asymmetry and the higher signaling cost of equity issuance. The trade-off view emphasizes the balance between the interest tax shield and the expected costs of financial distress. Moderate debt may increase value by lowering taxable income, whereas excessive debt raises bankruptcy risk, agency costs, and restrictions imposed by creditors. The observed relationship between leverage and value is therefore an empirical question that depends on whether the marginal tax benefit exceeds the marginal financial risk (Modigliani & Miller, 1958; Myers & Majluf, 1984).

Tax Rate, Tax Avoidance, and Firm Value

The effective tax rate represents income tax expense relative to pre-tax income and differs from the statutory corporate rate. It summarizes the combined effect of permanent differences, temporary differences, fiscal incentives, and tax-planning choices. A lower effective rate can increase after-tax cash flow, but the rate may also be influenced by losses, deferred tax items, or non-recurring transactions. Consequently, investors may not treat the effective tax rate as an independent signal unless they can identify the economic source of the variation. Prior evidence is mixed. Wulandari and Stiawan (2023) examined effective tax rates in relation to tax avoidance, while Handayani and Rachmawati (2022) showed that changes in corporate tax rates can interact with governance and audit competence. These differences justify testing the tax-rate effect directly in the food and beverage subsector.

Tax avoidance is defined in this study as a legal effort to reduce tax obligations through alternatives permitted by tax regulation. It differs from tax evasion, which involves unlawful concealment or misrepresentation. Tax avoidance may improve liquidity and support investment, debt repayment, or dividend distribution. Nevertheless, aggressive arrangements can produce additional compliance costs, uncertainty, and public criticism. Empirical studies consequently report positive, negative, and insignificant effects. Minh Ha *et al.* (2021) found a negative association in Vietnam, Nebie and Cheng (2023) documented evidence from Taiwan, and Utami *et al.* (2022) reported that tax

avoidance did not necessarily determine firm value in the Indonesian setting. This inconsistency supports its treatment as both an explanatory and moderating variable.

Leverage, Dividend Policy, and Firm Size

Leverage measures the proportion of assets financed by liabilities. Interest expense can reduce taxable income and produce a tax shield, but debt also creates fixed payment commitments. Food and beverage companies often require financing for inventories, distribution networks, production facilities, and market expansion. If debt-funded assets generate returns above the financing cost, leverage can increase shareholder value. If operating cash flow weakens, the same debt can reduce financial flexibility and raise default risk. Studies by Ibrahim and Isiaka (2020), Evianti *et al.* (2024), and Tandrio and Handoyo (2023) illustrate that the sign and significance of leverage vary across markets and model specifications.

Dividend policy determines the proportion of profit distributed to shareholders and the proportion retained for future investment. Dividend payments can reduce agency costs by limiting discretionary cash controlled by managers and can signal confidence in sustainable earnings. Conversely, a high payout can constrain internal financing and force the company to use external funds. During periods of uncertainty, management may retain earnings to protect liquidity even when the company remains profitable. Attig *et al.* (2021) showed that economic policy uncertainty influences dividend decisions, while Sari *et al.* (2022) emphasized the links among leverage, profitability, dividend policy, and firm value. This theoretical ambiguity explains why dividend policy may be significant in some samples but irrelevant in others.

Firm size is measured by the natural logarithm of total assets. Large firms commonly have broader market access, stronger bargaining power, and more diversified operations. They may also possess specialized tax departments and greater capacity to structure transactions efficiently. At the same time, large companies are subject to greater public scrutiny and can suffer more severe reputational consequences when tax practices are questioned. The positive resource effect and the negative monitoring effect may offset one another. Prior Indonesian evidence also remains inconsistent, with several studies finding positive, negative, or insignificant relationships between firm size and firm value or tax avoidance (Rantika *et al.*, 2022; Adi *et al.*, 2024; Cahyani & Wahyudi, 2025).

Research Gap and Hypotheses

The literature reveals three gaps. First, direct evidence for the food and beverage subsector remains limited even though the sector has stable consumer demand and a substantial contribution to manufacturing output. Second, earlier studies often examine tax avoidance, leverage, dividend policy, or firm size separately, which does not capture their simultaneous effect on market valuation. Third, the moderating role of tax avoidance is not yet conclusive. This study addresses these gaps by estimating direct and interaction models for 57 listed companies over 2020-2024. The hypotheses retain the directions proposed in the thesis and are summarized in Table 2.

Table 2. Research hypotheses

Code	Hypothesis
H1	Tax rate has a positive effect on firm value.
H2	Leverage has a positive effect on firm value.
H3	Dividend policy has a positive effect on firm value.
H4	Firm size has a positive effect on firm value.
H5	Tax avoidance has a positive effect on firm value.
H6	Tax avoidance moderates the tax rate-firm value relationship.
H7	Tax avoidance moderates the leverage-firm value relationship.
H8	Tax avoidance moderates the dividend policy-firm value relationship.
H9	Tax avoidance moderates the firm size-firm value relationship.

METHOD

This research uses a quantitative explanatory design with balanced panel data. The population comprises 95 food and beverage companies listed on the Indonesia Stock Exchange. Purposive sampling was applied using three criteria: the company was listed throughout 2020–2024, it published annual financial statements consecutively during the observation period, and it reported its financial statements in Indonesian rupiah. Fifty-seven companies

met the criteria, producing 285 firm-year observations. The study uses secondary data obtained from annual financial reports available through the Indonesia Stock Exchange website.

Population, Sample, and Data Collection

The sampling process follows the criteria reported in the thesis. From 95 listed food and beverage companies, 36 companies were excluded because they did not publish complete annual financial statements for every year in the observation period. Two additional companies were excluded because their financial statements were presented in United States dollars. The final sample therefore consists of 57 companies observed for five years, which forms a balanced panel of 285 firm-year observations. Table 3 presents the sampling calculation.

Table 3. Sample selection

Sampling criterion	Number
Food and beverage companies listed during 2020-2024	95
Companies without complete consecutive annual reports	(36)
Companies reporting in United States dollars	(2)
Companies included in the final sample	57
Total observations: 57 companies x 5 years	285

Financial data were collected through documentation from the annual reports available on the official Indonesia Stock Exchange website. The data items include income tax expense, profit before tax, total liabilities, total assets, dividends per share, earnings per share, outstanding shares, closing share prices, and book values. Each observation was checked against the relevant annual report before the ratios were calculated. The panel structure uses the company as the cross-sectional unit and the year as the time unit.

Variable Measurement

Firm value is proxied by Tobin's Q because the measure combines market information and accounting information. A value above one indicates that the market values the company above the recorded value of its assets. The effective tax rate is calculated as income tax expense divided by profit before tax. Leverage uses the debt-to-asset ratio, which reflects the proportion of assets financed by liabilities. Dividend policy uses the dividend payout ratio, calculated as dividends per share divided by earnings per share. Firm size is the natural logarithm of total assets. Tax avoidance is calculated as one minus the effective tax rate, so a higher value represents a lower effective tax burden and a higher intensity of tax avoidance (Gupta & Newberry, 1997, as cited in the thesis; Septiasari & Rahmawati, 2024).

Firm value is measured by Tobin's Q. Tax rate is measured by the effective tax rate, calculated as income tax expense divided by pre-tax income. Leverage is measured by the debt-to-asset ratio. Dividend policy is measured by the dividend payout ratio. Firm size is measured by the natural logarithm of total assets. Tax avoidance is calculated as one minus the effective tax rate, so a higher value indicates a greater level of tax avoidance. These measurements follow the operational definitions reported in the source study and prior literature (Fadilla & Budiantara, 2023; Hardiyansah *et al.*, 2021; Kusufiyah & Anggraini, 2022; Wulandari & Stiawan, 2023).

Table 4. Operational definition and measurement of variables

Variable	Role	Measurement	Scale
Firm value (FV)	Dependent	Tobin's Q = (market value of equity + book value of liabilities) / total assets	Ratio
Tax rate (TR)	Independent	Income tax expense / pre-tax income	Ratio
Leverage (LEV)	Independent	Total liabilities / total assets	Ratio
Dividend policy (DPR)	Independent	Dividend per share / earnings per share	Ratio

Variable	Role	Measurement	Scale
Firm size (SIZE)	Independent	Natural logarithm of total assets	Ratio
Tax avoidance (TA)	Moderator	1 – effective tax rate	Ratio

The analysis was conducted in EViews. Descriptive statistics and a correlation matrix were first examined. The Chow test was used to compare common and fixed effects, while the Hausman test was applied to select between fixed and random effects. The first model includes the four independent variables, the second adds tax avoidance as a direct predictor, and the third includes four interaction terms. Random effects were selected for Models 1 and 2, whereas fixed effects were selected for Model 3. Normality, multicollinearity, heteroskedasticity, and autocorrelation diagnostics were also evaluated in accordance with panel-data procedures (Ghozali, 2021; Gujarati & Porter, 2012; Widarjono, 2017).

Panel-Data Estimation and Diagnostic Tests

Model selection was carried out sequentially. The Chow test compares the common-effect model and the fixed-effect model. A probability below 0.05 indicates that company-specific fixed effects are required. The Hausman test then compares fixed and random effects, with a probability below 0.05 favoring fixed effects. The resulting procedure selected random effects for the two direct-effect specifications and fixed effects for the interaction specification. This approach allows the analysis to account for unobserved differences across companies while retaining the most efficient estimator supported by the statistical tests (Gujarati & Porter, 2012). The diagnostic evaluation follows the criteria specified in the thesis. Correlations among explanatory variables below 0.80 indicate that severe multicollinearity is absent. Heteroskedasticity is assessed with the Glejser procedure, and probabilities above 0.05 indicate constant residual variance. Autocorrelation is evaluated from the Durbin-Watson statistic, with values approaching two interpreted as evidence that serial correlation is not a material problem. Although the Jarque-Bera tests reject residual normality, the thesis notes that this assumption can be treated cautiously in a panel with 285 observations and heterogeneous company trends.

RESULTS AND DISCUSSION

Descriptive Statistics and Model Selection

Table 6 presents the descriptive statistics for 285 observations. Firm value has a mean of 1.4159, which is above one and indicates that the market value of the sampled firms is generally higher than the recorded value of their assets. Leverage averages 0.5209, showing that liabilities finance slightly more than half of total assets. The average dividend payout ratio is 0.2567, while firm size has a mean of 28.8461. Tax avoidance has a mean of 0.8253. The tax-rate and dividend variables show relatively high dispersion, whereas firm value, leverage, firm size, and tax avoidance have standard deviations below their means.

The minimum and maximum values reveal substantial heterogeneity among the firms. Firm value ranges from 0.3242 to 3.8332, indicating that some companies trade below the accounting value of their assets while others receive a strong market premium. The effective tax rate ranges from -9.3840 to 0.8683. The negative minimum reflects observations with unusual relationships between tax expense and pre-tax income, such as losses or tax adjustments, and explains why the tax-rate standard deviation exceeds its mean. The dividend payout ratio also has extreme values, from -6.6666 to 11.5897, because earnings per share can be small or negative in individual years. Leverage ranges from 0.0173 to 2.6416. Values above one indicate that liabilities exceed total assets and signal a weak equity position. Firm size ranges from 25.0686 to 32.9378 in natural-log terms, confirming that the sample includes companies with markedly different asset scales. Tax avoidance ranges from 0.0615 to 1.0000. The upper bound indicates observations in which the measured effective tax burden approaches zero. These distributions support the use of panel estimation because the data vary both across companies and over time.

Table 6. Descriptive statistics

Variable	Mean	Std. dev.	Maximum	Minimum	Obs.
Firm value	1.4159	0.6732	3.8332	0.3242	285
Tax rate	0.1527	0.5913	0.8683	-9.3840	285
Leverage	0.5209	0.3305	2.6416	0.0173	285
Dividend payout ratio	0.2567	0.9871	11.5897	-6.6666	285
Firm size	28.8461	1.6092	32.9378	25.0686	285
Tax avoidance	0.8253	0.1885	1.0000	0.0615	285

The correlation coefficients among the predictors are below 0.80, indicating no serious multicollinearity. As shown in Table 5, the Chow test selects fixed effects for all three specifications. The Hausman test then selects random effects for Models 1 and 2 because their probabilities are 0.0843 and 0.1342, while it selects fixed effects for Model 3 because its probability is 0.0201. The Glejser test probabilities exceed 0.05, and the Durbin–Watson statistics are close to two. The reported diagnostics therefore indicate that the selected models are not materially affected by multicollinearity, heteroskedasticity, or autocorrelation. Although the Jarque–Bera probabilities are below 0.05, the source study treats the normality requirement as nonbinding for the panel estimators.

Table 5. Panel-model selection results

Model	Test	Chi-square	Probability	Selected model
Model 1	Chow	405.7863	0.0000	Fixed effect
Model 1	Hausman	8.2069	0.0843	Random effect
Model 2	Chow	406.2501	0.0000	Fixed effect
Model 2	Hausman	8.4267	0.1342	Random effect
Model 3	Chow	402.3152	0.0000	Fixed effect
Model 3	Hausman	19.6603	0.0201	Fixed effect

Table 7. Diagnostic-test summary

Diagnostic	Criterion	Result	Interpretation
Normality	Jarque-Bera probability	0.0000 in all models	Residuals not normal
Multicollinearity	Pairwise correlation	All below 0.80	No serious multicollinearity
Heteroskedasticity	Glejser probabilities	Predictors above 0.05	No material heteroskedasticity
Autocorrelation	Durbin-Watson	1.9371; 1.9450; 1.8909	No material autocorrelation

Panel Regression Results

Table 8. Panel-data regression estimates

Variable	Model 1 (REM)	Model 2 (REM)	Model 3 (FEM)
Constant	2.2454 (1.7272)*	2.2088 (1.6843)*	2.8209 (5.1081)***
Tax rate	0.0013 (0.0337)	-0.0006 (-0.0161)	-0.0044 (-0.3299)
Leverage	-0.3314 (-1.7892)*	-0.3454 (-1.8438)*	0.3066 (2.3304)*
Dividend payout ratio	-0.0063 (-0.2553)	-0.0046 (-0.1855)	0.0143 (3.0339)**
Firm size	-0.0227 (-0.5081)	-0.0235 (-0.5222)	-0.0555 (-2.6859)*
Tax avoidance	—	0.0814 (0.5317)	4.7295 (12.7412)***
Tax rate × tax avoidance	—	—	-0.0287 (-0.2820)
Leverage × tax avoidance	—	—	-0.6259 (-3.9944)**
Dividend policy × tax avoidance	—	—	-0.0884 (-4.4294)**
Firm size × tax avoidance	—	—	-0.1502 (-11.8760)***
R-squared	0.0218	0.0229	0.9431
Adjusted R-squared	0.0122	0.0117	0.9263
F-statistic	0.8376	0.7322	55.9429***
Prob(F-statistic)	0.5022	0.5998	0.0000
Durbin–Watson	1.9371	1.9451	1.8910

Note: t-statistics are in parentheses. ***, **, and * indicate significance at 1%, 5%, and 10%, respectively.

Table 9. Summary of hypothesis testing

Hyp.	Relationship	Coefficient	Statistical result	Decision
H1	Tax rate -> firm value	0.0013	Not significant	Rejected
H2	Leverage -> firm value	-0.3314	Significant at 10%	Accepted, negative direction
H3	Dividend policy -> firm value	-0.0063	Not significant	Rejected
H4	Firm size -> firm value	-0.0227	Not significant	Rejected
H5	Tax avoidance -> firm value	0.0814	Not significant	Rejected
H6	Tax rate x tax avoidance	-0.0287	Not significant	Rejected
H7	Leverage x tax avoidance	-0.6259	Significant at 5%	Accepted
H8	DPR x tax avoidance	-0.0884	Significant at 5%	Supported by EViews output

Hyp.	Relationship	Coefficient	Statistical result	Decision
H9	Firm size x tax avoidance	-0.1502	Significant at 1%	Accepted

Direct Effects on Firm Value

The tax-rate coefficient in Model 1 is positive but statistically insignificant. This result indicates that changes in the effective tax rate do not alter firm value in the sampled companies. Investors may regard the tax burden as secondary to operating performance and stock-market prospects. The result is consistent with evidence that tax variables are not always incorporated into market valuation when they do not change expected cash flow materially (Arora & Gill, 2022; Gharaibeh & Khaled, 2020; Guedrib & Marouani, 2023; Nafti et al., 2020).

Leverage has a negative coefficient of -0.3314 and is significant at the 10% level. An increase in debt relative to assets therefore reduces firm value. The finding supports the pecking order argument that companies should rely on internal funds before using debt and indicates that investors view high leverage as a source of financial risk. It is consistent with evidence that excessive debt lowers firm value in emerging markets (Evianti et al., 2024; Ibrahim & Isiaka, 2020; Myers & Majluf, 1984).

Dividend policy does not have a significant direct effect. The result suggests that the payout ratio is not the principal criterion used by investors to assess the sampled firms. Dividend amounts may be too small or too unstable to provide a credible valuation signal, particularly when investors focus on capital gains and business growth. This finding aligns with studies that document dividend irrelevance under specific market conditions (Priya & Mohanasundari, 2016; Rajverma et al., 2019; Rehman, 2016).

Firm size is also statistically insignificant in the direct-effect model. Total assets describe the scale of corporate resources, but they do not necessarily indicate how effectively those resources generate market returns. A large asset base may therefore fail to increase valuation when profitability and asset productivity remain limited. Similar insignificant relationships have been reported in earlier studies (Ben & Chouaibi, 2023; Gharaibeh & Qader, 2017; Setiadharmas & Machali, 2017).

Tax avoidance has a positive but insignificant coefficient in Model 2. The result indicates that legal tax planning neither increases nor decreases firm value directly. Investors may consider the practice acceptable as long as it remains within regulatory boundaries and does not create observable legal or reputational risk. This interpretation is consistent with findings that tax avoidance can be neutral when tax savings and associated agency costs offset one another (Guedrib & Marouani, 2023; Nafti et al., 2020; Utami et al., 2022).

Moderating Role of Tax Avoidance

The interaction between tax rate and tax avoidance is negative but insignificant. Tax avoidance therefore does not change the relationship between tax rate and firm value. The market appears not to combine the two tax indicators into a distinct valuation signal. This result is plausible when both variables are considered routine components of financial reporting and do not materially change investor confidence (Amalia & Yuniarwati, 2023; Chen et al., 2014).

The leverage interaction is negative and significant at the 5% level. Tax avoidance weakens the relationship between leverage and firm value, which means that the adverse effect of debt becomes stronger as tax avoidance increases. Debt is often used to create interest deductions, but investors may interpret a combination of high leverage and intensive tax planning as a sign of greater financial and regulatory risk. The finding supports evidence that tax avoidance and financing decisions are interdependent and that debt-related tax strategies can reduce market value when they increase perceived risk (Shaukat et al., 2025; Shubita, 2024).

The interaction between dividend policy and tax avoidance is negative and significant at the 5% level in the reported EViews output. This finding indicates that tax avoidance weakens the relationship between dividend policy and firm value. Dividend payments may become a less credible positive signal when the market believes that distributable cash is supported by aggressive tax planning rather than sustainable operating performance. The result reinforces the need to evaluate dividend decisions together with the quality and transparency of tax strategies.

The interaction between firm size and tax avoidance is negative and significant at the 1% level. Tax avoidance therefore weakens the relationship between company size and firm value. Large firms have more resources and more complex structures for tax planning, but they also face greater public and regulatory scrutiny. When tax avoidance rises, investors may discount the advantages of a large asset base because of potential tax exposure, monitoring costs, and reputational consequences. Overall, the interaction results show that tax avoidance functions as a pure moderator for leverage, dividend policy, and firm size because its direct effect is insignificant while the interaction terms are significant.

Integrated Discussion of Direct Effects

The insignificant tax-rate coefficient indicates that the market does not treat variation in the effective tax burden as a separate determinant of value. Effective tax rates are influenced by accounting losses, deferred tax adjustments, incentives, and permanent differences. Investors may therefore find the ratio difficult to interpret without more detailed disclosure. The result is consistent with studies reporting that tax-related measures do not always explain market performance when investors focus more strongly on profitability, growth, and operating risk (Gharaibeh & Khaled, 2020; Nafti et al., 2020). It also supports the argument that a low effective tax rate is not automatically viewed as evidence of superior management. Leverage is the only direct predictor that is statistically significant in Model 1, and its coefficient is negative. The finding implies that the financial-risk component of debt is greater than the value of the interest tax shield in this sample. Food and beverage operations require working capital and fixed assets, but high debt creates mandatory interest and principal payments regardless of sales conditions. During 2020-2024, companies also faced disruptions associated with the pandemic and subsequent adjustments in costs and demand. Under these conditions, investors appear to discount companies with higher debt ratios. The result is consistent with the pecking order interpretation and with evidence that excessive leverage reduces firm value in emerging markets (Ibrahim & Isiaka, 2020; Evianti et al., 2024).

The dividend-policy result supports the dividend-irrelevance argument within the observed setting. The absence of a direct effect does not mean that dividends are unimportant to shareholders. It means that differences in payout ratios do not explain differences in Tobin's Q after the other financial variables are considered. Investors may prefer capital gains, may view retained earnings as necessary for growth, or may consider dividend payments too irregular to form a reliable valuation signal. The wide range of the payout ratio also indicates that negative or very small earnings can produce extreme values. This measurement characteristic can weaken a stable relationship between dividends and firm value (Rajverma et al., 2019; Priya & Mohanasundari, 2016).

Firm size does not directly determine value, which indicates that asset scale and market valuation capture different dimensions. Total assets show the resources controlled by a company, but Tobin's Q reflects expectations about how productively those resources will be used. A large asset base can increase production capacity, yet it can also create higher maintenance costs, organizational complexity, and slower adjustment. The market consequently rewards the efficiency and profitability of assets rather than their absolute amount. This interpretation is consistent with evidence that company size can be insignificant when performance and capital structure are modeled simultaneously (Gharaibeh & Qader, 2017; Setiadharmas & Machali, 2017).

Tax avoidance also lacks a significant direct effect. Legal tax planning can increase available cash, but the amount saved may be too small to alter market valuation or may already be reflected in reported earnings. Investors may also regard legal avoidance as a routine administrative practice rather than a strategic advantage. The finding is consistent with Utami et al. (2022) and with the argument that tax avoidance affects value only when it changes risk, disclosure quality, or other corporate policies. This result is important because it prevents the conclusion that a higher tax-avoidance measure automatically creates shareholder wealth.

Integrated Discussion of Moderating Effects

The tax-rate interaction is not significant, so tax avoidance does not change the relationship between the effective tax rate and firm value. Both measures originate from closely related tax information, and the market may not distinguish their separate interaction without additional disclosure. A lower tax burden can result from incentives, losses, or timing differences, not only from deliberate avoidance. This ambiguity limits the interaction's ability to explain valuation differences. The result also suggests that investors do not penalize or reward the effective tax rate merely because the measured level of tax avoidance is high.

The leverage interaction is negative and significant. Tax avoidance therefore intensifies the adverse valuation effect of debt. One explanation is that companies can use debt and interest deductions to reduce taxable income. When a company already has high leverage, an additional tax-avoidance strategy linked to financing may signal that management is prioritizing tax savings over financial resilience. The combination increases complexity, creditor monitoring, and the risk that cash flow will be insufficient for fixed obligations. Shubita (2024) and Shaukat et al. (2025) similarly emphasize that the value effect of tax avoidance depends on financing and governance conditions. In the present model, tax avoidance functions as a pure moderator because it is insignificant as a direct predictor but significant in the leverage interaction.

The EViews output reports a negative and significant interaction between dividend policy and tax avoidance. This statistical result means that a higher level of tax avoidance weakens the relationship between dividend payout and firm value. Tax savings may provide cash that can be distributed, but investors can question the sustainability of

dividends when the underlying cash depends on tax arrangements rather than operating performance. A company that simultaneously increases avoidance and dividends may also retain fewer resources for investment or future tax contingencies. The result should be interpreted carefully because the narrative and conclusion in the source thesis contain inconsistent statements regarding H8, whereas the coefficient and probability in the reported EViews table support significance.

The firm-size interaction is negative and significant at the 1% level. Larger companies have more resources to plan taxes, but they also face stronger scrutiny from regulators, investors, and the public. When tax avoidance rises, the advantages normally associated with scale can be offset by concerns about complexity, transparency, and reputational exposure. The result does not imply that large firms necessarily engage in unlawful behavior. It indicates that the market valuation of asset scale becomes less favorable when the measured intensity of legal tax avoidance is higher. This pattern is consistent with agency theory because information asymmetry and monitoring costs can increase in large and organizationally complex companies.

Theoretical and Practical Implications

The study contributes to agency, signaling, and capital-structure research in three ways. First, it confirms that the tax shield is not sufficient to make debt value enhancing when financial risk is high. Second, it shows that tax avoidance is more informative as a contextual variable than as a direct predictor. Third, it demonstrates that the market response to tax planning depends on the policy with which it is combined. These findings explain why previous studies report inconsistent direct effects: tax avoidance can be neutral on average while materially altering the valuation consequences of leverage, dividends, and firm size.

For managers, the results emphasize the need to evaluate tax efficiency together with financing risk and disclosure quality. Reducing tax payments should not be pursued through arrangements that require excessive debt or make financial statements difficult to interpret. Dividend decisions should be supported by sustainable operating cash flow rather than temporary tax savings. Large companies should strengthen tax governance, documentation, and communication because their scale increases public visibility. For investors, leverage deserves particular attention when assessing food and beverage companies. A high debt-to-asset ratio combined with a high tax-avoidance measure may indicate greater downside risk even when reported profit remains positive.

Limitations and Future Research

The study is limited to 57 companies and a five-year period. The observation window includes unusual economic conditions, so the coefficients may not represent longer-term relationships. The model also uses a limited set of financial variables and a single proxy for each construct. Effective tax rates can be affected by losses and deferred tax items, while Tobin's Q may respond to macroeconomic and market-wide factors not included in the equations. Future research can extend the period, compare manufacturing subsectors, distinguish current and cash effective tax rates, and include profitability, sales growth, corporate governance, ownership structure, and macroeconomic controls. Robustness checks using alternative leverage and firm-value measures would also clarify the stability of the findings.

CONCLUSION

This study analyzes 57 food and beverage companies listed on the Indonesia Stock Exchange during 2020–2024, comprising 285 firm-year observations. The results show that the effective tax rate, dividend policy, firm size, and tax avoidance do not have significant direct effects on firm value. Leverage has a negative and significant effect at the 10% level, indicating that a higher debt-to-asset ratio reduces market valuation. Tax avoidance does not moderate the relationship between tax rate and firm value. It does, however, significantly weaken the relationships of leverage, dividend policy, and firm size with firm value based on the reported interaction estimates.

The findings imply that managers should be cautious when combining debt financing and tax-avoidance strategies. Tax savings may improve short-term cash flow, but the market may impose a valuation discount when those savings are associated with higher financial risk or reduced transparency. Dividend decisions should also be supported by sustainable operating performance rather than by temporary tax savings. For investors, leverage deserves particular attention because it is the only variable with a significant direct effect and its negative influence becomes stronger when tax avoidance increases.

The study is limited by the five-year observation period, the relatively small number of companies that meet the sampling criteria, and the use of a restricted set of financial variables. Future research should extend the period,

compare different industries, and incorporate governance, profitability, growth, and macroeconomic variables. Alternative measures of tax avoidance may also be used to test the robustness of the moderating effects.

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