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Industry Matters: The Impact of Business Nature on Tax Avoidance and Financial Fraud Dynamics

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ABSTRACT

This study investigates the effect of tax avoidance (TA) on financial statement fraud (FD) and examines the moderating role of the nature of industry (NI) among publicly listed companies in Indonesia from 2021 to 2024. Using a sample of 150 firm-year observations from manufacturing and service sectors, the analysis employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate both direct and moderated relationships. The results reveal that TA has a positive and significant influence on FD, suggesting that aggressive tax strategies increase the likelihood of fraudulent financial reporting. Furthermore, NI significantly moderates this relationship, with higher industry complexity and discretion strengthening the TA–FD link. These findings support agency theory and the fraud triangle framework, indicating that managerial opportunism, facilitated by industry characteristics, can escalate fraudulent behaviors. This study provides important implications for regulators, auditors, and policymakers to incorporate both firm-specific and industry-level risk indicators in fraud prevention strategies.

Keywords: Tax Avoidance; Financial Statement Fraud; Nature of Industry; Agency Theory; Fraud Triangle; PLS-SEM; Indonesia Stock Exchange

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh penghindaran pajak (tax avoidance / TA) terhadap kecurangan laporan keuangan (financial statement fraud / FD) serta menguji peran moderasi karakteristik industri (nature of industry / NI) pada perusahaan publik yang terdaftar di Indonesia selama periode 2021–2024. Penelitian ini menggunakan sampel sebanyak 150 observasi perusahaan-tahun yang berasal dari sektor manufaktur dan jasa. Metode analisis yang digunakan adalah Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menguji hubungan langsung maupun hubungan yang dimoderasi. Hasil penelitian menunjukkan bahwa penghindaran pajak berpengaruh positif dan signifikan terhadap kecurangan laporan keuangan. Temuan ini mengindikasikan bahwa strategi penghindaran pajak yang agresif dapat meningkatkan kemungkinan terjadinya manipulasi dalam pelaporan keuangan. Selain itu, karakteristik industri terbukti memoderasi secara signifikan hubungan antara penghindaran pajak dan kecurangan laporan keuangan, di mana tingkat kompleksitas industri dan besarnya ruang diskresi manajerial memperkuat hubungan tersebut. Temuan ini mendukung agency theory dan kerangka fraud triangle, yang menegaskan bahwa perilaku oportunistik manajemen, ketika difasilitasi oleh karakteristik industri tertentu, dapat meningkatkan risiko terjadinya kecurangan. Penelitian ini memberikan implikasi penting bagi regulator, auditor, dan pembuat kebijakan untuk mempertimbangkan indikator risiko baik pada tingkat perusahaan maupun industri dalam merancang strategi pencegahan kecurangan yang lebih efektif.

Kata Kunci: *Penghindaran Pajak; Kecurangan Laporan Keuangan; Karakteristik Industri; Teori Keagenan; Fraud Triangle; PLS-SEM; Bursa Efek Indonesia*

INTRODUCTION

Tax avoidance and financial statement fraud represent two of the most critical challenges to corporate governance and financial integrity. Although tax avoidance can be legally justified as part of strategic tax planning, its aggressive forms often blur the boundary between lawful and unethical behavior. When firms manipulate financial

statements to disguise or justify their tax positions, tax avoidance may evolve into a form of deceptive reporting (Wang et al., 2022). Financial statement fraud, in contrast, involves deliberate misrepresentation or omission intended to mislead stakeholders, threatening investor confidence, market transparency, and regulatory compliance ((Sadjiarto et al., 2020); (Nadhifah & Arif, 2020); (Amah et al., 2022)). Understanding the intersection of these two behaviors is essential for developing more effective frameworks to safeguard corporate accountability and ensure the integrity of financial disclosures.

The practical significance of this issue extends to regulators, investors, and auditors who rely on early detection of red flags to mitigate financial misconduct. Tax avoidance strategies can serve as potential indicators of fraudulent reporting, particularly in industries where complex financial structures and accounting flexibility provide opportunities for manipulation (Khuong et al., 2020). From an academic standpoint, examining the link between tax avoidance and financial statement fraud advances the literature by integrating perspectives from corporate governance, taxation, and fraud detection. Such integration enables a more comprehensive understanding of how managerial incentives, ethical rationalizations, and institutional pressures converge to produce financial misrepresentation.

Despite extensive studies on tax avoidance and financial statement fraud as separate phenomena, research remains limited on how industry characteristics influence the relationship between them ((Zhang & Zhang, 2021); (Manry et al., 2023)). Industry-specific factors such as regulatory intensity, asset structure, and market competitiveness may either amplify or constrain the tendency of firms to engage in both tax avoidance and fraudulent reporting (Lestari, 2023). This study therefore aims to examine the effect of tax avoidance on financial statement fraud while assessing the moderating role of industry characteristics in shaping this relationship. Focusing on publicly listed companies across multiple sectors during the 2020–2024 period, this research seeks to provide empirical evidence on how contextual industrial factors contribute to variations in corporate misconduct, offering insights for more targeted regulatory oversight and governance reforms.

Literature Review

Tax avoidance has been extensively examined within the fields of corporate governance, financial transparency, and risk management. While tax avoidance remains legal when conducted within regulatory boundaries, its aggressive forms have been linked to unethical corporate practices such as earnings manipulation and fraudulent reporting (Wang et al., 2022). Firms engaging in high levels of tax avoidance may deliberately adjust financial statements to obscure the uncertainty and risk embedded in their tax strategies (Nguyen et al., 2023). From the perspective of Agency Theory, managers acting as agents may exploit information asymmetry to pursue personal or organizational gain through opportunistic tax behavior, often at the expense of shareholder interests. This principal agent misalignment provides incentives for managers to distort reported performance to conceal risk-taking or inefficiency. Consequently, tax avoidance may not only reflect efficient fiscal management but also serve as a signal of broader financial misconduct. In the modern era, the digitalisation of tax systems including e filing, blockchain based audits, and AI driven tax monitoring has introduced new challenges, increasing both transparency and the sophistication of concealment techniques. This dual effect makes the examination of tax avoidance and its potential link to fraud particularly relevant in today's evolving regulatory environment.

Financial statement fraud, as defined by Wijaya & Indriyani (2025), refers to intentional misrepresentation or omission of material facts in financial reporting designed to mislead users of financial information. Such misconduct often arises under pressures to meet market expectations, exploit accounting loopholes, or disguise operational weaknesses. Prior studies have indicated that complex tax strategies can act as both the motivation and the mechanism for financial misreporting (Zhang et al., 2022). Within the Agency Theory framework, fraudulent reporting can be viewed as a direct manifestation of agency conflict, wherein managers exploit discretionary accounting power to achieve self-serving objectives. In this regard, tax avoidance may become a vehicle for opportunistic financial reporting, blurring the boundary between legality and ethics. This theoretical connection suggests that tax avoidance and financial fraud are structurally interlinked rather than coincidental, sharing similar behavioral and informational roots. Moreover, in the wake of ongoing global tax reforms, such as Base Erosion and Profit Shifting (BEPS) initiatives and international data-sharing mechanisms, examining this nexus is increasingly important as firms adapt to heightened compliance standards and cross-border transparency expectations.

The nature of the industry has emerged as a crucial contextual factor influencing both tax behavior and financial misconduct. Industry-specific attributes such as asset intensity, regulatory oversight, and market competitiveness play a determining role in shaping corporate practices and managerial discretion (Zucman, 2024). Firms in highly regulated industries tend to face stricter compliance controls and greater external scrutiny, thereby reducing opportunities for misconduct. Conversely, sectors characterized by high accounting discretion or complex transactions provide fertile ground for manipulation (Tandean & Winnie, 2016). In agency terms, industries with greater information asymmetry or weaker governance mechanisms tend to amplify managerial opportunism, reinforcing the link between tax avoidance and fraud. Accordingly, incorporating industry characteristics as a moderating variable enhances theoretical precision by accounting for contextual variability in corporate behavior. Furthermore, the growing digitalisation of financial reporting and real time tax analytics has heightened the significance of industry context in identifying firms that exploit digital loopholes versus those adhering to compliance standards. Despite previous progress, existing studies have rarely integrated these constructs into a unified model that tests how industry factors condition the relationship between tax avoidance and financial statement fraud. Addressing this research gap, the present study proposes a framework that examines the interplay among tax avoidance, financial statement fraud, and industry characteristics, contextualized within the modern landscape of tax digitalisation and global compliance reforms.

Hypothesis Development

The relationship between tax avoidance and financial statement fraud can be explained through the lens of the *fraud triangle* theory, which emphasizes pressure, opportunity, and rationalization as drivers of fraudulent behavior (Ratmono et al., 2020). Tax avoidance, particularly in its aggressive form, may create the *opportunity* and *incentive* for financial misrepresentation. When companies implement complex tax strategies, they often operate in a gray area of accounting judgment and disclosure, which can simultaneously be used to conceal fraudulent activities in financial reports (Saraswati & Agustina, 2022). This intertwining of tax avoidance with earnings manipulation suggests that the higher the level of tax avoidance, the greater the likelihood of financial statement fraud, as both activities may leverage similar accounting flexibility and opacity (Harman & Bernawati, 2021).

The moderating role of the nature of the industry is grounded in the concept of *institutional theory*, which posits that external environments such as regulatory oversight, competitive pressures, and asset intensity shape corporate conduct (Renaldo & Veronica, 2024). In industries with greater accounting discretion, such as service-based or intangible asset–heavy sectors, managers may have more flexibility to engage in earnings manipulation without triggering detection. Conversely, in highly regulated or asset-intensive industries, stronger oversight and clearer asset valuation rules may constrain such activities ((Duan et al., 2024); (Rahman et al., 2020)). This variation suggests that the strength of the relationship between tax avoidance and financial statement fraud depends on industry specific factors, making it essential to test the moderating role of industry characteristics in this context. The theoretical and empirical evidence support the development of the following hypotheses:

H1: Tax avoidance has a positive and significant effect on financial statement fraud. Firms that engage in higher levels of tax avoidance are more likely to manipulate financial statements, as both activities rely on similar managerial discretion and opportunities for earnings distortion.

H2: The nature of the industry has a positive and significant effect on financial statement fraud. Industries characterized by higher accounting discretion and lower regulatory scrutiny tend to exhibit greater risks of financial misreporting.

H3: The nature of the industry moderates the relationship between tax avoidance and financial statement fraud, such that the positive association between tax avoidance and financial statement fraud is stronger in industries with higher accounting discretion and weaker in industries with higher regulatory oversight.

RESEARCH METHODS

This study employs a quantitative research design to examine the relationship between tax avoidance and financial statement fraud, with the nature of the industry serving as a moderating variable. The research adopts an explanatory approach to empirically test the proposed relationships using statistical analysis. Partial Least Squares–Structural Equation Modeling (PLS-SEM) is utilized because it is suitable for analyzing complex causal relationships and moderating effects involving latent constructs, even when data do not follow a normal distribution or when sample sizes are moderate.

The population of this study comprises all publicly listed non-financial companies on the Indonesia Stock Exchange (IDX) during the five years from 2020 to 2024. The initial population consists of approximately 780 firms across various sectors, including manufacturing, mining, infrastructure, consumer goods, and technology. From this population, a purposive sampling technique is employed to select firms that meet specific criteria: (1) availability of complete and audited financial statements for the years 2020–2024; (2) disclosure of tax expense and cash tax paid data required for tax avoidance measurement; and (3) clear industry classification information based on IDX sector categories. After applying these criteria, the final sample comprises 250 firms, yielding 1,250 firm-year observations (250 firms × 5 years). This sample is considered adequate for PLS-SEM analysis, as it exceeds the minimum requirement based on the "10-times rule" for structural models with multiple indicators and interactions.

Tax avoidance (TA) is measured using two primary indicators widely adopted in prior literature: the Effective Tax Rate (ETR) and the Cash Effective Tax Rate (CETR). The ETR is calculated as total tax expense divided by pre-tax accounting income, while the CETR is calculated as cash taxes paid divided by pre-tax accounting income. Lower ETR and CETR

values indicate higher levels of tax avoidance, reflecting managerial efforts to minimize tax liabilities through legal or aggressive tax planning strategies.

Financial statement fraud (FF) is detected using the Beneish M-Score model, which integrates eight financial ratios Days' Sales in Receivables Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), Sales Growth Index (SGI), Depreciation Index (DEPI), Sales, General, and Administrative Expenses Index (SGAI), Leverage Index (LVGI), and Total Accruals to Total Assets (TATA) to estimate the likelihood of earnings manipulation. Firms with an M-Score greater than -2.22 are classified as likely manipulators, while those below the threshold are considered non-manipulators. Additional indicators, such as financial restatements or enforcement actions, are used as supplementary evidence to enhance reliability.

The moderating variable, Nature of Industry (NI), is conceptualized as a multidimensional construct that captures the structural and regulatory attributes of each industry, influencing managerial discretion and compliance behavior. Drawing upon Lestari (2023) and Wang and Liu (2022), NI is measured through three quantifiable indicators: (1) Asset Intensity (AI): total fixed assets divided by total assets, reflecting the capital intensity of operations; (2) Regulatory Intensity (RI): a dummy variable coded as "1" for highly regulated industries (such as finance, utilities, and healthcare) and "0" for less regulated industries; and (3) Market Competition (MC): proxied by the Herfindahl–Hirschman Index (HHI) calculated from industry-level market share concentration, where lower HHI values indicate higher competition and greater strategic pressure.

These indicators collectively capture how structural, regulatory, and competitive characteristics vary across industries, providing an empirically grounded framework for testing the moderating role of NI on the relationship between tax avoidance and financial statement fraud. This operationalization ensures the moderation hypothesis is both theoretically justified and statistically measurable.

Data analysis is performed using SmartPLS 4 software. The analytical procedure involves two sequential stages. The first stage, measurement model assessment, evaluates indicator reliability, internal consistency (Cronbach's Alpha, Composite Reliability), convergent validity (Average Variance Extracted or AVE), and discriminant validity (Heterotrait–Monotrait ratio, HTMT). The second stage, structural model assessment, examines collinearity (VIF), path coefficients, coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and the statistical significance of hypothesized relationships using bootstrapping with 5,000 subsamples.

Moderation analysis is conducted by creating an interaction term (TA × NI) within the PLS-SEM framework to test whether industry characteristics influence the strength or direction of the relationship between tax avoidance and financial statement fraud. A significant interaction term would indicate that the relationship between tax behavior and fraudulent reporting varies depending on the industry's structural and regulatory context. Robustness tests are conducted using alternative tax avoidance measures (e.g., long-run cash ETR) and fraud detection proxies (e.g., F-Score) to ensure the consistency and reliability of the findings.

This methodological framework allows for a rigorous and comprehensive examination of the direct and moderating effects between tax avoidance, financial statement fraud, and the nature of industry. By focusing on the 2020–2024 period marked by heightened tax transparency initiatives, digitalization of reporting systems, and post-pandemic corporate governance reforms this study contributes timely empirical evidence on how evolving

industry structures shape corporate tax and reporting behavior in the modern economic landscape.

RESULTS AND DISCUSSION

Results

Descriptive Statistics

The results of the descriptive analysis for the main variables Tax Avoidance (TA), Financial Statement Fraud (FF), and Nature of Industry (NI) are presented in Table 1. All variables are expressed in ratio form to ensure comparability and consistency across firms and industries.

Table 1. Descriptive Statistics (Ratio-Based)

Variable	Mean	Median	Min	Max	Std. Deviation	Skewness	Kurtosis
Tax Avoidance (TA)	0.215	0.247	0.000	0.612	0.128	0.046	0.428
Financial Statement Fraud (FF)	-1.992	-2.030	-3.850	1.480	1.112	0.285	-0.913
Nature of Industry (NI)	0.073	0.058	-0.520	0.870	0.165	-0.754	1.264

Source: Processed Data, 2025

The descriptive statistics in Table 1 provide key insights into the characteristics and variability of the data. For Tax Avoidance (TA), the mean ratio of 0.215 is slightly lower than the median (0.247), suggesting a minor left-skewed distribution, as supported by a skewness value of 0.046. The minimum value of 0.000 indicates that certain firms report no observable tax avoidance, whereas the maximum value of 0.612 reflects considerable variation among firms in managing their effective tax burdens. The kurtosis value of 0.428, slightly above zero, implies a distribution marginally more peaked than normal, suggesting moderate concentration around the mean.

For Financial Statement Fraud (FF), measured using the Beneish M-Score, the mean value of -1.992 and median of -2.030 indicate a distribution centered near the manipulation threshold (-2.22). The positive skewness (0.285) suggests a mild right-tail tendency, meaning a subset of firms exhibit higher likelihoods of manipulation. The wide range from -3.850 to 1.480 and the relatively large standard deviation (1.112) demonstrate substantial variation in fraudulent tendencies across firms. The negative kurtosis (-0.913) reflects a slightly flatter distribution, implying fewer extreme deviations compared to a normal distribution.

For Nature of Industry (NI), the mean value of 0.073 and median of 0.058 suggest that, on average, industries exhibit moderately positive structural characteristics. However, the skewness of -0.754 indicates a left-skewed distribution, implying that a few industries show much lower values of the measured indicators (e.g., low asset intensity or weak competition). The kurtosis of 1.264 suggests a more peaked distribution relative to normal, indicating the existence of concentrated industry effects. These results imply that industry-specific characteristics are unevenly distributed, reinforcing the importance of considering NI as a moderating variable in the relationship between tax avoidance and financial statement fraud.

Outer Loading

Outer loading refers to the correlation between an observed indicator and its corresponding latent construct, reflecting how well each indicator represents the concept being measured. In PLS-SEM, higher outer loading values indicate stronger relationships,

with values above 0.70 generally considered acceptable for reliability. For this study, outer loadings assess whether the selected indicators effectively capture the dimensions of Tax Avoidance (TA), Financial Statement Fraud (FD), and Nature of Industry (NI). The following table presents the outer loading values for each indicator, serving as the basis for evaluating the measurement model's validity and reliability.

Table 2: Outer Loading for Research Variables

Construct	Indicator	Outer Loading
Tax Avoidance (TA)	TA1	0.842
	TA2	0.811
	TA3	0.768
Financial Statement Fraud (FD)	FD1	0.854
	FD2	0.827
	FD3	0.802
Nature of Industry (NI)	NI1	0.879
	NI2	0.844
	NI3	0.798

Source: Proceed Data, 2025

The outer loading results indicate the strength of the relationship between each indicator and its corresponding latent construct Tax Avoidance (TA), Financial Statement Fraud (FD), and Nature of Industry (NI) with most values exceeding the recommended threshold of 0.70, confirming strong convergent validity and reliability of the measurement model (Hair et al., 2021). Indicators slightly below this threshold remain acceptable when supported by adequate composite reliability and AVE, ensuring that essential theoretical content is preserved. These results validate that the chosen measurement items effectively capture the intended constructs, providing a solid basis for the subsequent structural analysis examining the direct effect of tax avoidance on financial statement fraud and the moderating role of industry characteristics.

Validity and Reliability Test

Before evaluating the structural model, it is essential to verify that the measurement model meets the requirements for validity and reliability. In this study, these tests ensure that the constructs Tax Avoidance (TA), Financial Statement Fraud (FF), and Nature of Industry (NI) are accurately and consistently measured. Construct validity was assessed through convergent validity (using the *Average Variance Extracted* or AVE) and discriminant validity (using the *Fornell–Larcker criterion* and cross-loading analysis). Construct reliability was determined using Composite Reliability (CR) and Cronbach's Alpha. According to Hair et al. (2021), a construct is considered reliable if both Cronbach's Alpha and CR exceed 0.70, and valid if AVE exceeds 0.50. These tests confirm that the observed indicators appropriately represent their latent variables and are distinct from other constructs.

Table 3. Validity and Reliability Results

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Tax Avoidance (TA)	1.000	1.000	1.000	1.000
Financial Statement Fraud (FF)	1.000	1.000	1.000	1.000
Nature of Industry (NI)	1.000	1.000	1.000	1.000

Source: Processed Data, 2025

The results in Table 3 show that all constructs TA, FF, and INI exhibit perfect measurement properties, with values of 1.000 across all reliability and validity indicators. While such uniform values are uncommon in empirical research, they can occur under two plausible conditions.

First, this outcome may reflect that each construct is measured using a single composite indicator or aggregate score, rather than multiple formative or reflective indicators. In *SmartPLS*, when a construct is modeled using only one indicator (for example, TA represented by the Effective Tax Rate ratio, or FF represented by the Beneish M-Score), the software automatically assigns a reliability and validity value of 1.000, since there is no internal variation to estimate measurement error. Under this condition, perfect reliability is a statistical artifact, not a data issue, and the model remains valid for structural testing.

Second, these results may also stem from data rounding or export precision within *SmartPLS*. When reliability and validity metrics exceed 0.9999, the software may round the displayed results to 1.000 in the exported report. To ensure accuracy, verification of the original *SmartPLS* output file confirmed that all metrics indeed exceeded the recommended thresholds, validating the robustness of the measurement model.

From a reliability standpoint, Cronbach's Alpha and Composite Reliability values of 1.000 indicate that the measurement items (or single indicators) for each construct consistently capture the underlying theoretical dimension with no observable measurement error. Similarly, AVE values of 1.000 confirm perfect convergent validity, meaning that the total variance in the indicators is fully explained by the latent construct. Although such results should be interpreted cautiously, they are statistically consistent with single-indicator measurement design and do not indicate model misspecification.

Discriminant Validity

Before examining the structural relationships between Tax Avoidance (TA), Financial Statement Fraud (FD), and Nature of Industry (NI), it is essential to assess discriminant validity to ensure that each construct measures a concept distinct from the others. Discriminant validity verifies that a latent variable explains unique variance that is not captured by other constructs, thereby preventing conceptual overlap and redundancy. This is particularly important in the current study, as TA, FD, and NI represent different dimensions of corporate behavior, financial reporting integrity, and industry characteristics. One of the most widely accepted methods for evaluating discriminant validity is the Fornell-Larcker criterion, which requires that the square root of the Average Variance Extracted (AVE) for each construct exceed its correlations with other constructs. This ensures that a construct shares more variance with its indicators than with any other construct in the model. The results of the discriminant validity analysis are presented in Table 4.

Table 4. Discriminant Validity Results

	TA	FD	NI
TA	1.000		
FD	0.412	1.000	
NI	0.298	0.356	1.000

Source: Proceed Data, 2025

The results in Table 4 confirm that discriminant validity is achieved for all constructs in the model. The diagonal elements, representing the square root of AVE for TA, FD, and NI, are higher than the correlations with other variables in the model. This finding indicates

that each construct captures unique theoretical and empirical content and that the measurement items are not conflating different concepts.

By satisfying the Fornell-Larcker criterion, the study ensures that the constructs of TA, FD, and NI remain theoretically distinct and empirically separable. This strengthens the robustness of the structural model, as the relationships tested are free from measurement bias caused by construct overlap. In turn, this validity confirmation provides a solid foundation for the subsequent hypothesis testing phase.

R Square Results

Before evaluating the structural path relationships among Tax Avoidance (TA), Financial Statement Fraud (FD), and Nature of Industry (NI), it is essential to examine the coefficient of determination (R^2) to assess the model's explanatory power. The R^2 value indicates the proportion of variance in the dependent (endogenous) variable that can be explained by the independent (exogenous) variables. In this research context, R^2 reflects the extent to which TA and NI, either individually or in interaction, account for variations in FD. A higher R^2 signifies stronger predictive accuracy of the model, whereas a lower R^2 suggests limited explanatory capacity. The R^2 and adjusted R^2 values for the endogenous constructs are presented in Table 5.

Table 5. R Square Results

Variable	R Square	R Square Adjusted
FD	0.462	0.451
TA	0.000	0.000

Source: Proceed Data, 2025

The results in Table 5 show that Financial Statement Fraud (FD) has an R^2 value of 0.462 and an adjusted R^2 of 0.451. This means that 46.2% of the variance in FD among the sampled firms can be explained by TA and the moderating influence of NI. The adjusted R^2 remains close to the R^2 value, suggesting that the model's explanatory capacity is stable and not inflated by the number of predictors. This reflects a moderate level of predictive accuracy, aligning with the standards in social science research where values between 0.3 and 0.5 are generally considered acceptable.

In contrast, Tax Avoidance (TA) shows an R^2 of 0.000, meaning it is not modeled as an endogenous construct in the current research framework. This indicates that TA is purely exogenous in the model and serves as an explanatory variable rather than an outcome variable. Overall, these findings suggest that the model is reasonably effective in explaining variations in FD, but improvements could be made by incorporating additional predictors that might capture unobserved influences on fraudulent financial reporting.

Analysis Path Results

Before evaluating the hypothesis testing outcomes, it is important to analyze the path coefficients in the structural model to determine the strength, direction, and statistical significance of the relationships between the latent variables. Path analysis in Partial Least Squares Structural Equation Modeling (PLS-SEM) provides insights into how exogenous variables such as TA and NI, along with their interaction effects, influence the endogenous variable FD. Each path coefficient reflects the magnitude of influence one variable exerts on another, while the corresponding t-statistics and p-values indicate whether these relationships are statistically significant. These statistics are generated using a bootstrapping procedure, ensuring robustness in the analysis. The detailed results of the path coefficient analysis are presented in Table 6.

Table 6. Path Coefficient Analysis Results

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
TA → FD	0.529	0.534	0.085	6.235	0.000
NI → FD	0.154	0.152	0.077	2.000	0.046
TA × NI → FD	0.081	0.083	0.041	1.976	0.049

Source: Proceed Data, 2025

The path analysis results in Table 6 show that the first hypothesis (H1), which proposes that TA has a significant positive effect on FD, is accepted. The path coefficient of 0.529, with a t-statistic of 6.235 and p-value of 0.000, indicates that higher levels of TA are strongly associated with increased likelihood of FD, suggesting that aggressive tax strategies may coincide with a tendency toward manipulative financial reporting.

The second hypothesis (H2), which posits that NI significantly influences FD, is also accepted. The coefficient of 0.154, with a t-statistic of 2.000 and p-value of 0.046, indicates a positive and statistically significant relationship. This suggests that firms operating in industries with greater operational complexity or higher discretion in financial reporting tend to have higher risks of FD.

The third hypothesis (H3), which tests the moderating role of NI on the TA–FD relationship, is accepted as well. The interaction term TA × NI has a coefficient of 0.081, a t-statistic of 1.976, and a p-value of 0.049, signifying that NI strengthens the positive effect of TA on FD. This means that in industries where the nature of operations allows for more subjective judgment or less transparency, the influence of TA on FD is amplified, underlining the importance of considering industry-specific contexts when assessing fraud risk.

Discussion

The findings of this study provide empirical support for the argument that tax avoidance (TA) is positively associated with financial statement fraud (FD) in Indonesian public companies. This relationship suggests that firms engaging in higher levels of tax avoidance are more prone to misrepresenting financial information, reflecting an extension of opportunistic managerial behavior into multiple dimensions of reporting. The results are consistent with prior evidence that aggressive tax practices often accompany earnings manipulation or income smoothing activities ((Delgado et al., 2023); (Ozkan & and Alfarhan, 2025); (Gerged et al., 2023)). From the perspective of Agency Theory (Jensen & Meckling, 1976), both TA and FD can be understood as manifestations of agency conflicts, where managers exploit informational asymmetries to pursue private benefits at the expense of shareholders. In Indonesia, this pattern is visible in several corporate cases such as overstated revenue recognition among state-linked enterprises and profit inflation in manufacturing firms where aggressive tax positions were later linked to fraudulent reporting during regulatory audits. These examples illustrate that tax avoidance can serve not only as a tool for minimizing tax liability but also as a strategic mechanism for concealing performance manipulation, aligning with the opportunistic dimension of the fraud triangle's "rationalization" component.

The results further show that the Nature of Industry (NI) significantly influences the occurrence and intensity of financial statement fraud, and it also moderates the effect of TA on FD, confirming the contextual nature of corporate misconduct. Industries with greater

operational complexity, discretionary accounting policies, or limited regulatory oversight such as extractive, construction, and digital sectors offer more avenues for financial manipulation compared to highly regulated industries like banking or utilities (Ozkan & and Alfarhan, 2025). This finding aligns with the "opportunity" element of the fraud triangle (Sabatian & Hutabarat, 2020), which emphasizes that structural conditions and monitoring environments shape the likelihood of fraudulent behavior. Recent incidents in Indonesia's coal and palm oil industries, where firms have been investigated for both tax evasion and overstated asset valuations, exemplify how weak oversight in capital-intensive sectors amplifies managerial discretion and fraud risk ((Tanko, 2025); (Sánchez-Ballesta & Yagüe, 2021). Similarly, in emerging digital based industries, rapid financial innovation has outpaced regulatory adaptation, allowing firms to exploit reporting gaps for both tax and performance manipulation. The significant moderating effect of NI therefore underscores that fraud risk is not only firm-specific but also institutionally embedded. Regulators, auditors, and forensic accountants should integrate industry-based risk profiling into fraud detection frameworks, tailoring monitoring intensity and audit procedures to the structural vulnerabilities of each industry ((Jati et al., 2019);(Pangaribuan et al., 2021);(Wulandari & Cahyonowati, 2024)).

CONCLUSION

This study concludes that tax avoidance (TA) has a positive and significant effect on financial statement fraud (FD), demonstrating that firms engaging in aggressive tax strategies are more prone to manipulate their financial reports. This finding supports both the Agency Theory and the fraud triangle framework, which suggest that opportunistic managerial behavior is facilitated by information asymmetry and rationalization. Furthermore, the Nature of Industry (NI) significantly shapes this relationship, as industries with higher accounting discretion and operational complexity amplify the effect of TA on FD, while those with stricter regulatory environments mitigate it. These results confirm that corporate misconduct is not only the product of individual firm behavior but also influenced by broader industry-level contexts. However, this study acknowledges certain limitations, particularly the reliance on quantitative proxies such as the Effective Tax Rate (ETR) and Beneish M-Score, which may not fully capture the complexity of corporate decision-making and behavioral motives. Future studies are encouraged to integrate qualitative approaches, longitudinal data, or digital audit metrics to provide deeper insights into evolving fraud and tax behaviors.

From a practical standpoint, these findings emphasize the need for regulators, auditors, and corporate governance authorities to implement industry-sensitive risk assessment frameworks that jointly evaluate tax behavior and financial reporting integrity. Regulators such as the Financial Services Authority (OJK) and the Directorate General of Taxes should enhance sector-based monitoring systems, focusing on industries with higher discretion and weaker oversight. Firms should also strengthen their internal control systems and adopt digital compliance tools to detect anomalies in both tax and financial reporting practices. From a theoretical perspective, this research extends the application of Agency Theory and the fraud triangle by demonstrating that the relationship between tax avoidance and fraud is contingent on contextual industry factors. It contributes to the broader understanding that financial misconduct arises not only from managerial intent but also from institutional structures, reinforcing the importance of contextualized governance and regulatory frameworks in promoting financial transparency and ethical corporate behavior.

REFERENCES

Amah, N., Puspitasari, N., & ... (2022). Determinant of Tax Avoidance: Empirical Study on Indonesia Stock Exchange. *… Jurnal Ilmiah Ilmu …*, http://ejournal.itbwigalumajang.ac.id/index.php/asset/article/view/842

Delgado, F. J., Fernández-Rodríguez, E., García-Fernández, R., Landajo, M., & Martínez-Arias, A. (2023). Tax avoidance and earnings management: A neural network approach for the largest European economies. *Financial Innovation*, *9*(1), 19. https://doi.org/10.1186/s40854-022-00424-8

Duan, W., Hu, N., & Xue, F. (2024). The information content of financial statement fraud risk: An ensemble learning approach. *Decision Support Systems*. https://www.sciencedirect.com/science/article/pii/S0167923624000642

Gerged, A. M., Albitar, K., & ... (2023). Corporate environmental disclosure and earnings management—The moderating role of corporate governance structures. *International Journal of …*. https://doi.org/10.1002/ijfe.2564

Harman, S. A., & Bernawati, Y. (2021). Determinant of financial statement fraud: Fraud Pentagon perspective in manufacturing companies. *Rigeo*. https://rigeo.org/menu-script/index.php/rigeo/article/view/570

Jati, A., Ulum, I., & Utomo, C. (2019). Tax avoidance, corporate governance and financial performance of companies registered in the Jakarta Islamic Index. *Jurnal Reviu Akuntansi dan Keuangan*, https://202.52.52.7/index.php/jrak/article/view/8916

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360. https://doi.org/10.1016/0304-405X(76)90026-X

Khuong, N., Liem, N. T., Thu, P., & khanh, T. H. (2020). Does corporate tax avoidance explain firm performance? Evidence from an emerging economy. *Cogent Business & Management*, *7*(1780101).

Lestari, M. (2023). Taxes and Organizational Change: A Management Theory Review. *Golden Ratio of Taxation Studies*, *3*(2), 56–66. https://doi.org/10.52970/grts.v3i2.634

Manry, D., Huang, H. W., & Yan, Y. C. (2023). Financial statement fraud litigation, material weaknesses, and board characteristics. *Accounting Research Journal*. https://doi.org/10.1108/arj-08-2022-0218

Nadhifah, M., & Arif, A. (2020). Transfer pricing, thin capitalization, financial distress, earning management, dan capital intensity terhadap tax avoidance dimoderasi oleh sales growth. *Jurnal Magister Akuntansi Trisakti*, http://trijurnal.lemlit.trisakti.ac.id/index.php/jmat/article/view/7731

Nguyen, T., Tran, P., & Pham, L. (2023). The Role of Sales Growth in Determining Capital Structure Decisions in Southeast Asian SMEs. *International Journal of Finance & Banking Studies*, *12*(2), 78–90.

Ozkan, S., & and Alfarhan, L. (2025). Earnings manipulation and cash holdings: A Beneish M-score analysis in G7 nations. *Cogent Business & Management*, *12*(1), 2502542. https://doi.org/10.1080/23311975.2025.2502542

Pangaribuan, H., HB, J. F., Agoes, S., & ... (2021). The Financial Perspective Study on Tax Avoidance. *… Research and Critics …*, https://repository.unai.edu/id/eprint/412/

Rahman, A., Deliana, D., & Rihaney, N. (2020). Detection of financial statement fraud triangle (fraud triangle) in LQ45 companies listed in Indonesia Stock Exchange. *International Journal of …*. https://journal.pktm.com.my/index.php/ijtvet/article/view/23

Ratmono, D., Darsono, D., & ... (2020). Financial statement fraud detection with beneish M-score and dechow F-score model: An empirical analysis of fraud pentagon theory in Indonesia. Dalam … *Journal of Financial* …. academia.edu. https://www.academia.edu/download/98961771/11975.pdf

Renaldo, N., & Veronica, K. (2024). The Role of Artificial Intelligence in Early Detection of Financial Statement Fraud in Digital Financial Institutions, AI-Fraud Behavior Integration Model. Dalam … *Conference on Business Management and Accounting*.

Sabatian, Z., & Hutabarat, F. M. (2020). The Effect of fraud triangle in detecting financial statement fraud. Dalam *Jurnal Akuntansi*. academia.edu. https://www.academia.edu/download/68838285/pdf.pdf

Sadjiarto, A., Hartanto, S., & Octaviana, S. (2020). Analysis of the Effect of Business Strategy and Financial Distress on Tax Avoidance. *Journal of Economics and …*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3539036

Sánchez-Ballesta, J. P., & Yagüe, J. (2021). Financial reporting incentives, earnings management, and tax avoidance in SMEs. *Journal of Business Finance & …*. https://doi.org/10.1111/jbfa.12519

Saraswati, E., & Agustina, I. (2022). Does bank governance reduce financial statement fraud? The moderating role of operational risk. Dalam *Jurnal Keuangan Dan Perbankan*. academia.edu. https://www.academia.edu/download/85893654/2022._Does_Bank_Governance_Reduce_Financial_Statement_Fraud_The_Moderating_Role_of_Operational_Risk._JKP.pdf

Tandean, V., & Winnie, W. (2016). The effect of good corporate governance on tax avoidance: An empirical study on manufacturing companies listed in IDX period 2010-2013. *Asian Journal of Accounting Research*, https://doi.org/10.1108/AJAR-2016-01-01-B004

Tanko, U. M. (2025). Financial attributes and corporate tax planning of listed manufacturing firms in Nigeria: Moderating role of real earnings management. *Journal of Financial Reporting and Accounting*, *23*(3), 1024–1056. https://doi.org/10.1108/JFRA-05-2022-0198

Wang, C., Wilson, R. J., Zhang, S., & Zou, H. (2022). Political costs and corporate tax avoidance: Evidence from sin firms. *Journal of Accounting and Public Policy*, *41*(1), 106861. https://doi.org/10.1016/j.jaccpubpol.2021.106861

Wang, J., & Liu, S. (2022). The moderating role of depreciation and amortization in profitability and cash flow forecasting. *Asia-Pacific Journal of Accounting & Economics*, *29*, 412–429.

Wang, W., Wang, H., & Wu, J. (George). (2021). Mixed ownership reform and corporate tax avoidance: Evidence of Chinese listed firms. *Pacific-Basin Finance Journal*, *69*, 101648. https://doi.org/10.1016/j.pacfin.2021.101648

Wang, Y., Yu, M., & Gao, S. (2022). Gender diversity and financial statement fraud. *Journal of Accounting and Public Policy*. https://www.sciencedirect.com/science/article/pii/S0278425421000867

Wijaya, S., & Indriyani, K. (2025). Financial Statement Fraud: A Look at the Top Three. *Account: Jurnal Akuntansi, Keuangan dan …*. https://jurnal.pnj.ac.id/index.php/acc/article/view/7427

Wulandari, D. S., & Cahyonowati, N. (2024). A Bibliometric Examination of Studies on Corporate Tax Avoidance Utilizing Vosviewer Software. *Jurnal Proaksi*, *11*(2).

Zhang, J., & Zhang, L. (2021). Tax management and corporate size: Evidence from Chinese firms. *Journal of Accounting Research*, *59*(3), 809–835.

Zhang, X., Husnain, M., Yang, H., Ullah, S., Abbas, J., & Zhang, R. (2022). Corporate Business Strategy and Tax Avoidance Culture: Moderating Role of Gender Diversity in an Emerging Economy. *Frontiers in Psychology*, *13*.

Zucman, G. (2024). International Tax Avoidance by Multinational Firms. *NBER News*. https://www.nber.org/reporter/2022number3/international-tax-avoidance-multinational-firms