

Corporate Governance Mechanisms and Tax Incentive Utilisation: Empirical Evidence from Nigerian Non-Financial Firms

This study investigated the impact of corporate governance mechanisms on tax incentive utilisation among 10 non-financial firms listed in Nigeria, using a panel dataset spanning 2014–2023. Employing Generalised Least Squares (GLS) regression, the research found that board gender diversity, board financial expertise, and board meeting frequency all significantly and positively influence the utilisation of tax holidays, loss relief, and capital allowances. Board financial expertise emerged as the most influential factor, demonstrating the strongest and most consistent positive effects across all tax incentive measures (e.g., $\beta = 0.163$, $p < 0.001$ for tax holidays; $\beta = 0.792$, $p < 0.01$ for loss relief; $\beta = 1.132$, $p < 0.01$ for capital allowances). This highlights the critical role of financial acumen in identifying and securing tax benefits. Board gender diversity also significantly enhanced tax incentive utilization (e.g., $\beta = 0.075$, $p < 0.01$ for tax holidays; $\beta = 0.394$, $p < 0.05$ for loss relief; $\beta = 0.522$, $p < 0.05$ for capital allowances), as did board meeting frequency (e.g., $\beta = 0.041$, $p < 0.01$ for tax holidays; $\beta = 0.318$, $p < 0.001$ for loss relief; $\beta = 0.384$, $p < 0.001$ for capital allowances). These findings align with agency theory, upper echelon theory, and resource dependence perspectives, suggesting that robust governance structures facilitate the strategic utilisation of legitimate tax incentives. The study contributes to the literature by emphasising proactive tax planning over avoidance, offering valuable insights for tax policy, corporate governance reforms, and regulatory frameworks in emerging economies.

Keywords: corporate governance, board gender diversity, board financial expertise, board meeting frequency, tax incentives, tax holidays, loss relief, capital allowance, Nigeria, panel data.

Introduction

Corporate governance has emerged as a critical determinant of organisational outcomes, influencing financial performance, operational efficiency, and regulatory compliance (Oshim & Igwe, 2024). In recent years, the corporate governance

landscape has attracted increased scholarly and policy attention due to its role in fostering economic growth, attracting foreign investment, and mitigating corporate failures (Akinyemi et al., 2024). One crucial aspect of corporate governance is the composition and effectiveness of boards of directors, which

Latifat Omolara AKANO – PhD, lecturer at Department of Accounting, Olabisi Onabanjo University, Ago-Iwoye, Nigeria. Phone: 0705 8247999. Email: akano.latifat@oouagoiwoye.edu.ng

Nurudeen Afolabi SOFOLUWE – PhD, lecturer at Cooperative and Rural Development, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria. Phone: 0816 8406980. Email: sofoluwe.nurudeen@oouagoiwoye.edu.ng

Jamiu Adeniyi AKINDELE – PhD, lecturer at Department of Accounting, Olabisi Onabanjo University, Ago-Iwoye, Ogun State, Nigeria. Phone: 0915 3840058. Email: akindele.jamiu@oouagoiwoye.edu.ng

significantly shape firm policies, including tax strategies (Ebire et al., 2024).

Tax incentives, particularly tax holidays, loss relief, and capital allowances, serve as essential government policy tools aimed at encouraging business growth, investment, and economic development. Every government has implemented various tax incentives, including company income tax relief, to stimulate private sector growth and investment (Olutimehin et al., 2024). However, the effectiveness of these incentives remains debated, as many firms either underutilise or fail to take full advantage of available tax incentives or reliefs. One potential explanation for this discrepancy lies in corporate governance structures, particularly board attributes that shape firms' tax-related decisions (Sotonye et al., 2024). Before the decision to take tax incentives is concluded and the incentives are actualised, the board of directors' decision is required. Furthermore, the availability of these various incentives is not disputed over time, however, it has been observed that firms exhibit considerable variation in their utilisation rates, raising questions about whether corporate governance factors influence tax-related decisions (Oyerogba et al., 2024). Well-governed firms with effective boards may strategically leverage tax incentives to optimise financial outcomes while maintaining regulatory compliance, whereas weak governance structures may lead to inefficient tax management or exploitative practices.

The interaction between corporate governance structures and tax incentives remains an area of ongoing empirical investigations for corporate tax

planning, compliance, and overall firm performance (Oyerogba et al., 2024). Prior research on corporate governance and taxation has predominantly focused on tax avoidance and aggressiveness (Gospel et al., 2020; Ezeala & Okerekeoti, 2021; Ogbodo & Omonigho, 2021), with limited attention to how governance mechanisms influence the legitimate utilisation of tax incentives. This study addresses this gap by shifting the analytical focus from tax avoidance to the strategic utilisation of legitimate tax incentives, offering a more robust understanding of corporate tax behaviour.

Furthermore, while studies have examined board characteristics in relation to financial performance (Chukwu et al., 2024; Sotonye et al., 2024), the specific influence of board gender diversity, financial expertise, and meeting frequency on tax incentive utilisation remains underexplored. Existing literature on board gender diversity and tax incentives presents limited and often conflicting empirical evidence (Saleh et al., 2024; Zulpahmi et al., 2024; Widijaya and Putra, 2025; Seemali, 2024; Che et al., 2024). Some studies suggest that gender-diverse boards, known for their risk-averse nature and emphasis on transparency, may encourage more responsible tax incentive engagement, while others contend that diversity may lead to more strategic exploitation, balancing compliance with financial optimisation (Affes & Jarboui, 2023; Ait et al., 2024; Amanamah, 2024). Similarly, empirical evidence on the relationship between board meeting frequency and tax incentive strategies remains inconclusive, with mixed results (Akinyemi et al., 2024; Chukwu et al., 2024; Ebire et al., 2024; Sotonye et al., 2024). Additionally,

the impact of financially skilled boards on navigating complex and frequently changing tax policies in emerging economies is inconsistent, with some studies suggesting conservatism and others indicating a more aggressive approach to tax incentives (Amanamah, 2024; Che et al., 2024; Seemali, 2024).

Based on the above arguments and positions, **this study addresses three research questions:** (1) To what extent do corporate governance mechanisms influence the tax holidays of non-financial firms in Nigeria? (2) How do corporate governance mechanisms affect firms' loss relief utilisation? (3) What is the impact of corporate governance mechanisms on capital allowance utilisation? By answering these questions, the study makes several novel contributions. First, it shifts the analytical focus from tax avoidance, often associated with aggressive and potentially unethical practices, to the strategic utilisation of legitimate tax incentives, offering a more robust understanding of corporate tax behaviour. Second, it provides empirical evidence from an emerging economy context where corporate governance structures and tax regimes differ significantly from those in developed countries. Third, it integrates multiple governance indicators to examine their differential effects across three distinct types of tax incentives, enabling more targeted policy recommendations

The primary objective of this study is to investigate the relationship between corporate governance mechanisms and the utilisation of tax incentives among non-financial firms in Nigeria. Specifically, this study aims to:

- Examine the extent to which corporate governance mechanisms influence the utilisation of tax holidays by non-financial firms in Nigeria.
- Determine how corporate governance mechanisms affect firms' loss relief utilisation.
- Assess the impact of corporate governance mechanisms on capital allowance utilisation.

Theoretical Framework and Hypothesis Development

Agency theory, board monitoring and board meeting

Agency theory, introduced by Jensen and Meckling (1976), explores the dynamics between principals (shareholders) and agents (managers) in corporate structures. Information asymmetry gives managers the power to act in their self-interest, potentially diverging from shareholder objectives. The principal-agent relationship is central to corporate governance, with tax management emerging as a significant arena for potential agency conflicts. Whereas modern extensions of agency theory suggest that managers might engage in "rent-seeking" behaviour through complex tax strategies that benefit them personally rather than the shareholders (Salehi et al., 2024). Therefore, robust board monitoring mechanisms are essential to align managerial decisions with organisational goals. To address this, principals implement monitoring mechanisms, including board oversight, to align managerial decisions with organisational goals. In the

context of tax incentives, effective board monitoring should ensure that managers identify and utilise available tax benefits in ways that maximise shareholder value while maintaining regulatory compliance

Global empirical evidence underscores the importance of various board characteristics in mitigating agency problems related to taxes. For instance, studies in Australia have demonstrated that board independence and the financial expertise of directors significantly curb tax aggressiveness, thereby reducing agency risk (Richardson et al., 2013). Similarly, research on Italian firms indicates that board characteristics, in conjunction with the roles played by auditors, collectively influence a company's tax planning orientation (Iazzi et al., 2023). However, the effectiveness of these mechanisms can vary across different contexts, leaving a gap in the area of the impact of these mechanisms on tax incentive utilisation as an alternative strategy. For example, Alkurdi and Mardini (2020) found in Jordan that while board composition is important, the frequency of board meetings did not significantly impact tax avoidance strategies, suggesting that the quality and strategic depth of oversight may be more critical than mere quantitative measures in emerging markets. Furthermore, recent multi-country studies have highlighted the growing importance of board diversity, such as gender diversity and the presence of interlocking directors, as critical attributes for fostering tax resilience and ethical tax practices (Song et al., 2024; Yahaya et al., 2025; Pavlou et al., 2025). Therefore, boards that meet frequently are better positioned to provide

continuous oversight, review tax strategies, and make timely adjustments in response to regulatory changes regarding tax incentives.

H_{1a}: Board meeting frequency positively influences (tax holiday, loss relief and capital allowance) tax incentives utilisation.

Upper Echelon Theory and Board Financial Expertise

Upper Echelon Theory (UET) argues that organisational outcomes reflect the cognitive bases, values, and expertise of top decision-makers. Board members with financial expertise, possessing professional qualifications such as CFA, CPA, ACCA, ACA, or finance-related degrees, are better equipped to understand complex tax laws, assess eligibility criteria for incentives, and structure operations to maximise tax benefits. Röttger et al. (2019) in their study of German firms, highlight that this expert power is essential for effective tax planning. According to UET, the bounded rationality of executives means that their strategic choices are heavily influenced by their background characteristics, including their education and professional experience (Hambrick, 2018). When applied to tax management, this theory suggests that a board's collective financial literacy directly impacts a firm's tax posture.

Financially literate boards can evaluate tax planning proposals critically, question management assumptions, and ensure that tax strategies align with long-term corporate objectives. Prior research suggests that financial expertise

enhances tax efficiency while minimising avoidance risk (Onyeogubalu et al., 2025). Moreso, recent international studies emphasise that tax decisions are not merely technical accounting exercises but strategic choices that reflect the board's risk appetite and ethical values. For instance, research on Indonesian family firms indicates that the characteristics of top executives, viewed through the UET lens, significantly influence the level of tax aggressiveness (Oktaviani et al., 2024). Furthermore, modern UET research highlights the importance of relational dynamics within the board, suggesting that the collective expertise of the top management team is crucial in shaping coherent and effective tax outcomes (Basson & Van der Spuy, 2025).

H_{2a}: Board financial expertise positively influences (tax holiday, loss relief and capital allowance) tax incentives utilisation.

Resource Dependence Theory and Board Gender Diversity

Resource Dependence Theory posits that boards serve as crucial mechanisms for managing external dependencies and acquiring vital resources. Diverse board compositions, particularly those with gender diversity, are instrumental in broadening perspectives, strengthening oversight, and enhancing organisational legitimacy. Female directors are frequently associated with heightened risk aversion, ethical decision-making, and a strong stakeholder orientation (Ait, Hattani & Sahbani, 2024; Amanamah, 2024). These attributes can influence

tax-related decisions in two primary ways: by fostering transparency and compliance, thereby increasing eligibility for discretionary tax incentives such as tax holidays; and by encouraging strategic yet responsible tax planning that effectively utilises available incentives without resorting to aggressive avoidance tactics. Empirical evidence further indicates that gender-diverse boards contribute positively to corporate social responsibility outcomes and long-term sustainability efforts (Olutimehin et al., 2024).

Some other studies investigating the relationship between board gender diversity and corporate tax practices have yielded varied but generally consistent findings, largely supporting the notion that female directors influence more conservative and compliant tax behaviours. For instance, Gaio et al. (2025) found that increased female representation on boards significantly reduces corporate tax aggressiveness. Similarly, Lanis et al. (2017) and Jarboui et al. (2020) provided evidence that a higher proportion of women on the board is associated with lower levels of tax avoidance. Wang et al. (2024) further reinforced this by demonstrating that companies with more female directors tend to be more cautious in tax planning and exhibit a stronger inhibitory effect on tax aggressiveness, especially when firms have low risk-taking levels. These studies suggest that the risk-averse nature and ethical considerations often attributed to female directors translate into a preference for legitimate tax planning over aggressive tax avoidance strategies.

However, the literature also presents nuances. Garcia-Blandon et al. (2022)

complex interplay that varies across institutional contexts. While Elouaer (2022) found that board gender diversity itself might not directly moderate the relationship between tax aggressiveness and corporate social responsibility, the presence of a female CEO did. Bataineh (2025) presented findings that, while seemingly contradictory, suggest that female representation can have a positive effect on tax avoidance practices in some contexts, but also contribute to its reduction in others, highlighting the need for more granular analysis of specific tax practices. Zhang et al. (2022) also noted the moderating role of female directors in how business strategies influence tax decisions.

Synthesising these findings, it appears that female directors, through their distinct perspectives and governance styles, are more likely to steer firms towards transparent and compliant tax strategies. This orientation would naturally favour the strategic utilisation of legitimate tax incentives, such as tax holidays, loss relief, and capital allowances, rather than engaging in practices that could be perceived as aggressive tax avoidance. Their emphasis on ethical decision-making and long-term sustainability aligns with maximising the benefits of available incentives within regulatory frameworks.

H_{3d}: Board gender diversity positively influences (tax holiday, loss relief and capital allowance) tax incentives utilisation.

Consequently, the study is grounded in agency theory (Jensen & Meckling, 1976), which posits that effective board monitoring aligns managerial decisions with shareholder interests, including optimal tax planning. Also, upper echelon

theory suggests that organisational outcomes reflect the characteristics of top decision-makers, while resource dependence theory emphasises that diverse and skilled board members equip firms with strategic capacity to interact effectively with regulatory bodies. Together, these theoretical perspectives provide a comprehensive framework for understanding how board attributes shape tax incentive outcomes.

Tax incentives in Nigeria

The Nigerian government has historically employed a variety of tax incentives as strategic instruments to stimulate private sector investment, foster industrialisation, and diversify the economy away from its heavy dependence on oil revenues. These incentives are primarily governed by the Companies Income Tax Act (CITA) and the Industrial Development (Income Tax Relief) Act (IDITRA), which provide the legal framework for tax holidays, loss relief, and capital allowances.

Tax holidays (Pioneer Status Incentive)

Under the Industrial Development (Income Tax Relief) Act, the Pioneer Status Incentive (PSI) is perhaps the most significant tax holiday mechanism in Nigeria. It is granted to companies operating in industries designated as “pioneer” industries, sectors deemed crucial to national development but not yet sufficiently established. Eligible firms enjoy an initial tax-free period of three years, which can be extended for an additional one or two years, totalling up to

five years of exemption from Companies Income Tax (CIT). This incentive aims to reduce the initial tax burden on new investments, allowing firms to reinvest profits into expansion and technology (Nigerian Investment Promotion Commission (NIPC), 2024).

Loss relief

The Companies Income Tax Act (CITA) provides for the carry-forward of business losses to be offset against future taxable profits. In Nigeria, there is generally no time limit for carrying forward losses for most companies, although the relief is restricted to the same line of business in which the loss was incurred. This mechanism serves as a critical buffer for firms during economic downturns or initial startup phases, ensuring that taxes are only paid on cumulative profitability over time (PwC, 2025).

Capital allowances

Capital allowances are granted instead of accounting depreciation, allowing firms to deduct the cost of qualifying capital expenditure (such as plant, machinery, and buildings) from their assessable profits. Under the Nigerian tax regime, these are categorised into Initial Allowances (granted in the year of acquisition) and Annual Allowances (granted over the useful life of the asset). For most non-manufacturing firms, the total capital allowance claimable in any year is restricted to two-thirds (66.7%) of the assessable profit, while manufacturing and agricultural firms are exempt from this restriction, allowing them to utilize 100% of their allowances to offset taxable income (KPMG, 2024).

Summarily, the effective utilisation of these incentives is often contingent upon a firm's ability to navigate the complex administrative requirements set by the Federal Inland Revenue Service (FIRS) and the Nigerian Investment Promotion Commission (NIPC). Consequently, the role of corporate governance and board expertise becomes paramount in strategically identifying and securing these legitimate fiscal benefits to optimise firm performance and shareholder value.

Research Methodology

Research design and sampling

This study adopted an ex-post facto research design, utilising secondary data from audited annual reports and financial statements of non-financial firms listed on the Nigerian Exchange Group (NGX). The population comprised 107 non-financial firms as of March 2025. Using purposive sampling, ten firms were selected based on data availability for the study period (2014–2023). The selected companies include Dangote Cement Plc, Large Africa Plc, Nestle Nigeria Plc, Cadbury Nigeria Plc, Guinness Nigeria Plc, Nigerian Breweries Plc, Total Energies Marketing, Mobil Oil Nigeria Plc, Berger Paint Nigeria Plc, and CAP Plc. In addition to data availability, the selected firms were assessed based on their potential eligibility for key tax incentives under the Nigerian tax framework, including tax holidays (Pioneer Status Incentive), loss relief, and capital allowances. Specifically, all sampled firms operate within sectors such

as manufacturing, consumer goods, oil and gas marketing, and industrial production, which are recognised under the Companies Income Tax Act (CITA) and the Industrial Development (Income Tax Relief) Act (IDITRA) as qualifying for various forms of tax relief. The final dataset comprised balanced panel data with 100 firm-year observations (10 firms \times 10 years).

Model specification

The model was specified in line with Hirschi's (1969) deterrent theory and was based on components of a previous study by Sotonye, Lateef and Ene (2024), which were adopted and modified to achieve the objectives of this study. The following panel data linear regression models were stated.

Table 1. Description and measurement of variables

Variables	Acronyms		Description / Measurement	Sources of Data	Empirical Sources	Expected Sign
Dependent Variables						
1	Tax Holiday	THD	Dummy variable (1 = firm enjoys tax holiday; 0 = otherwise); proxied using tax exemption disclosures and effective tax rate reductions.	Notes to financial statements (taxation notes, tax reconciliation, Pioneer Status Incentives, i.e., PSI disclosures)	Sotonye et al., (2024)	
2	Loss Relief	LRF	The nature log of the number of years for which a company can apply loss relief against future taxable profits.	Deferred tax notes in annual reports (tax loss carry-forward schedules)	Saleh et al., (2024).	
3	Capital Allowance	CAL	Difference between capital allowance and accounting depreciation.	Tax computation notes and deferred tax schedules in financial statements	Widijaya & Putra, (2025)	
Independent Variables						
4	Board Gender Diversity	BGD	Proportion of female board members to total board members.	Corporate governance section / Board of directors' profiles in annual reports	Bruna et al., (2019)	+
5	Board Member Financial Expertise	BFE	Proportion of directors or board members with financial qualifications (e.g., CFA, CPA, ACCA, ACA, FCA) or finance-related degrees.	Directors' biographies and profile disclosures in annual reports	Fauziah & Widiyati, (2022)	+
6	Board Meeting Frequency	BMF	Natural log of the number of board meetings held annually.	Corporate governance report (board meeting and attendance disclosures)	Ogodo & Omonigho, (2021)	+

Source: compiled by the authors.

$$THD_{it} = \beta_0 + \beta_1 BDG1_{it} + \beta_2 BFE_{it} + \beta_2 BMF_{it} + \varepsilon_{it} \quad (1)$$

$$THD_{it} = \beta_0 + \beta_1 BDG1_{it} + \beta_2 BFE_{it} + \beta_2 BMF_{it} + \varepsilon_{it} \quad (2)$$

$$THD_{it} = \beta_0 + \beta_1 BDG1_{it} + \beta_2 BFE_{it} + \beta_2 BMF_{it} + \varepsilon_{it} \quad (3)$$

Where:

THD_{it} = Tax holidays for firm i in year t .

LRF_{it} = Loss relief for firm i in year t .

CAL_{it} = Capital allowance for firm i in year t .

BGD_{it} = Board gender diversity of firm i in year t .

BMF_{it} = Board Meeting Frequency of firm i in year t .

$BMFE_{it}$ = Board member financial expertise of firm i in time t .

ε_{it} = error term

Results

The results in Table 2 show that the mean value of the Tax Holiday was 0.325, indicating that approximately 32.5% of the firm-year observations reflect the presence of tax holidays. This confirms that a subset of the sampled firms benefited

from such incentives during the study period. This approach ensures that the sample is not only data-driven but also relevant for examining tax incentive utilisation behaviour. The standard deviation of = 0.47: Indicates a moderate spread around the mean. The binary nature (0 = No tax holiday, 1 = Tax holiday) explains this variability. The minimum value of 0 and the maximum value of 1 confirm the binary structure. This implies that a significant portion of firms benefit from tax holidays, making it a relevant tax incentive measure.

Loss relief had a mean of 15.89 and a standard deviation of 4.63, suggesting a moderate level of variability in the tax relief due to operational losses. The variable ranged from 5.00 to 28.75. This shows substantial variation in loss relief across firms. This indicated that some firms benefit greatly from loss relief, possibly due to prior periods of high losses or strategic use of tax planning. The capital allowance had a mean value of 8.24 with a standard deviation of 2.75, reflecting that investment-related deductions differ across firms, possibly based on the size or capital intensity

Table 2. Descriptive statistics of variables

Variable	Mean	Std. Dev.	Min	Max
Tax Holiday	0.325	0.47	0	1
Loss Relief	15.89	4.63	5.00	28.75
Capital Allowance	8.24	2.75	2.10	14.90
Board Gender Diversity	0.218	0.15	0	0.67
Board Financial Expertise	0.632	0.20	0.20	1.00
Board Meeting Frequency	5.22	1.31	3	9

Source: compiled by the authors.

of operations. The variable has a range value of 2.10–14.90, confirming that not all firms claim capital allowances at the same level. The result indicates that firms with more fixed assets or long-term investments likely claim higher allowances.

Board Gender Diversity (BGD) had a mean value of 0.218. On average, 21.8% of the board members are female. The standard deviation of 0.15 moderates' variability and shows that some boards are entirely male, others are more diverse. The maximum value of 0.67 indicates that a few boards have up to 67% female representation. This result shows that gender diversity is still relatively low, but some firms are making progress. The Board Financial Expertise (BFE) had a mean value of 0.632, revealing that about 63.2% of board members on average have financial expertise. The maximum value of 1.00 shows that some firms have full financial representation. The minimum value of 0.20: The least financially experienced board still has at least 20% representation. Most firms prioritise financial competence on the board, an important feature for tax decision-making.

Board Meeting Frequency (BMF) had a mean value of 5.22 meetings/year, suggesting boards meet roughly once every

two months. The range of 3–9 meetings/year shows that some boards meet infrequently, others more rigorously. This reveals that firms vary in board activeness, which may influence tax policy decisions or compliance levels.

Table 3 displays the Pearson correlation coefficients to examine the relationship among variables and assess potential multicollinearity. The result shows that tax holiday positively correlated with BGD (0.18) and CA (0.21), suggesting that firms with more diverse boards or greater capital investments are more likely to benefit from tax holidays.

Correlation Matrix

Loss Relief (LR) was also positively correlated with BFE (0.23) and BMF (0.19), indicating that financially literate boards and active boards may optimise loss-related tax benefits. Capital Allowance (CA) had a moderate positive correlation with BFE (0.31) and BMF (0.29), pointing to a meaningful relationship and suggesting that good board governance (particularly financial skill and meeting frequency) enhances access to or usage of capital allowance deductions. The BGD

Table 3. Correlation matrix

Variable	TH	LR	CA	BGD	BFE	BMF
TH	1					
LR	0.12	1				
CA	0.21	0.47	1			
BGD	0.18	0.03	0.06	1		
BFE	0.09	0.23	0.31	0.27	1	
BMF	0.06	0.19	0.29	0.12	0.34	1

Source: compiled by the authors.

and BFE (0.27) suggest that firms with more gender-diverse boards also tend to have more financially knowledgeable board members. The positive relationship between BFE and BMF (0.34) shows that boards with more financial expertise tend to meet more frequently, indicating stronger governance behaviour. All correlation coefficients are well below 0.80, indicating no serious multicollinearity concerns. This supports reliable regression analysis, where each independent variable can provide distinct explanatory power.

Diagnostic Test

To ensure the validity of the models, multicollinearity test, heteroskedasticity test, autocorrelation test and normality test were conducted. A multicollinearity test was conducted using the Variance Inflation Factor to check for collinearity among independent variables. A heteroskedasticity test was conducted using the Breusch-Pagan test to verify

the presence of non-constant variance in residuals. An autocorrelation test was conducted using the Wooldridge test to check for serial correlation in panel data.

Multicollinearity test

Table 4 shows that all the VIF values are well below 5.0, indicating no multicollinearity concerns. Tolerance values (1/VIF) are comfortably above the minimum threshold of 0.2. The low VIFs confirm that the independent variables, BGD, BFE, and BMF, do not significantly overlap in the information they provide.

Heteroskedasticity test

Table 5 reveals that $p\text{-value} = 0.143 > 0.05 \rightarrow$ Fail to reject H_0 . This indicates no evidence of heteroskedasticity. The residuals have constant variance, so the OLS regression is efficient, and the standard errors are reliable. If the $p\text{-value} < 0.05$, then heteroskedasticity is present, which

Table 4. Summary of multicollinearity test

Variable	VIF	Tolerance (1/VIF)
Board Gender Diversity	1.15	0.87
Board Financial Expertise	1.28	0.78
Board Meeting Frequency	1.23	0.81
Mean VIF	1.22	

Source: compiled by the authors.

Table 5. Summary of result of Breusch-Pagan test

Test Statistic	Df	p-value
5.42	3	0.143

Source: compiled by the authors.

would require the use of robust standard errors or Generalised Least Squares (GLS).

Autocorrelation test

The Wooldridge test was used to detect autocorrelation (serial correlation) in panel data regression models. It is a key diagnostic tool to validate model assumptions. The result of the autocorrelation is shown in Table 6 and provides that the p-value = 0.010 < 0.05, implying that the null hypothesis was rejected. This is evidence of first-order autocorrelation in the panel data. For these reasons, Generalised Least Squares (GLS) regression addresses detected heteroskedasticity (Breusch-Pagan $\chi^2 = 5.42$,

p = 0.143) and first-order autocorrelation (Wooldridge F = 7.82, p = 0.010). The Hausman test ($\chi^2 = 12.47$, p < 0.05) favours fixed effects; however, GLS with robust standard errors provides efficient estimation given the panel structure.

Estimation technique

Supported across all the models as shown in the results in Table 7, BGD demonstrates significant positive effects on tax holidays ($\beta = 0.075$, p < 0.01), loss relief ($\beta = 0.394$, p < 0.05), and capital allowances ($\beta = 0.522$, p < 0.05) as presented in the table. Specifically, the implication of the board Gender Diversity (BGD) effect on tax holidays is that firms with greater female representation on the board are

Table 6. Wooldridge test

F-statistic	p-value
7.82	0.010

Source: compiled by the authors.

Table 7. GLS result on the impact of corporate governance mechanisms on tax incentives of non-financial firms in Nigeria

Variable	Model 1: Tax Holiday		Model 2: Loss Relief		Model 3: Capital Allowance	
	Coeff. (SE)	z-stat	Coeff. (SE)	z-stat	Coeff. (SE)	z-stat
Constant	0.928 (0.144)***	6.44	6.723 (0.654)***	10.28	12.648 (0.983)***	12.86
Board Gender Diversity	0.075 (0.022)***	3.41	0.394 (0.158)**	2.49	0.522 (0.215)**	2.43
Board Financial Expertise	0.163 (0.038)***	4.29	0.792 (0.286)***	2.77	1.132 (0.404)***	2.80
Board Meeting Frequency	0.041 (0.012)***	3.42	0.318 (0.089)***	3.57	0.384 (0.109)***	3.52
Wald χ^2 (3)	38.57***		31.85***		28.72***	
Observations	100		100		100	

Source: compiled by the authors.

more likely to benefit from tax holidays. Also, the effect size increases across incentive types, suggesting diversity particularly enhances complex, investment-related tax planning. Another possible explanation for positive significance is that increased board diversity improves decision-making quality and oversight, leading to better compliance or negotiation for tax incentives. This aligns with stakeholder orientation arguments that diverse boards may prioritise long-term investment strategies that qualify for capital allowances while maintaining transparency that facilitates regulatory relationships for discretionary incentives like tax holidays. Overall, the result confirms the alternative hypothesis, and it is accepted.

Considering the Board Financial Expertise effect, in the results in table 7, on tax incentives, tax holidays ($\beta = 0.163$, $p < 0.001$), loss relief ($\beta = 0.792$, $p < 0.01$), and capital allowances ($\beta = 1.132$, $p < 0.01$) connotes that BFE has a positive and significant effect on all the tax incentives. It further explains that financially skilled directors are critical in identifying, managing, and maximising tax incentives. Expert boards appear to transform technical tax knowledge into tangible incentive capture, consistent with Upper Echelon Theory predictions. The high significance and size of Board Financial Expertise (1.132) highlight that skilled boards are essential in navigating complex tax loss mechanisms, potentially enabling firms to reduce taxable income effectively. Conclusively, the result supports the alternative hypothesis and confirms that board financial expertise will improve tax incentive utilisation.

Coming to the board meeting, as shown in Table 7, the effect on tax

holidays ($\beta = 0.041$, $p < 0.01$), loss relief ($\beta = 0.318$, $p < 0.001$), and capital allowances ($\beta = 0.384$, $p < 0.001$). This implies that board meeting has positive and statistically significant effect on tax incentive utilisation. This pattern mirrors financial expertise, where more frequent engagement particularly enhances complex incentive utilisation and suggests that active oversight ensures timely decision-making on investment timing, loss recognition, and regulatory compliance documentation. Similarly, active boards that meet frequently may be better able to monitor and plan tax-related decisions, thereby improving access to tax holidays.

Convincingly, Board Gender Diversity and Meeting Frequency also significantly enhance tax loss relief utilisation, reinforcing that diversity and active governance contribute to better tax planning. Likewise, firms with gender-diverse boards, financially knowledgeable directors, and frequent board meetings are more likely to invest strategically in capital assets and claim higher capital allowances. This could be because knowledgeable and active boards oversee capital expenditure and depreciation policies more efficiently, resulting in greater tax benefits.

Discussion

This study provides robust evidence that corporate governance mechanisms significantly influence tax incentive utilisation among Nigerian non-financial firms. The study's findings suggest that gender-diverse boards may enhance firms' legitimacy and transparency, potentially

influencing tax authorities' decisions in granting discretionary incentives like tax holidays. This aligns with and extends existing literature in several important ways. It supports arguments that female directors, known for risk-averse and ethical decision-making styles (Ait et al., 2024), encourage responsible tax planning that utilises available incentives without crossing into aggressive avoidance. This aligns with Amanamah (2024), who found that gender-diverse boards prioritise stakeholder concerns and improve corporate social responsibility outcomes. The positive association with capital allowances (0.394) further suggests that diverse boards contribute to long-term strategic planning, including investment decisions that qualify for tax relief.

The significant positive effect of board meeting frequency supports agency theory predictions that active monitoring mitigates management inefficiencies and enhances compliance. Boards that meet more frequently are better positioned to review tax strategies, monitor regulatory changes, and make timely adjustments. This finding aligns with Seemali (2024), who found that regular board meetings enhance decision-making and organisational oversight. However, the relatively smaller coefficients compared to financial expertise suggest that meeting frequency alone is insufficient without the substantive knowledge brought by financially expert directors. This nuanced finding reconciles conflicting evidence in prior literature: while Guluma (2021) and Mokalapa et al. (2024) cautioned that excessive meetings may yield diminishing returns, our results suggest that when combined with appropriate

expertise, frequent meetings enhance strategic tax outcomes.

The consistently strongest effect of board financial expertise underscores the critical role of financial competence in tax-related decision-making. Directors with financial acumen are better equipped to understand complex tax laws, assess eligibility criteria for incentives, and structure operations to maximise tax benefits. This finding supports upper echelon theory, which posits that organisational outcomes reflect the cognitive base and expertise of top decision-makers. It also aligns with recent evidence from emerging markets showing that financial expertise enhances tax efficiency while minimising avoidance risk (Onyeogubalu et al., 2025; Zulpahmi et al., 2024). The finding also supports Wasiuzzaman and Subramaniam's (2023) claim that women on boards promote ethical corporate behaviour and stakeholder trust. Overall, the study upholds agency theory, which posits that active monitoring mitigates management inefficiencies and enhances compliance.

Conclusion and Policy Implications

This study examined the relationship between corporate governance mechanisms and tax incentive utilisation among Nigerian non-financial firms. Using panel data from 10 listed firms over 2014–2023 and GLS estimation, the study finds that board gender diversity, board financial expertise, and board meeting frequency all exert statistically significant positive effects on firms' utilisation of tax holidays, loss relief, and capital allowances. Board financial expertise demonstrates

the strongest and most consistent impact, underscoring the critical role of financial competence in identifying and securing tax benefits.

These findings collectively support and extend multiple theoretical perspectives. Agency theory is validated by the positive effect of board meeting frequency, confirming that active monitoring aligns managerial decisions with shareholder interests. Upper echelon theory is supported by the strong effect of board financial expertise, demonstrating that decision-maker characteristics shape strategic tax outcomes. Resource dependence theory is validated by the positive effect of board gender diversity, suggesting that diverse boards enhance firms' capacity to manage external dependencies, including relationships with tax authorities. The integration of these perspectives provides a more comprehensive understanding of how board attributes influence tax behaviour than any single theory alone.

The study contributes to the literature in several ways. First, it shifts analytical focus from tax avoidance, often associated with aggressive practices, to the strategic utilisation of legitimate tax incentives, offering a more nuanced understanding of corporate tax behaviour. Second, it provides empirical evidence from

an emerging economy context where governance structures and tax regimes differ significantly from those in developed countries. Third, it demonstrates the complementary value of integrating multiple theoretical perspectives, agency, upper echelon, and resource dependence theories, to explain how board attributes shape tax outcomes.

The findings have important implications for policy and practice. For tax authorities such as the Federal Inland Revenue Service (FIRS), considering firm-level governance indicators when designing or allocating tax incentives could enhance policy effectiveness. Recognising firms with strong governance structures may help ensure that incentives achieve their intended goals without abuse. For corporate boards, the results underscore the importance of investing in financial expertise, promoting gender diversity, and maintaining regular meeting schedules. These governance investments not only support regulatory compliance but also create opportunities for lawful tax reduction. For regulators, amending corporate governance codes to encourage minimum gender representation and financial expertise requirements could enhance overall tax compliance and incentive utilisation across the corporate sector.

References

1. Affes, W., & Jarboui, A. (2023). The impact of corporate governance on financial performance: A cross-sector study. *International Journal of Disclosure and Governance*, 20, 374–394. <https://doi.org/10.1057/s41310-023-00182-8>
2. Ait, M., Hattani, N., & Sahbani, S. (2024). Decoding tax management: The role of corporate governance mechanisms. *Corporate Governance and Organizational Behavior Review*, 8(1), 83–93. <https://doi.org/10.22495/cgobrv8i1p7>
3. Akinyemi, A. J., Nwankwo, A. M., & Oyedare, E. O. (2024). Effect of tax incentive on compliance in Nigeria of listed food and beverages firms in Nigeria. *African Journal of Accounting and Financial Research*, 7(3), 149–159. <http://dx.doi.org/10.52589/ajaf-4kj6qy97>
4. Alkurdi, A., & Mardini, G. H. (2020). The impact of ownership structure and the board of directors' composition on tax avoidance strategies: empirical evidence from Jordan. *Journal of Financial Reporting and Accounting*, 18(4), 795–812. <https://doi.org/10.1108/JFRA-01-2020-0001>
5. Amanamah, R. B. (2024). Corporate governance, financial leverage, external audit quality, and financial reporting quality in Ghanaian companies. *Financial Markets, Institutions and Risks*, 8(1), 43–62. doi: <https://doi.org/10.61093/fmir>
6. Basson, R., & van der Spuy, P. V. A. (2025). Corporate tax avoidance and the upper echelon effect: Evidence from segment disclosure choices. *South African Journal of Economics and Management Sciences*, 28(1), 59–65. <https://doi.org/10.4102/sajems.v28i1.5965>
7. Bataineh, H. (2025). The moderating effect of female directors on the relationship between ownership structure and tax avoidance practices. *Sustainability*, 18(7), 350. <https://www.mdpi.com/1911-8074/18/7/350>
8. Bruna, M. G., Dang, R., & Scotto, M. J. (2019). Does board gender diversity affect firm risk-taking? Evidence from the French stock market. *J Manag Gov*, 23, 915–938. <https://doi.org/10.1007/s10997-019-09473-1>
9. Chukwu, J. H., Ogbonna, S. N., & Ogbuagu, G. O. (2024). Impact of corporate governance on financial performance: A study of deposit money banks in Nigeria. *International Journal of Research and Review*, 11(7), 526–542. <https://doi.org/10.52403/ijrr.20240756>
10. Companies Income Tax Act (CITA), Cap C21 LFN 2004 (as amended). (2024). *Laws of the Federation of Nigeria*.
11. Ebire, K., Musa, A. M., & Onmonya, L. (2024). Moderating effect of board independence on the relationship between firm attributes and tax aggressiveness: Empirical evidence from the Nigerian banks. *International Journal of Accounting & Finance Review*, 15(1), 1–9. <https://doi.org/10.46281/ijaf.v15i1.2184>
12. Elouaer, N. (2022). Does gender diversity and experience moderate the relationship between tax aggressiveness and corporate social responsibility? *Sustainability*, 14(21), 14348. <https://www.mdpi.com/2071-1050/14/21/14348>
13. Ezeala, G., & Okerekeoti, C. U. (2021). Corporate governance and tax avoidance: An empirical study of quoted food and beverage firms in Nigeria. *International Journal of Research in Education and Sustainable Development*, 1(9), 1–14.
14. Gaio, L. E., Lucas, A. C., Stefanelli, N. O., & Grespan Bonacim, C. A. (2026). Board gender diversity: impact on corporate tax avoidance in response to economic policy uncertainty. *Journal of Sustainable Finance & Investment*, 16(1), 1–21. <https://doi.org/10.1080/20430795.2025.2596601>
15. Fauziah, R. R., & Widiyati, D. (2022). The effect of tax incentives and good corporate governance on tax avoidance. *Journal of Industrial Engineering & Management Research*, 3(1), 185–196. <https://doi.org/10.7777/jiem.v3i1.282>
16. Garcia-Blandon, J., Argilés-Bosch, J. M., Ravenda, D., & Castillo-Merino, D. (2022). Board gender quotas, female directors and corporate tax aggressiveness: A causal approach. *International Review of Financial Analysis*, 79. <https://doi.org/10.1016/j.irfa.2021.102010>
17. Gospel, J. C., Ebimobowei, A., & Adefisayo, A. (2020). Corporate governance mechanism and tax aggressiveness of listed consumer goods firms in Nigeria. *The Review of Economics and Statistics*, 91(3), 614–631.
18. Guluma, T. F. (2021). The impact of corporate governance measures on firm performance:

- The influences of managerial overconfidence. *Future Business Journal*, 7(1), 1–18. <https://doi.org/10.1186/s43093-021-00093-6>
19. Iazzi, A., Vacca, A., Maizza, A., & Schiavone, F. (2023). The role of corporate board and auditors in tax planning: evidence from Italy. *Management Research Review*, 46(3), 321–339. doi: <https://doi.org/10.1108/MRR-07-2021-0518>
 20. Hambrick, D. C. (2007). Upper echelons theory: An update. *Academy of Management Review*, 32(2), 334–343. <https://doi.org/10.5465/amr.2007.24345254>
 21. Hirschi, T. (1969). *Causes of delinquency*. Berkeley: University of California Press.
 22. Industrial Development (Income Tax Relief) Act (IDITRA), Cap I7 LFN 2004 (as amended). (2024). *Laws of the Federation of Nigeria*.
 23. Jarboui, A., Saad, M. K. B., & Riguen, R. (2020). Tax avoidance: do board gender diversity and sustainability performance make a difference? *Journal of Financial Crime*, 27(4), 1389–1408. doi: <https://doi.org/10.1108/JFC-09-2019-0122>
 24. 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](https://doi.org/10.1016/0304-405X(76)90026-X)
 25. KPMG. (2024). *A guide to tax/incentives in Africa*. KPMG Nigeria. <https://assets.kpmg.com/content/dam/kpmg/ng/pdf/tax/ng-incentives-in-africa.pdf>
 26. Lanis, R., Richardson, G., & Taylor, G. (2017). Board of director gender and corporate tax aggressiveness: An empirical analysis. *Journal of Business Ethics*, Springer, 144(3), 577–596. doi: <https://doi.org/10.1007/s10551-015-2815-x>
 27. Mokalapa, P. M., Oyedokun, G. E., & Fowokan, T. E. (2024). Effect of corporate governance practices on the performance of an established medium-sized enterprise in the mining industry in South Africa. *Small Business Accounting Management and Entrepreneurship Review*, 4(1), 17–33. <https://doi.org/10.61656/sbamer.v4i1.144>
 28. Nigerian Investment Promotion Commission (NIPC). (2024). *Compendium of investment incentives in Nigeria*. NIPC. <https://www.nipc.gov.ng/compendium/2-general-tax-based-incentives/>
 29. Ogbodo, O. C., & Omonigho, A. J. (2021). Corporate governance and tax avoidance of quoted consumer goods manufacturing companies in Nigeria. *International Journal of Advanced Academic Research*, 7(2) 17–51. <https://doi.org/10.46654/ij.24889849.s7714>
 30. Oktaviani, R. M., Rohman, A., & Zulaiikha, Z. (2024). CEO characteristics and tax aggressiveness in Indonesian family firms: the upper echelons theory perspective. *Journal of Tax Reform*, 10(1), 149–161. doi: <https://doi.org/10.15826/jtr.2024.10.1.162>
 31. Olutimehin, D., Ofofode, S., Ugochukwu, G. O., & Nwankwo, E. (2024). Corporate governance and stakeholder engagement in Nigerian enterprises: A review of current practices and future directions. *World Journal of Advanced Research and Reviews*, 21(3):736–742. <https://doi.org/10.30574/wjarr.2024.21.3.0737>
 32. Onyeogubalu, O. N., Okeke, O. N., & Akwuobi, B. U. (2025). Board financial expertise and tax avoidance of listed consumer goods firms in Nigeria. *Global Journal of Economic and Finance Research*, 2(1), 56–66. doi: 10.55677/GJEFR/07-2025-Vol02E1
 33. Oshim, J. C., & Igwe, A. O. (2024). Corporate governance and financial performance of listed consumer goods firms in Nigeria. *International Journal of Business and Management Review*, 12(1), 96–115. <https://doi.org/10.37745/ijbmr.2013/vol12n196115>
 34. Oyerogba, E. O., Alamu, J. A., Olugbenro, S. O., & Sangodare, T. O. (2024). Tax incentives and foreign direct investment: Evidence from the Nigeria listed manufacturing firms. *Journal of Tax Reform*, 10(2), 355–380. <https://doi.org/10.15826/jtr.2024.10.2.173>
 35. Pavlou, C., Persakis, A., & Koliass, G. (2025). The impact of board characteristics on tax avoidance: Do industry regulations matter? *Journal of Risk and Financial Management*, 18(6), 287. <https://doi.org/10.3390/jrfm18060287>
 36. PwC. (2025). Nigeria – Corporate – Tax credits and incentives. *PwC Worldwide Tax Summaries*. <https://taxsummaries.pwc.com/nigeria/corporate/tax-credits-and-incentives>
 37. PwC. (2025). Nigeria – Corporate – Deductions. *PwC Worldwide Tax Summaries*. <https://taxsummaries.pwc.com/nigeria/corporate/deductions>
 38. Richardson, G., Taylor, G., & Lanis, R. (2013). The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy*, 32(3), 68–88. <https://doi.org/10.1016/j.jaccpubpol.2013.02.004>

39. Song, Q., Ding, W., Hasan, I., & Wang, Q. (2024). Banker directors on board and corporate tax avoidance. *Journal of Empirical Finance*, 79. ISSN 0927-5398. <https://doi.org/10.1016/j.jempfin.2024.101551>
40. Röttger, P., Spee, K., & Wobst, J. (2019). The effect of chief financial officers' expert power on tax avoidance—empirical evidence from Germany. *Management Studies*, 9(1), 8–22.
41. Saleh, S., Al-Mansoori, M., & Al-Hammadi, H. (2024). Board gender diversity and tax avoidance: Evidence from the UAE. *Journal of Financial Reporting and Accounting*. Advance online publication. <https://doi.org/10.1108/JFRA-01-2024-0012>
42. Seemali, A. A. (2024). The impact of corporate governance on financial performance: A quantitative study of the banking sector in Sri Lanka between 2018 and 2022. *Master's Thesis*, Umea University.
43. Sotonye, O. I., Lateef, S. A., & Ene, J. (2024). Effect of corporate governance on organizational performance: A study of listed manufacturing companies in Nigeria. *American Journal of Industrial and Business Management*, 14, 905–918. <https://doi.org/10.4236/ajibm.2024.146046>
44. Wang, Z., Yang, Y., & Jiewei, Z. (2024). Are female directors more inclined to avoid risks? *International Review of Financial Analysis*, Elsevier, 92(C). <https://doi.org/10.1016/j.irfa.2024.103112>
45. Widijaya, W., & Putra, D. P. (2025). Pengaruh narsisme ceo, ukuran dewan (komisaris), direktur perempuan, kesulitan keuangan, dan ukuran perusahaan terhadap penghindaran pajak perusahaan. *Jurnal Riset Akuntansi Politala*, 8(1), 58–70. <https://doi.org/10.34128/jra.v8i1.449>
46. Wasiuzzaman, S., & Subramaniam, V. (2023). Board gender diversity and environmental, social and governance (ESG) disclosure: Is it different for developed and developing nations? *Corporate Social Responsibility and Environmental Management*, 30(5), 2145–2165. <https://doi.org/10.1002/csr.2475>
47. Yahaya, M. B., Oon, E. Y. N., & Jusoh, R. (2025). Board structure, executive attributes and corporate tax avoidance: a systematic literature review. *Asian Review of Accounting*. <https://doi.org/10.1108/ARA-09-2023-0245>
48. 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. *Front. Psychol.*, 13, 827553. <https://doi.org/10.3389/fpsyg.2022.827553>
49. Zulpahmi, S., al Azizah, U. S., Nugroho, A. W., & Setiawan, E. (2024). Investigating the impact of corporate governance on financial performance and firm value prior to and during the COVID-19 pandemic. *Revista De Gestão Social E Ambiental*, 18(6), 1–28. <https://doi.org/10.24857/rgsa.v18n6-069>

The paper submitted: March 17, 2026
Prepared for publication: June 1, 2026