

Corporate Governance, Capital Intensity, And Tax Avoidance: Evidence From Food And Beverage Firms On The IDX (2019–2023)

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Abstract

This study investigates the influence of corporate governance mechanisms and capital intensity on tax avoidance in food and beverage companies listed on the Indonesia Stock Exchange (IDX) during 2019–2023. Corporate governance is represented by managerial ownership, institutional ownership, and independent commissioners, while capital intensity reflects investment in fixed assets. Using purposive sampling, 10 firms were selected, producing 35 panel data observations analyzed with the Fixed Effect Model (FEM). The results reveal that, partially, managerial ownership, institutional ownership, independent commissioners, and capital intensity have no significant effect on tax avoidance, but simultaneously these variables significantly influence tax avoidance, indicating that governance mechanisms and structural characteristics are more effective when considered collectively rather than individually. These findings are consistent with agency theory, which emphasizes the role of governance structures in reducing agency problems, and also support prior empirical studies in emerging markets. The study contributes by providing sector-specific evidence from the Indonesian food and beverage industry and offers practical insights for managers, investors, and regulators to strengthen governance frameworks, limit opportunistic tax practices, and ensure sustainable corporate compliance.

Keywords: Corporate governance, capital intensity, tax avoidance, food and beverage, Indonesia.

JEL Classification: G32, G34

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Introduction

Taxation plays a crucial role as the primary source of government revenue and as a policy instrument to regulate economic stability. Despite growing awareness of tax compliance, corporate tax avoidance practices remain prevalent across industries. Tax avoidance refers to a legal effort to minimize tax obligations through regulatory loopholes, which remains controversial as it reduces potential government revenue while technically adhering to the law.. This issue is particularly relevant in emerging economies like Indonesia, where tax revenue plays a crucial role in fiscal sustainability..

Corporate governance mechanisms are considered one of the key factors influencing corporate behavior regarding tax strategies. Strong governance structures, reflected through managerial ownership, institutional ownership, and the presence of independent commissioners, are expected to enhance transparency, accountability, and compliance. However, weak governance may provide room for opportunistic managerial actions that could increase the likelihood of aggressive tax avoidance.

On the other hand, capital intensity, which refers to the proportion of fixed assets relative to total assets, can also shape corporate tax policies. A high level of capital intensity may reduce taxable income through depreciation expenses, thus potentially lowering the effective tax rate. Consequently, capital structure and asset composition can indirectly encourage or discourage tax avoidance practices.

The F&B companies in Indonesia provides an interesting context for this study. As one of the fastest-growing industries listed on the Indonesia Stock Exchange (IDX), companies in this sector contribute significantly to national economic growth and tax revenues. However, given the competitive business environment and pressure to maximize profits, firms may engage in tax planning strategies that border on avoidance.

Although previous studies have examined the effect of corporate governance and capital intensity on tax avoidance, most focused on broader manufacturing samples (e.g., Darsani & Sukartha, 2021; Febri, 2019) or reported mixed empirical results, with some confirming significant relationships (Iqbal et al., 2022), while others found none (Windasari & Merkusiwati, 2019). Moreover, few studies explicitly address this issue within a single sub-

sector, such as food and beverage, where ownership patterns, capital structures, and monitoring mechanisms differ substantially. This gap indicates the need for sector-specific evidence to clarify whether governance and structural characteristics jointly influence tax avoidance in highly competitive consumer industries.

Therefore, this study aims to examine the effect of corporate governance and capital intensity on tax avoidance in F&B companies listed on the IDX during the period 2019–2023. By focusing on this industry, the research contributes to a deeper understanding of the interaction between governance mechanisms, investment in fixed assets, and tax avoidance behavior in emerging markets. The findings are expected to provide valuable insights for regulators in strengthening corporate governance policies and for firms in balancing efficiency with ethical and transparent tax practices.

Although numerous studies have examined the influence of corporate governance and capital intensity on tax avoidance, most have focused on the manufacturing sector in general without distinguishing the characteristics of specific subsectors. Moreover, empirical findings in Indonesia remain inconsistent—some studies report a significant relationship between managerial ownership and tax avoidance, while others find no such link. These inconsistencies suggest that sectoral context may influence the effectiveness of governance mechanisms in constraining tax avoidance practices. Therefore, this study fills the gap by analyzing the food and beverage (F&B) sector specifically, which is characterized by high capital intensity, intense market competition, and unique ownership structures in Indonesia. This approach is expected to provide deeper insights into the synergistic role of corporate governance and asset structure in shaping firms' tax behavior. Therefore, this study aims to examine the effect of corporate governance and capital intensity on tax avoidance in F&B companies listed on the IDX during the period 2019–2023.

Literature Review

Theoretical Background

Agency Theory (Jensen & Meckling, 1976) emphasizes the conflict of interest between principals (shareholders) and agents (managers). Managers may act opportunistically to maximize their own welfare, including through earnings manipulation or tax avoidance. Effective corporate governance mechanisms (such as managerial ownership, institutional ownership, and independent commissioners) are designed to reduce agency problems by aligning managerial actions with shareholders' interests and by enhancing monitoring and accountability.

Political Cost Theory (Watts & Zimmerman, 1986) provides a complementary explanation by suggesting that large or capital-intensive firms face higher political visibility and public scrutiny. Consequently, they may either attempt to minimize their effective tax burden through depreciation benefits or refrain from aggressive tax avoidance to avoid negative political attention. These theories jointly provide the conceptual foundation for examining how governance structures and capital intensity shape tax behavior within firms.

Despite these theoretical expectations, prior empirical findings remain inconsistent across contexts and industries. Therefore, combining these two perspectives enables a more comprehensive understanding of firm behavior, particularly in emerging economies such as Indonesia, where governance reforms and tax transparency are still evolving.

Empirical Evidence and Hypothesis Development

Managerial Ownership and Tax Avoidance

Empirical findings on the relationship between managerial ownership and tax avoidance are inconclusive. Febri (2019) found no significant relationship, indicating that managerial equity participation does not always prevent opportunistic actions, possibly due to low ownership proportions in Indonesian firms. Agency theory, however, suggests that higher managerial ownership should align managerial and shareholder interests, thereby discouraging aggressive tax avoidance. Recent studies provide mixed evidence: Sulistiyanto (2024) found that managerial ownership has a significant negative effect on tax avoidance, suggesting that higher managerial ownership reduces tax avoidance. In contrast, several studies reported no significant effect of managerial ownership on tax avoidance, including Widiastutik et al. (2025) in manufacturing companies, Manalu & Andesto (2025) in consumer subsector companies, Prawaati (2024) in energy sector firms, and Rahma & Masripah (2024) in companies listed on the Indonesia Stock Exchange. These findings indicate that the influence of managerial

ownership on tax avoidance may depend on firm characteristics, industry context, and other moderating factors.

H1: Managerial ownership has an effect on tax avoidance in F&B companies listed on the IDX during 2019–2023.

Institutional Ownership and Tax Avoidance

Institutional investors, given their substantial shareholdings, are expected to enhance corporate monitoring. Studies by Darsani and Sukartha (2021) and Iqbal et al. (2022) found that institutional ownership significantly reduces tax avoidance, supporting the monitoring hypothesis of agency theory. However, Windasari and Merkusiwati (2019) reported insignificant effects, implying that institutional investors may not always prioritize tax compliance in emerging markets. These mixed findings suggest that the role of institutional ownership in curbing tax avoidance may depend on investor type and monitoring effectiveness.

H2: Institutional ownership has an effect on tax avoidance in F&B companies listed on the IDX during 2019–2023.

Independent commissioners contribute to board effectiveness by providing objective oversight and ensuring transparency. Empirical studies, such as Darsani & Sukartha (2021), Iqbal et al. (2022), Ardiana (2025), Dewi & Oktaviani (2021), Bangsawan, Amiruddin, & Husain (2025), Jennifer (2025), Purwanto (2025), and Windasari & Merkusiwati (2019), highlight that strong board independence tends to reduce opportunistic managerial behaviors, including tax avoidance. Some studies found that independent commissioners have a significant impact on reducing tax avoidance, while others reported no significant effect, suggesting that board independence may be moderated by industry characteristics, firm size, or regulatory environment. From the agency perspective, independent commissioners enhance accountability and improve compliance with tax regulations. Nevertheless, in some Indonesian firms, independence is formal rather than substantive, reducing their effectiveness in influencing tax policy decisions.

H3: Independent commissioners have an effect on tax avoidance in F&B companies listed on the IDX during 2019–2023.

Capital Intensity and Tax Avoidance

Capital intensity refers to the ratio of fixed assets to total assets, influencing tax outcomes through depreciation. Studies by Darsani & Sukartha (2021) and Dewi & Oktaviani (2021) show that capital-intensive firms often enjoy legitimate tax shields, which may lower the effective tax rate without resorting to aggressive avoidance. However, some studies found no significant effect of capital intensity on tax avoidance, suggesting that fiscal incentives, industry-specific regulations, and other firm characteristics may moderate this relationship (Windasari & Merkusiwati, 2019; Bangsawan, Amiruddin, & Husain, 2025; Jennifer, 2025; Purwanto, 2025). Under political cost theory, firms with high capital intensity might avoid aggressive tax strategies to reduce regulatory scrutiny.

H4: Capital intensity has an effect on tax avoidance in F&B companies listed on the IDX during 2019–2023.

Corporate Governance, Capital Intensity, and Tax Avoidance (Simultaneous Effect)

While individual effects appear inconsistent, several studies indicate that corporate governance and capital intensity jointly determine tax behavior. Integrating agency theory and political cost theory, a comprehensive framework suggests that firms with stronger governance structures and efficient asset composition are more capable of balancing profit goals and compliance obligations. This study extends previous research by focusing specifically on the F&B companies, which has distinctive ownership concentration and capital allocation patterns, thereby addressing a gap in sectoral evidence within emerging markets.

H5: Corporate governance (proxied by managerial ownership, institutional ownership, and independent commissioners) and capital intensity simultaneously affect tax avoidance in F&B companies listed on the IDX during 2019–2023.

Research Method

This study applies a quantitative research design with a descriptive-verify approach, aiming to empirically examine the effect of corporate governance and capital intensity on tax

avoidance. The research focuses on F&B companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023.

The population of this study consists of all F&B companies listed on the IDX. Using purposive sampling, ten companies were selected based on specific criteria, namely: consistently being listed during the observation period, publishing complete annual reports and financial statements, and providing the necessary information for measuring research variables. The data used in this study are secondary data, obtained from companies' annual reports and audited financial statements available on the IDX official website as well as on the respective companies' official portals. Data collection was carried out through documentation and literature review.

The dependent variable in this research is tax avoidance, which is measured by the Effective Tax Rate (ETR). ETR is calculated by dividing income tax expense by pre-tax income, where a lower ETR indicates a higher level of tax avoidance. The independent variables are corporate governance and capital intensity. Corporate governance is proxied by three indicators: managerial ownership, measured as the percentage of company shares owned by managers; institutional ownership, measured as the percentage of company shares owned by institutional investors; and independent commissioners, measured as the proportion of independent commissioners relative to the total number of commissioners. Meanwhile, capital intensity is measured by the ratio of fixed assets to total assets.

To test the hypotheses, panel data regression analysis was employed with the assistance of EViews statistical software. Prior to the regression test, several classical assumption tests were conducted to ensure the reliability of the model, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. The general regression model is expressed as follows:

$$TA_{it} = \alpha + \beta_1 MO_{it} + \beta_2 IO_{it} + \beta_3 IC_{it} + \beta_4 CI_{it} + \epsilon_{it}$$

Where tax avoidance (TA_{it}) of firm iii in year ttt is influenced by managerial ownership (MO_{it}), institutional ownership (IO_{it}), independent commissioners (IC_{it}), and capital intensity (CI_{it}).

Hypothesis testing was conducted using both the F-test to determine the simultaneous effect of the independent variables on tax avoidance, and the t-test to examine the partial effects. A 5% significance level ($\alpha=0.05$) was applied in deciding whether to accept or reject each hypothesis.

Table 1 Operational Variables

Variable	Dimension / Measurement Indicator		Scale	Reference
Dependent Variable				
Tax Avoidance (TA)	Effective Tax Rate (ETR)	$ETR = \frac{\text{Income Tax Expense}}{\text{Pre-Tax Income}}$	Ratio	Pohan (2016); Suandy (2022)
Independent Variables				
Managerial Ownership (MO)	Percentage of shares owned by managers and directors	$MO = \frac{\text{Shares owned by managers}}{\text{Total outstanding shares}} \times 100\%$	Ratio	Febri (2019)
Institutional Ownership (IO)	Percentage of shares owned by institutional investors (e.g., banks, insurance companies, pension funds)	$IO = \frac{\text{Shares owned by institutions}}{\text{Total outstanding shares}} \times 100\%$	Ratio	Darsani & Sukartha (2021)
Independent Commissioners (IC)	Proportion of independent commissioners in the board of commissioners	$IC = \frac{\text{Number of independent commissioners}}{\text{Total commissioners}} \times 100\%$	Ratio	Pambudi, Nurhasanah & Widyastuti (2023)
Capital Intensity (CI)	Ratio of fixed assets to total assets	$CI = \frac{\text{Fixed Assets}}{\text{Total Assets}}$	Ratio	Siboro & Santoso (2021)

Source : Self-processed

Results and Discussions

Results

Before conducting regression analysis, descriptive statistics were used to provide an overview of the research variables. This analysis aims to identify the distribution, minimum and maximum values, mean, and standard deviation of each variable observed during the 2019–2023 period. The descriptive statistics help to illustrate the characteristics of managerial ownership, institutional ownership, independent commissioners, capital intensity, and tax avoidance (measured by Effective Tax Rate/ETR) in F&B companies listed on the Indonesia Stock Exchange (IDX).

The summary of descriptive statistics for all variables is presented in Table 2 below.

Tabel 2 Descriptive Statistics

Variable	Mean	Maximum	Minimum	Std. Dev.	Observations
Tax Avoidance	0.240000	0.334000	0.172000	0.036798	35
Managerial Ownership	0.168971	0.560000	0.000000	0.212768	35
Institutional Ownership	0.505143	0.728000	0.214000	0.137145	35
Independent Commissioners	0.399200	0.667000	0.000000	0.161342	35
CI (Capital Intensity)	1.045629	26.27600	0.016000	4.393553	35

Source: Authors' calculation based on financial statements from IDX (2019–2023) and processed using EViews 12.

The descriptive statistics in Table 2 provide an overview of the distribution of the research variables based on 35 firm-year observations from F&B companies listed on the Indonesia Stock Exchange (IDX) during 2019–2023.

The results show that the average Effective Tax Rate (ETR), used as a proxy for tax avoidance, is 0.24 (24%), with a minimum of 0.172 and a maximum of 0.334. This suggests that, on average, the companies pay taxes below the statutory tax rate in Indonesia, indicating the presence of tax avoidance practices.

For managerial ownership (CGPM), the mean is 0.168 (16.8%), with values ranging from 0.000 to 0.560. This indicates that managerial ownership in most companies is relatively low, and in some firms, managers hold no shares at all. Such a low level of ownership may reduce the alignment between managers' and shareholders' interests.

Institutional ownership (CGPI) has a mean value of 0.505 (50.5%), with a minimum of 0.214 and a maximum of 0.728. This shows that institutional investors hold a significant portion of company shares, implying that monitoring by institutional shareholders is relatively strong.

The proportion of independent commissioners (CGPK) averages 0.399 (39.9%), with values between 0.000 and 0.667. This reflects that most companies comply with regulatory requirements mandating at least 30% of commissioners to be independent, although there is variation across firms.

Finally, capital intensity (CI) records a mean of 1.045, with a minimum of 0.016 and a maximum of 26.276. The high standard deviation (4.393) indicates a large disparity in asset structures across companies, where some rely heavily on fixed assets while others do not. This wide variation suggests that capital intensity may affect tax strategies differently depending on the firm's asset profile.

Overall, the descriptive statistics reveal that tax avoidance exists in the sampled companies, managerial ownership is generally low, institutional ownership is relatively dominant, the proportion of independent commissioners meets regulatory standards, and capital intensity shows substantial variability across firms.

Table 3 Fixed Effect Model (FEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C (Constant)	0.349468	0.093547	3.735735	0.0010
CGPM (Managerial Ownership)	-0.251289	0.161088	-1.559956	0.1319
CGPI (Institutional Ownership)	-0.098448	0.136002	-0.723874	0.4761
CGPK (Independent Commissioners)	-0.039167	0.066435	-0.589555	0.5610

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CI (Capital Intensity)	-0.001570	0.001338	-1.173647	0.2521

Source: Authors' calculation based on financial statements from IDX (2019–2023) and processed using EViews 12.

The regression analysis using the Fixed Effect Model (FEM) shows that the overall model is statistically significant, as indicated by the probability value of the F-statistic (0.0393), which is below the 5% significance level. This result implies that corporate governance variables (managerial ownership, institutional ownership, and independent commissioners) together with capital intensity jointly influence tax avoidance in F&B companies listed on the IDX during 2019–2023.

However, when examined individually, none of the independent variables have a statistically significant effect on tax avoidance. Managerial ownership shows a negative coefficient (-0.251289) with a probability value of 0.1319, indicating that although higher managerial ownership tends to reduce tax avoidance, the effect is not statistically significant. Institutional ownership also has a negative coefficient (-0.098448) with a probability of 0.4761, suggesting that institutional investors may contribute to reducing tax avoidance practices, but the relationship is weak and insignificant.

Similarly, the proportion of independent commissioners demonstrates a negative but insignificant relationship with tax avoidance (coefficient -0.039167, $p = 0.5610$). This finding suggests that the presence of independent commissioners has not been fully effective in curbing opportunistic tax practices in the sampled companies. Capital intensity, which is expected to influence tax avoidance through depreciation expenses, also shows a negative coefficient (-0.001570) but remains statistically insignificant ($p = 0.2521$).

The coefficient of determination (Adjusted R^2) is 0.2897, meaning that approximately 28.9% of the variation in tax avoidance can be explained by the independent variables in the model, while the remaining 71.1% is influenced by other factors not included in this study, such as profitability, leverage, firm size, and external regulatory pressures.

Overall, these findings indicate that while corporate governance and capital intensity collectively influence tax avoidance, their individual effects are not strong enough to be

statistically significant. This suggests that other internal and external factors may play a more dominant role in determining tax avoidance practices in the F&B companies.

Table 4 Classical Assumption Test Summary

No	Test	Method / Statistic	Result (Value)	Decision / Interpretation
1	Normality	Jarque–Bera (standardized residual histogram)	Jarque-Bera = 0.892583, Prob = 0.639997	Prob > 0.05 → Residuals are normally distributed.
2	Multicollinearity	Bivariate correlation among independent variables (correlation matrix)	All absolute correlations < 0.8 (e.g., CGPM–CGPI = -0.664; CGPK–CGPI = -0.279; CI– CGPM = -0.131).	No serious multicollinearity detected among independent variables.
3	Heteroskedasticity	White Test	F-stat = 1.937845 (Prob F(14,20)=0.0860); Obs*R- squared = 20.14741 (Prob Chi- Sq(14)=0.1256).	Prob (Obs*R-sq) > 0.05 → No heteroskedasticity (residual variance is homogeneous).
4	Autocorrelation	Run Test (panel data)	R ² (probability) = 0.412, greater than $\alpha = 0.05$.	Prob > 0.05 → No autocorrelation detected.

Source: Authors' calculation based on financial statements from IDX (2019–2023) and processed using EViews 12.

The results of the classical assumption tests indicate that the regression model used in this study is valid and reliable for further analysis. First, the **normality test** using the Jarque–Bera statistic shows a probability value of 0.639997, which is greater than the 0.05 significance level. This result confirms that the residuals are normally distributed, fulfilling the normality assumption.

Second, the **multicollinearity test** through the correlation matrix reveals that the correlation coefficients among independent variables are all below the threshold of 0.8. This finding suggests that there is no serious multicollinearity problem, meaning that the independent variables can be analyzed simultaneously without distorting the regression results.

Third, the **heteroskedasticity test** using the White Test produces an Obs*R-squared probability of 0.1256, which exceeds the 0.05 level of significance. This indicates that the

residual variance is homogeneous, implying that the model does not suffer from heteroskedasticity issues.

Lastly, the **autocorrelation test** based on the run test yields a probability value of 0.412, which is greater than 0.05. This confirms that the residuals are free from autocorrelation, and thus the regression model is considered appropriate for use with the panel data analyzed in this study.

In summary, all four classical assumption tests (normality, multicollinearity, heteroskedasticity, and autocorrelation) demonstrate that the regression model satisfies the necessary statistical requirements, thereby strengthening the credibility of the subsequent hypothesis testing and regression results.

Table 5 Panel Data Tests

No	Test	Method / Statistic	Result (Value)	Decision / Interpretation
1	Chow Test (Common Effect vs Fixed Effect)	F-statistic	F = 3.926506, Prob = 0.0071	Prob < 0.05 → Fixed Effect Model (FEM) is more appropriate than Common Effect Model (CEM).
2.	Hausman Test (Fixed Effect vs Random Effect)	Chi-Square statistic	Chi-Sq = 17.819836, Prob = 0.0013	Prob < 0.05 → Fixed Effect Model (FEM) is more appropriate than Random Effect Model (REM).

Source: **Source: Authors' calculation based on financial statements from IDX (2019–2023) and processed using EViews 12**

The results of the Chow Test indicate that the F-statistic is 3.926506 with a probability value of 0.0071, which is lower than the 0.05 significance level. This suggests that the Fixed Effect Model (FEM) is more appropriate than the Common Effect Model (CEM). In other words, there are significant individual (cross-sectional) effects in the data that cannot be captured by the CEM. Therefore, FEM is a better fit because it controls for heterogeneity across entities by allowing each cross-sectional unit to have its own intercept.

Subsequently, the Hausman Test was conducted to determine whether the FEM or the Random Effect Model (REM) is more suitable. The test produced a Chi-Square statistic of 17.819836 with a probability value of 0.0013, which is again below the 0.05 threshold. This

outcome indicates that the FEM is more appropriate than the REM, as the null hypothesis of no systematic difference between the estimators is rejected. In practical terms, this means that unobserved heterogeneity is correlated with the explanatory variables, making FEM the consistent and reliable estimator.

In conclusion, based on both the Chow Test and Hausman Test, the Fixed Effect Model (FEM) is the most appropriate panel data regression model for this study. This choice ensures that firm-specific differences are accounted for, leading to more accurate and valid estimation results.

Discussions

The results of the Chow and Hausman tests indicate that the Fixed Effect Model (FEM) is the most appropriate specification for this study. The Chow Test ($\text{Prob} < 0.05$) confirms that firm-level heterogeneity is statistically significant, making FEM superior to the Common Effect Model (CEM). Similarly, the Hausman Test ($\text{Prob} < 0.05$) rejects the null hypothesis that there is no systematic difference between estimators, implying that unobserved firm-specific factors are correlated with the independent variables. Consequently, FEM is considered more suitable than the Random Effect Model (REM) for controlling unobserved heterogeneity (Sarwono, 2025; Suteja, 2023).

From a theoretical perspective, this finding aligns with Agency Theory (Jensen & Meckling, 1976), which posits that conflicts of interest between principals and agents differ across firms depending on ownership concentration, board structure, and incentive mechanisms. These firm-specific governance characteristics are not random but systematically related to corporate decision-making processes, including tax strategy choices. FEM effectively captures within-firm variations by controlling for time-invariant factors such as managerial culture, governance style, and monitoring intensity. This methodological approach ensures that observed effects are attributable to genuine firm-level behavior rather than cross-sectional variation.

Consequently, the estimated coefficients in FEM reflect within-firm effects over time, isolating the true influence of changes in managerial ownership, institutional ownership, independent commissioners, and capital intensity on tax avoidance. This strengthens the internal validity of the empirical results, ensuring that observed relationships are not driven by cross-sectional bias but by authentic behavioral and structural dynamics within each firm.

Empirical findings reveal that managerial ownership, institutional ownership, independent commissioners, and capital intensity do not exert significant partial effects on tax avoidance. This suggests that, although these factors theoretically influence managerial decision-making, their individual effects are insufficient to alter firms' tax behavior. One possible explanation is that managerial ownership levels in the food and beverage (F&B) sector remain relatively low, with a mean of 16.8%, limiting the degree of incentive alignment between managers and shareholders. In such cases, managers may prioritize operational efficiency over long-term tax strategy optimization (Widiastutik, 2025).

Similarly, while institutional ownership tends to enhance monitoring, many institutional investors in Indonesia adopt short-term financial performance perspectives, thereby focusing on profitability rather than governance compliance. Studies by Widiastutik (2025) and Suteja (2023) support this view, showing that institutional oversight in the Indonesian context may not translate into significant reductions in opportunistic tax behavior if investors are primarily concerned with short-term returns.

The insignificant influence of independent commissioners could be attributed to the limited expertise or authority of boards in enforcing tax compliance oversight. In some firms, independent commissioners serve more as formal regulators rather than active governance agents. This indicates that the mere presence of independent commissioners does not guarantee effective monitoring unless complemented by sufficient competence, independence, and engagement in financial policy review (Sarwono, 2025). This finding aligns with prior literature suggesting that formal independence without substantive participation is insufficient to curb managerial discretion in tax-related decisions.

Regarding capital intensity, its lack of significance implies that differences in asset composition may not strongly drive tax behavior in this industry. Food and beverage firms generally follow similar accounting standards and depreciation methods regulated by tax authorities, which reduces variability in effective tax rates across companies. Consequently, tax avoidance behavior in this sector may be more influenced by profitability, leverage, or management discretion than by asset structure (Suteja, 2023). These results underscore the sector-specific nature of tax planning behavior, where external regulations and standardized accounting practices may limit the effectiveness of individual firm-level governance mechanisms.

Overall, these results reinforce the notion that corporate governance mechanisms are more effective when operating collectively rather than individually. This finding is consistent with agency theory's view that multi-layered governance structures jointly mitigate agency conflicts. The lack of significant effects of each variable individually highlights the importance of complementary governance mechanisms, where managerial ownership, institutional oversight, board independence, and asset structure collectively shape managerial behavior and tax compliance.

Empirical studies focusing on the Indonesian F&B sector from 2019 to 2024 provide additional support for the selection of FEM in this research. Analyses examining corporate governance, ownership structure, and profitability among listed F&B companies consistently found that fixed effects capture firm-specific variations more accurately than pooled or random specifications. Such variations are largely attributed to structural and strategic differences across firms, including supply chain integration, market orientation, ownership concentration, and family control, which significantly influence managerial behavior and financial outcomes (Widiastutik, 2025; Sarwono, 2025).

Given these firm-level idiosyncrasies, FEM offers more reliable estimations because it controls for unobserved heterogeneity that remains constant over time but differs across firms. In contrast, REM assumes that such heterogeneity is uncorrelated with explanatory variables, which is often unrealistic in the Indonesian context, where governance mechanisms and ownership identities are strongly interlinked. Therefore, employing FEM is theoretically justified and empirically consistent with prior research on governance–performance relationships within this industry (Suteja, 2023; Sarwono, 2025).

Further, studies by Widiastutik (2025) highlight that the joint consideration of managerial and institutional ownership is crucial in understanding tax avoidance behaviors. While individually these ownership structures may not yield significant effects, together they shape incentives, oversight, and monitoring practices that influence managerial decisions. This emphasizes the need for integrated governance frameworks in policy design and corporate practice, particularly in emerging market contexts such as Indonesia.

In conclusion, the selection of the Fixed Effect Model is supported by both statistical diagnostics and theoretical reasoning. FEM effectively controls for unobserved heterogeneity across firms, captures within-firm dynamics over time, and isolates the influence of managerial ownership, institutional ownership, independent commissioners, and capital intensity on tax

avoidance. The empirical findings, showing no significant individual effects, suggest that governance mechanisms must operate collectively to meaningfully influence managerial tax behavior. These insights contribute to a deeper understanding of how ownership structures, board composition, and firm-specific characteristics interact to shape tax compliance in Indonesia's food and beverage sector.

Interpretative and Managerial Implications

First, the results derived from the Fixed Effect Model (FEM) should be interpreted as within-firm effects, meaning that the estimated coefficients represent how changes in governance variables (such as managerial ownership, institutional ownership, or the proportion of independent commissioners) affect tax avoidance behavior over time within the same firm, rather than across different firms. This interpretation underscores the importance for corporate managers to prioritize internal governance reforms and consistency in policy implementation to improve transparency and compliance.

Second, the rejection of the Random Effect Model (REM) through the Hausman Test indicates that unobserved firm-specific factors, such as ownership concentration, managerial style, or dividend policy, are correlated with explanatory variables. This correlation implies that governance interventions cannot be universally applied across all companies. Instead, governance frameworks should be context-specific, recognizing that each firm possesses distinct organizational cultures, ownership identities, and strategic orientations that shape managerial decision-making and tax behavior.

Finally, the suitability of FEM for the F&B sector reinforces the agency theory perspective, which posits that governance structures are instrumental in mitigating agency conflicts within firms. For regulators and policymakers, this finding emphasizes the necessity of developing governance standards that account for firm-level heterogeneity and the varying effectiveness of oversight mechanisms across industries. For corporate managers, it highlights the strategic value of strengthening internal governance mechanisms (such as board independence, managerial shareholding, and transparent disclosure practices) to align managerial incentives with shareholder interests and sustain long-term corporate competitiveness.

Conclusion

The regression results indicate that, partially, managerial ownership, institutional ownership, independent commissioners, and capital intensity do not have a significant effect on tax avoidance in food and beverage companies in Indonesia. This suggests that when observed individually, each of these governance mechanisms or firm characteristics is not strong enough to influence management's decision-making related to tax avoidance practices.

However, the simultaneous test shows that these variables collectively have a significant effect on tax avoidance. This finding implies that the interaction of governance mechanisms and firm structural factors plays a more important role in shaping tax-related strategies. In other words, while none of the variables are dominant on their own, together they form a governance environment that can either encourage or constrain tax avoidance practices.

This outcome is consistent with agency theory, which highlights that conflicts of interest between managers and shareholders may affect corporate tax policies. Effective governance requires the integration of multiple mechanisms working in synergy rather than relying on a single factor. Empirical studies on Indonesian manufacturing and food and beverage firms during 2019–2024 also support this result, showing that corporate tax avoidance is more strongly influenced by the combined effect of governance and firm characteristics rather than by any single determinant.

Overall, these findings underline the importance of strengthening corporate governance in a comprehensive manner to reduce tax avoidance and foster sustainable tax compliance.

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