MODERATING EFFECT OF BOARD INDEPENDENCE ON THE RELATIONSHIP BETWEEN TAX PLANNING AND FINANCIAL PERFORMANCE OF LISTED MANUFACTURING FIRMS IN NIGERIA

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DOI: https://doi.org/10.67203/sp.ICAD.2026

ABSTRACT

Tax planning remains a critical strategy for enhancing firm financial performance yet its effectiveness may depend on corporate governance mechanism such as board independence. This study examines the moderating effect of board independence on the relationship between tax planning and financial performance of listed manufacturing firms in Nigeria. An ex-post facto research design and quantitative research approach was adopted. The population of the study comprised 55 listed manufacturing firms on Nigeria Exchange Group as at 31st December 2024 out of which sample firms were selected through filtering. Secondary data was used and data were collected from forty (40) listed manufacturing firms covering a period of ten (10) years (2015-2024). The techniques for data analysis include descriptive statistic, correlation and regression and the statistical software employed was STATA 13 Version. The result revealed that book-tax difference and firm size have positive and significant effect on financial performance; thin capitalization have positive and insignificant effect; capital intensity and tax savings have negative and significant effect on financial performance while effective tax rate and board independence have negative and insignificant effect on financial performance. The finding revealed that board independence moderate the relationship between capital intensity, book-tax difference and financial performance while board independence does not moderate the relationship between effective tax rate, tax savings, thin capitalization and financial performance. The study concluded that board independence moderate the relationship between capital intensity, book-tax difference and financial performance while board independence does not moderate the relationship between effective tax rate, tax savings, thin capitalization and financial performance. The study recommends that manufacturing firms should optimize their tax planning in order to improve financial performance.

Keywords: *Tax planning; effective tax rate; capital intensity; thin capitalization; tax saving; book-tax difference; financial performance; board independence and listed manufacturing firms in Nigeria*

1.1 INTRODUCTION

A key goal for any business is to improve its financial performance and increase shareholder wealth. Financial performance indicates how well a company uses its financial and production resources to generate profits for its owners, and this is a central focus for profit-driven organizations (Kayode & Folajinmi, 2020). The financial performance of a company is a key concern for those who use financial statements, especially within the manufacturing sector of many economies. As a result, many companies aim to maximize the interests of their stakeholders by focusing on profit growth (Liu *et al*., 2022; Poetri *et al*., 2020; Wang *et al*., 2021). However, the strong desire to improve profitability in the manufacturing sector has encountered numerous obstacles, including high multiple tax rates, rising operational costs, and inconsistent management of working capital. These challenges have forced financial managers to prioritize cost control measures in order to restore the companies' financial health (Oeta *et al*., 2019). The manufacturing sector's contribution to Nigeria's economic objectives remains below the global average, largely due to its low and limited profitability Adekoya *et al* (2019). Adejumo and Sanyaolu (2020) pointed out that manufacturing firms in Nigeria face significant challenges due to having to comply with multiple tax regulations requirement, inefficient tax administration combined with policies that cause effective tax rates to be much higher than the

standard business income tax rate create major burdens for businesses by draining time, money and potential growth as high effective rates discourage expansion. Moreover, the imposition of various levies by different levels of government results in significant tax burdens on profitable businesses. This makes tax expenses a key factor that restricts a firm's productive capacity by limiting its financial strength (Fagbemi *et al*., 2019).

The relationship between tax planning and financial performance has garnered significant attention globally, with research indicating that effective tax strategies can substantially influence a firm's financial health (Chen *et al*., 2020). Tax planning encompassing various proxies such as effective tax rate management, capital intensity optimization, thin capitalization, tax savings, and book-tax difference which plays a crucial role in enhancing firm financial performance. Also in the global context, studies have shown that firms employing sophisticated tax planning strategies tend to exhibit improved financial performance, measured through metrics like return on assets (ROA) (Dyreng *et al*., 2020). The impact of tax planning on financial performance has been a subject of extensive research. For instance, a study by Hanlon and Heitzman (2010) highlights that effective tax planning not only reduces tax liabilities but also enhances firm value by increasing after-tax cash flows. Furthermore, research by Armstrong *et al*. (2021) underscores the importance of board independence in moderating the relationship between tax planning and financial performance, suggesting that independence of the board can better navigate complex tax environments to optimize financial outcomes.

Tax planning emerges as a crucial tool to boost financial results and maximize shareholder value. This need has driven managers to adopt various approaches to lower tax obligations, with effective tax planning being a prominent strategy. Tax planning involves legally minimizing tax payments through methods such as tax avoidance. The money saved through these strategies can then be reinvested into new opportunities, ultimately improving the company's performance (Omodero & Ogbonnaya, 2018).

Previous research presents inconsistent results on the impact of tax planning on company financial performance. Several studies for instance, (Ado *et al*.; 2021, Angelina & Darmawan, 2021; Eneisik & Moses, 2021; Adejumo & Sanyaolu, 2020; Akintoye *et al*., 2020; Madugba *et al*., 2020; Omesi & Appah, 2021; Fagbemi *et al*., 2019) have found negative or little to no relationship between tax planning and the financial success of publicly listed companies. On the other hand, researcher like Osho & Orisamika, (2022) argues that effective tax planning is positively linked to increased profitability in these firms. More so, Akpanowo *et al*.; (2024) revealed that thin capitalization has a positive effect where as effective tax rate has negative effect on financial performance of manufacturing firms. Supporting the positive view, some studies such as (Adejumo, 2020; Akintoye *et al*., 2020; Felix *et al*., 2021; Niyi *et al*., 2024; Olayiwola John & Okoro Stephanie, 2021; Ibrahim *et al*., 2021; Oyeshile Oladopo Kayode & Festus Folajinmi, 2020) confirm that tax planning positively influences the financial performance of manufacturing companies in Nigeria. Therefore, this study explored the role of board independence as a moderating factor, while also considering firm size as control variables to account for firm-specific characteristics that affect performance.

1.2 Statement of the Problem

Nigeria's manufacturing sector financial success is greatly affected by how well they plan their taxes. Tax planning helps reduce tax payments, which in turn boosts profits and increases the overall value of the company (Kayode & Folajinmi, 2020). However, the complexity of tax laws, infrastructure deficits, high inflation, energy costs, and changing economic conditions complicate effective tax planning and financial performance (Muideen et al., 2024). In addition, policies inconsistency; adding to the regulatory unpredictability firms must navigate create challenges that demand strong corporate governance to make sure tax planning supports the company's financial goals (Olagunju & Eze, 2024). An important factor in this process is the financial knowledge and experience of board members. Boards with solid independence directors are better equipped to understand tax issues, oversee tax strategies, and manage related risks effectively (Adegboye *et al*., 2022). Despite the growing recognition of how board characteristics influence tax planning and company financial outcomes, there is still little research focused on how board independence within a board affects the impact of tax planning on financial performance in Nigerian manufacturing firms.

This is an important issue because boards lacking independence directors may implement poor tax strategies, potentially leading to penalties or lost tax-saving chances, which harms profitability (Adewumi & Okoye, 2023).

1.3 Research Questions

The following research questions are formulated which form the basis of the study.

i. To what extent does effective tax rate influence financial performance of listed manufacturing firms in Nigeria?.
ii. What is the effect of capital intensity on financial performance of listed manufacturing firms in Nigeria?.
iii. How does book-tax difference impact financial performance of listed manufacturing firms in Nigeria?.
iv. To what extent does tax savings influence financial performance of listed manufacturing firms in Nigeria?.
v. What is the effect of thin capitalization on financial performance of listed manufacturing firms in Nigeria?.
vi. What is the effect of board independence on financial performance of listed manufacturing firms in Nigeria?
vii. To what extent does board independence moderate the relationship between effective tax rate and financial performance of listed manufacturing firms in Nigeria?.
viii. What is the moderating effect of board independence on the relationship between capital intensity and financial performance of listed manufacturing firms in Nigeria?.
ix. How does board independence the relationship between book-tax difference and financial performance of listed manufacturing firms in Nigeria?.
x. To what extent does board independence moderate the relationship between tax savings and financial performance of listed manufacturing firms in Nigeria?.
xi. What is the moderating effect of board independence on the relationship between thin capitalization and financial performance of listed manufacturing firms in Nigeria?.

1.4 Objectives of the Study

The general objective of the study is to examine the moderating effect of board independence on the relationship between tax planning and financial performance of listed manufacturing firms in Nigeria. The specific objectives are to investigate the effect of effective tax rate, capital intensity, book-tax difference, tax savings, thin capitalization and board independence on financial performance of listed manufacturing firms in Nigeria.

LITERATURE REVIEW

2.1 Conceptualization

Literature review begins with conceptualization where key concepts and definitions are clarified to establish a common understanding and scope for the study.

2.1.1 Concept of Financial Performance

Brigham and Ehrhardt (2022) describe financial performance as a way to evaluate how effectively a company uses its assets in its main business activities to generate income. It serves as an overall indicator of a company's financial health during a specific time frame and allows for comparisons between companies within the same industry or across different sectors. Similarly, Ross *et al* (2023) explain that financial performance reflects the measurable results of a company's strategies, operations, and decisions. Eneisik and Moses (2021) describe financial performance as how well a company manages its financial resources over a period, including how it collects and uses cash. This can be evaluated through measures such as capital adequacy ratio, liquidity, leverage, solvency, and profitability.

2.1.2 Concept of Tax Planning

According to Felix and Aruna (2021), tax planning consists of legal strategies businesses use to efficiently manage their income and expenses to minimize tax payments. Similarly, Akpanowo *et al* (2021) describe tax planning as the deliberate effort to anticipate future tax obligations and find ways to reduce them. In addition, Kayode and Folajinmi (2020), add that corporate tax planning involves legitimate actions aimed at managing income and expenses to eliminate, reduce, or defer taxes within legal limits. Through tax planning, companies can legally identify opportunities within tax laws to lower their tax liabilities.

2.1.3 Concept of Effective Tax Rate (ETR)

Muideen *et al* (2024) defined effective tax rate as the percentage of a company's earnings before tax that is paid in taxes. Akpanowo *et al* (2024) explain that effective tax rate is an important tax concept that shows the real tax load paid by individuals or businesses compared to their taxable income. It takes into account factors like deductions, exemptions, credits, and other adjustments that affect the final amount of tax owed. Also, Eneisik and Moses (2021) define effective tax rate as the portion of a company's tax obligation that is lowered without negatively affecting its reported earnings.

2.1.4 Concept of Capital Intensity

According to Akintoye *et al* (2020), Capital intensity refers to how much a business spends on its fixed assets, like machinery and equipment, to support its operations. Similarly, Akpanowo *et al*. (2021) define capital intensity as the level of capital investment necessary to support a company's operations and generate revenue. Essentially, it shows the proportion of fixed assets such as property, equipment, and machinery relative to the company's total output or sales. Also, Kayode and Folajinmi (2020) describe capital intensity as the amount of fixed or tangible capital compared to other production factors, particularly labor. In addition, Sadia and Qaisar (2012) explain that capital intensity is the amount of money a business invests to increase its production.

2.1.5 Concept of Thin Capitalization

According to the Organization for Economic Cooperation and Development (OECD, 2012), thin capitalization is a strategy where companies maintain a high debt-to-equity ratio to take advantage of tax laws that allow interest payments on debt to be deducted as expenses. More so, Eneisik and Moses (2021) thin capitalization happens when the amount of debt in a company capital exceeds the amount of equity. Temitope *et al* (2019) thin capitalization is a strategy some businesses use by keeping a high level of debt compared to equity. This allows them to take advantage of tax rules that let them deduct interest paid on debt as a business expense.

2.1.6 Concept of Tax Savings

According to Felix and Aruna (2021), tax savings can be seen as a strategy companies use to secure either permanent or temporary reductions in their tax expenses. It reflects the management's ability to minimize tax costs reported in a company's financial statements. More so, Omesi and Appah (2021) state that tax savings represent the gap between the official tax rate and the actual effective tax rate a company pays. Common methods to generate tax savings include deferring taxes, utilizing rollover relief, and strategically timing taxable events.

2.1.7 Concept of Book Tax Difference

According to Chukwudi *et al* (2020), book-tax difference generally refers to the gap between company's reported income on its financial statements and the income reported for federal tax purposes. More so, Wahab and Halland (2015) explain that book-tax difference is understand as the gap between income reported in accounting records and the income expected to be taxable. In this study, book-tax difference (BTD) refers to the gap between a company's accounting profit (book income) and its taxable income within a given period.

2.1.8 Concept of Board Independence

According to Martins and Omoye (2024), board independence refer to certain members of the board who are not part of the management team or executive directors but are tasked with monitoring and controlling executive director. This independence involves appointing professionals from various fields such as lawyers, financial experts, business consultants, accountants, sales professional and management experts to the board. Similarly, Chiu-Hui Wu (2021) stated that board independence refers to the presence of non-executive and independent directors on the board of a company who are free from management influence and personal interests that could impair their objectivity.

2.1.9 Concept of Firm Size

According to Elizabeth and Onipe (2024), firm size typically refers to the overall scale or extent of company operations, which can be measured in different ways like total asset, market value and number of employees. Also, Kayode and Folajinmi (2020) describe firm size as the total value of a company's assets at a given point in time. Similarly, Kehinde and Onipe (2023) explain that firm size generally refers to the scale of a company's operations, which can be measured by indicators like total assets, revenue, or market capitalization.

2.2 Empirical Review

2.2.1 Effective Tax Rate and Financial Performance

Niyi et al., (2024), Kayode and Folajinmi (2020), and Akpanowo et al., (2024) examine the effect of tax planning on financial performance and the results revealed positive and significant effect between effective tax rate and financial performance. Also Otuya and Omoye (2021) reported a positive but insignificant effect effective tax rate on financial performance. Muideen et al., (2024), Chukwudi et al., (2020), and Fagbenle et al. (2019) also reported a negative and significant relationship between effective tax rate and financial performance. Eneisik and Moses (2021), Felix and Aruna (2021), and Omesi and Appah (2021) found a negative but insignificant relationship between effective tax rate and financial performance.

2.2.2 Capital Intensity and Financial Performance

Niyi et al., (2024), Akpanowo et al., (2024), Fitriani and Indrati (2024), John and Okoro (2021), Felix and Aruna (2021) and Ferawati (2021) investigate capital intensity and financial performance, the results shows positive and significant effect between capital intensity and financial performance. Muhammed (2022), and Otuya and Omoye (2021) also found a positive but insignificant relationship between capital intensity and financial performance. Eneisik and Moses (2021), Ado et al. (2021), and Omesi and Appah (2021) found a negative but insignificant relationship capital intensity and financial performance.

2.2.3 Book-Tax Difference and Financial Performance

Muideen et al., (2024), Efor and Akagbobi (2022), Osho and Orisamika (2022), and Chukwudi et al., (2020) examine the relationship tax planning and financial performance and all reported positive and significant relationship between book-tax difference and financial performance. Angelina and Darmawan (2021) revealed negative and insignificant relationship between book-tax difference and financial performance.

2.2.4 Tax Savings and Financial Performance

Muideen et al. (2024) and Felix and Aruna (2021) determined a relationship between tax savings and financial performance and both documented a positive and significant, and positive but insignificant relationship respectively between tax savings and financial performance. Omesi and Appah (2021) found a negative and insignificant relationship between tax savings and financial performance.

2.2.5 Thin Capitalization and Financial Performance

Akpanowo et al., (2024), Kayode and Folajinmi (2020), Fagbenle et al. (2019), and Otuya and Omoye (2021) investigate relationship between thin capitalization and financial performance and the results revealed positive and significant relationship between thin capitalization and financial performance. Niyi et al., (2024) and Eneisik and Moses (2021) found a negative and insignificant relationship between thin capitalization and financial performance where as John and Okoro (2021) documented a negative and significant relationship between thin capitalization and financial performance.

2.2.6 Board Independence and Financial Performance

Martin and Omoye (2024), Wu Chiu-Hui (2021), Peter et al. (2020), and Osebe et al., (2019) examine the relationship between board independence and financial performance, the result revealed positive and significant relationship between board independence and financial performance where as Ftouhi and Dabboussi (2019) reported a negative and significant relationship between board independence and financial performance.

2.3 Theoretical Framework

2.3.1 Hoffman's Tax Planning Theory (1961)

Hoffman's Tax Planning Theory was propounded by Hoffmann in 1961. The theory posits that taxation is largely or mostly grounded in business or accounting concepts, thus a firm can modify these activities towards the attainment of reduction in tax liability without affecting accounting profits thereby increasing liquidity and after tax savings. The Hoffman tax theory state that firm should engage in tax planning activities only when there is a tendency to reduce taxable income to the barest minimum in a way that does not negatively or adversely impact accounting income, because the firm is assessed by the appropriate tax authority based on taxable income rather than accounting income. As a result, they should focus their efforts on tax planning actions that reduce taxable income rather than accounting profit. Hoffman (1961) claimed that there is a direct link between tax planning efforts and an entity's financial performance to the degree that the net tax planning gain resulting as a direct result of tax planning is greater than the expense. Hoffmann identified some ambiguities and loopholes in tax laws due to unclear intentions of the legislative intent and concluded that successful tax schemes work with the legal concepts and precise wording of the statute and complying with these concepts very precisely as it relates to individual firm tends to be advantageous to firms in form of tax savings. As highlighted by Akintoye *et al* (2020), one of the underlying assumptions of this theory is that the tax obligation of a company is based on tax-deductible earnings as opposed to accounting income, as it is in Nigeria. The notion holds that there is a significant relationship between corporate performance and tax preparation.

The adoption of the Hoffman Tax Planning Theory as the foundation for this study is consistent with recent studies in the Nigerian manufacturing sector. Specifically, the work of (Akintoye *et al*., 2020, Kayode & Folajinmi 2020, Akpanowo *et al*., 2024, Muideen *et al*., 2024 and Flex and Aruna 2021).

2.3.2 Optimal Taxation Theory (1927)

The idea of optimal tax theory was first introduced by Frank Ramsey back in (1927). This theory highlights that taxes should be designed to boost overall public welfare while keeping economic inefficiencies and biases to a minimum, all while raising a specific amount of revenue. A good tax system should be simple and easy for people to follow. As a result, when given a choice between two options, taxpayers tend to pick the one with lower taxes or some form of tax relief. Ramsey also pointed out that taxes cause fewer problems when consumers are less sensitive to price changes. Because of this, governments are encouraged to maintain stable tax policies and clear tax rules to attract and keep investors confident.

The core aim of optimal taxation theory is to create a tax system that raises government funds efficiently while maximizing social welfare and minimizing economic disruptions. It strives to balance fairness by taxing people based on their ability to pay and efficiency by limiting how much

taxes interfere with economic activities like working and investing. The theory focuses on finding tax rates and structures that fund public services, support fair income redistribution, and keep markets running smoothly, avoiding big losses caused by taxes that heavily distort supply and demand.

3.1 RESEARCH METHODOLOGY

An ex-post facto research design and quantitative research approach was adopted. The population of the study comprised 55 listed manufacturing firms on Nigeria Exchange Group as at 31st December 2024 out of which 40 firms were purposefully selected through filtering criteria such as firms listed on or before 2015, firms with complete data for the study period and firms that have never be delisted throughout the study period. Secondary data was used and data were collected from annual audited report of the sampled firms for a period of ten (10) years (2015-2024). The techniques for data analysis include descriptive statistic, correlation and regression and the statistical software employed was STATA 13 Version.

3.2 Model Specification

This study adopted (Akpanowo et al., 2024) model for examining the moderating effect of board independence on the relationship between tax planning and financial performance of listed manufacturing firms in Nigeria which can be specified as follows:

$$ROAit = \beta0 + \beta1ETRit + \beta2CAIit + \beta3BTDit + \beta4TASit + \beta5TCNit + Eit \ldots\ldots\ldots\ldots (1)$$

$$ROAit = \beta0 + \beta1ETRit + \beta2CAIit + \beta3BTDit + \beta4TASit + \beta5TCNit + \beta6BINDit + \beta7FSZit + Eit \ldots\ldots\ldots\ldots (2)$$

$$ROAit = \beta0 + \beta1ETRit + \beta2CAIit + \beta3BTDit + \beta4TASit + \beta5TCNit + \beta6BINDit + (\beta7ETRit * BIND) + \beta8CAIit*BIND) + (\beta9BTDit*BIND) + (\beta10TASit*BIND) + (\beta11TCNit*BIND) + \beta12FSZit + Eit \ldots\ldots\ldots\ldots (3)$$

Variable Definitions

Dependent Variable:

ROA: Return on Assets (measure of financial performance)

Independent Variables (Tax Planning Proxies):

ETR: Effective Tax Rate

CAI: Capital Intensity

BTD: Book-Tax Difference

TAS: Tax Savings

TCN: Thin Capitalization

Moderator:

BIND: Board independence (proportion of independence directors)

Control Variables:

FSZ: Firm Size (log of total assets)

3.3 Variables Measurement

Table 1: Variables definition and measurement of dependent variable, independent variables, moderating variable and control variable.

Variable Name	Acronym	Type	Measurement	Source (s)
Return on Asset	ROA	Dependent	Profit before tax divided by total asset	John and Okoro (2021).
Effective Tax Rate	ETR	Independent	Income tax divided by profit before tax	Muideen *et al (*2024).
Capital Intensity	CAI	Independent	Noncurrent asset divided by total asset	Akpanowo *et al* (2024), Akintoye *et al* 2020.
Book-Tax Difference	BTD	Independent	Income before tax Minus taxable income	Chukwudi *et al* (2020).
Tax Saving	TAS	Independent	Statutory tax rate minus Effective tax rate	Omesi & Appah (2021).
Thin Capitalization	TCN	Independent	Total debt divided by Total asset	Eneisik & Moses (2021).
Board Independence	BIND	Moderator	Proportion of board independence to total board size	Martins & Omoye (2024).
Firm Size	FSZ	Control	Natural logarithm of total asset	Kayode & Folajinmi (2020).

Source: Researcher compilation base on literature review, 2025.

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Descriptive Statistics

Table 3 below presents the descriptive statistics for both dependent and the independent variables of the study.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	400	0.076	0.411	-2.370	6.190
ETR	400	0.214	0.461	-4.720	5.030
CAI	400	0.545	0.522	0.040	9.590
TCN	400	0.918	2.098	0.040	19.550
TAS	400	0.126	0.290	-1.300	1.880
BTD	400	-0.016	0.401	-2.500	6.130
BIND	400	0.370	0.091	0.125	0.500
FSZ	400	10.511	0.720	8.204	11.824

Source: STATA output (2025)

Table 2 presents the descriptive statistics for Return on Assets (ROA) of listed manufacturing firms, the mean ROA is 0.076, indicating that on average; sampled manufacturing firms generated a

return of about 7.6% on their total assets during the study period. The standard deviation of 0.411 shows that there is considerable variation in profitability among the firms. The minimum value of -2.37 implies that at least one firm recorded a loss, where liabilities and costs outweighed returns on assets in a particular year. On the other hand, the maximum value of 6.19 indicates that another firm achieved very strong performance, generating returns that were more than 6 times its asset base in a given year.

Table 2 also reports the descriptive statistics for Effective Tax Rate (ETR) of listed manufacturing firms; the mean ETR is 0.214, which implies that on average, manufacturing firms paid about 21.4% of their pre-tax income as tax during the period. This is below the statutory corporate income tax rate of 30% in Nigeria, suggesting that firms engaged in some form of tax planning to reduce their tax burden through incentives, allowances, and other legal provisions. The standard deviation of 0.461 indicates a high level of variation in tax payments across firms and years. The minimum value of -4.72 suggests that some firms recorded negative ETR in certain years. Conversely, the maximum value of 5.03 shows that other firms had an ETR as high as 503% in a particular year.

Table 2 further shows the descriptive statistics for Capital Intensity of listed manufacturing firms in Nigeria; the mean capital intensity is 0.545 which implies that on average, manufacturing firms invested about 54.5% of their total assets in fixed assets where production relies heavily on tangible assets. The standard deviation of 0.521 indicates moderate variation in asset structure across firms. The minimum value of 0.040 shows that at least one firm operated with very low fixed asset holdings relative to total assets in a given year. On the other hand, the maximum value of 9.59 indicates that another firm had fixed assets that were almost 10 times its total assets base in a particular year.

Table 2 also presents the descriptive statistics for Book-Tax Difference (BTD) of listed manufacturing firms .The mean BTD is -0.016, indicating that on average, the accounting income reported by manufacturing firms was slightly higher than their taxable income during the period. The standard deviation of 0.401 shows that there is considerable variation in BTD across firms and years. The minimum value of -2.50 indicates that some firms had taxable income that was much higher than their accounting income in certain years. Conversely, the maximum value of 6.13 suggests that other firms reported accounting income that was significantly higher than taxable income.

Table 2 further reports the descriptive statistics for Tax Savings of listed manufacturing .The mean tax savings is 0.125, which implies that on average, manufacturing firms were able to reduce their tax burden by about 12.5% of pre-tax income through planning activities such as incentives, allowances, and exemptions provided in Nigerian tax laws. The standard deviation of 0.289 indicates moderate variation in tax savings across firms and years. The minimum value of -1.30 shows that some firms recorded negative tax savings in certain years. On the other hand, the maximum value of 1.88 indicates that other firms achieved tax savings as high as 188% of pre-tax income in a given year.

Table 2 presents the descriptive statistics for Thin Capitalization of listed manufacturing. The mean thin capitalization ratio is 0.917. This suggests that on average, manufacturing firms financed about 91.7% of their operations with debt relative to equity. The standard deviation of 2.098 shows that there is high variability in leverage levels across firms and years. The minimum value of 0.040 indicates that at least one firm operated with very low debt relative to equity in a particular year, suggesting an equity-based financing approach. In contrast, the maximum value of 19.55 reveals that another firm had debt that was almost 20 times its equity in a given year.

Table 2 also reports the descriptive statistics for Board Independence of listed manufacturing firms. The mean board independence is 0.370, indicating that on average, about 37% of board members in sampled manufacturing firms are independent directors. The standard deviation of 0.091 shows that there is relatively low variation in board independence across firms. The minimum value of 0.125 indicates that at least one firm had only 12.5% of its board as independent directors in a given year. On the other hand, the maximum value of 0.50 shows that some firms achieved a board composition where 50% of directors were independent.

Table 2 presents the descriptive statistics for Firm Size of listed manufacturing firms. The mean firm size is 10.511, this implies that on average, sampled manufacturing firms are relatively large in terms of asset base. The standard deviation of 0.720 indicates moderate variation in firm size

among the sampled companies. The minimum value of 8.204 shows that at least one firm was relatively small in asset size during the period; while the maximum value of 11.824 indicates that other firms were very large.

4.2 Correlation Matrix

Table 3: Correlation Matrix

Variable	ROA	ETR	CAI	BTD	TAS	TCN	BIND	FSZ
ROA	1.0000							
ETR	0.0507	1.0000						
CAI	-0.0964	-0.0783	1.0000					
BTD	0.9191	0.0170	-0.0641	1.0000				
TAS	-0.1137	-0.5664	0.1255	-0.0501	1.0000			
TCN	0.0900	-0.0439	0.1030	-0.0628	0.1314	1.0000		
BIND	-0.0207	0.0510	-0.1032	-0.0248	-0.1407	-0.1121	1.0000	
FSZ	0.0916	-0.0429	-0.1053	0.0442	0.0126	0.0997	-0.0101	1.0000

Source: STATA Output (2026)

Table 3 presents the Pearson correlation result between Effective Tax Rate and Return on Assets. The result shows that Effective Tax Rate has a positive but very weak correlation with ROA at r = 0.0507. The correlation coefficient is very close to zero, which indicates that there is almost no linear relationship between effective tax rate and financial performance. The Pearson correlation result in Table 3 shows that Book-Tax Difference has a very strong positive correlation with Return on Assets at r = 0.9191. This implies that there is a high degree of association between book-tax difference and financial performance of the listed manufacturing firms in Nigeria. Table 3 shows the correlation between Thin Capitalization and Return on Assets. The result reveals that Thin Capitalization has a positive but very weak correlation with ROA at r = 0.0900. This indicates that there is almost no linear relationship between the level of debt financing used for tax advantage and the financial performance of listed manufacturing firms in Nigeria during the study period. The correlation matrix in Table 3 indicates that Firm Size has a positive but very weak correlation with Return on Assets at r = 0.0916.This suggests that there is almost no linear relationship between the size of listed manufacturing firms and their financial performance. Table 3 presents the correlation between Capital Intensity and Return on Assets. The result shows that capital intensity has a negative and very weak correlation with ROA at r = -0.0964.This implies that there is almost no linear relationship between the level of fixed assets to total assets and the financial performance. The correlation result in Table 3 shows that Tax Savings has a negative and very weak correlation with Return on Assets at r = -0.1137. This indicates that there is almost no linear relationship between the amount of tax savings from tax planning activities and the financial performance of listed manufacturing firms. Table 3 presents the Pearson correlation between Board Independence and Return on Assets. The result shows that Board Independence has a negative and very weak correlation with ROA at r = -0.0207.This suggests that there is a very low linear relationship between the proportion of independent directors on the board and the financial performance of listed manufacturing firms in Nigeria. This high correlation partly reflects measurement overlap by construction, as BTD is measured as accounting profit before tax minus taxable income while ROA is measured as profit before tax scaled by total assets. Both share profit before tax in their numerators, which mechanically inflates their correlation. To further assess whether this high correlation biases the estimates, multicollinearity test was conducted. The VIF of 1.050 is below threshold of 5,

indicating that although bivariate correlation is high, it does not pose severe multicollinearity problem for the overall model.

4.3 Multicollinearity Test

To check for Multicollinearity, the rule of thumb is if a tolerance value is greater than 0.1 and less than 1, so also if VIF is greater than 1 but less than 10; which shows that the variables do not have problem of multicollearity.

Table 4: Multicollinearity Test

Variable	VIF	1/VIF
TAS	1.530	0.652
ETR	1.480	0.676
TCN	1.050	0.950
CAI	1.050	0.953
BIND	1.040	0.963
FSZ	1.030	0.973
BTD	1.010	0.986
Mean VIF	**1.170**	

Source: STATA 13 output (2026)

From the table 5, the multicollinearity test result show that variance inflation factor (VIFs) for all variables (TAS, CAI, TCN, BTD, ETR, BIND, FSZ) range from 1.01 to 1.53, indicating no significant multicollinearity issues.

4.4 Heteroscedasticity test

To test for heteroskedasticity, the study employs breusch-pagan/cook-weisberg test. The test result shows as follows:

Table 5: Breusch-Pagan Cook-Weisbag Test for Heteroskedasticity

Chi^2 (1)	20.38
Prob chi^2	0.000

Source: STATA 13 Output (2025)

From the above table 5, it can be seen that Chi^2 is significant and this signifies the presence of heteroskedasticity. Prob Chi^2 = 0.000, this P-value says probability of observing the data or more extreme assuming no heteroscedasticity is basically zero. Therefore, the test reject the null hypothesis of constant variance homoscedasticity, meaning heteroscedasticity is present.

4.5 Hausman Specification Test

Hausman test was used to select fixed effect vs random effect structure (FE preferred), while PCSE was adopted as an estimation technique to correct for heteroscedasticity and autocorrelation detected in diagnostics, not as a replacement for model selection.

ropriate. The explanation of the model presented in Table 4.5 below depends on the selection of the appropriate model based on Hausman's test presented below.

Table 6: Hausman's Specification Test

Test: Ho: difference in coefficients not systematic

Chi-square test value	=	16.25
P-value	=	0. 0229

Source: Author's Computation using Stata13 Output, (2025)

As presented in Table 6, the Hausman specification test produced a chi-square statistic of 16.25 with a corresponding probability value of 0.0229. Since the probability value is less than the 5 percent level of significance (0.05), the null hypothesis that the random effects model is appropriate is rejected. This indicates that the differences between the fixed effects and random effects estimators are statistically significant, implying that the assumptions underlying the random effects model are violated. Consequently, the fixed effects model is considered more appropriate for the analysis because it provides consistent and efficient parameter estimates by controlling for unobserved firm-specific characteristics that may be correlated with the explanatory variables. Although the Hausman specification test indicated that the Fixed Effects model was appropriate, further diagnostic tests revealed the presence of heteroscedasticity, serial correlation, and cross-sectional dependence in the panel data. These violations of the classical regression assumptions imply that the standard errors generated by the conventional Fixed Effects estimator may be biased and inefficient, leading to unreliable statistical inferences. Consequently, the Panel Corrected Standard Error (PCSE) estimator was employed. The PCSE model corrects the estimated standard errors for contemporaneous correlation across panels and panel heteroscedasticity while remaining robust in the presence of serial correlation. It is particularly suitable for panel datasets with relatively large cross-sectional units and moderate time periods, such as the current study. Therefore, the adoption of the PCSE estimator provides more reliable parameter estimates and valid hypothesis tests, thereby improving the robustness and credibility of the empirical findings.

4.6 Regression Result

Table 7: Base Model Regression Result (PCSE Estimation)

Variables	**Coefficient**	**Std. Err.**	**z-Statistic**	**P-value**
Constant	-0.148529	0.089500	-1.66	0.097
ETR	-0.004538	0.012192	-0.37	0.710
CAI	-0.023068	0.011203	-2.06	0.039
BTD	0.931210	0.040397	23.05	0.000
TAS	-0.150956	0.034606	-4.36	0.000
TCN	0.007877	0.007899	1.00	0.319
BIND	-0.028010	0.064984	-0.44	0.658
FSZ	0.025645	0.008320	3.08	0.002
R-Square	0.8543			
Wald chi-square	663.36			
F –Stat	0.0000			

Source: STATA Output (2026)

The results of the base regression model presented in Table 8 show that the overall R-squared is 0.8543, indicating that approximately 85.43% of the variation in the financial performance of listed manufacturing firms, measured by return on assets (ROA), is explained by the explanatory variables

included in the model. This implies that effective tax rate, capital intensity, book-tax difference, tax savings, thin capitalization, board independence, and firm size jointly account for a substantial proportion of the changes in financial performance, while the remaining 14.57% is attributable to other factors not included in the model. Furthermore, the Wald Chi-square statistic of 663.36 with a corresponding probability value of 0.0000 indicates that the overall model is statistically significant at the 1 percent level. This confirms that the explanatory variables jointly provide a good fit for the model and are relevant in explaining variations in the financial performance of listed manufacturing firms in Nigeria.

Table 8: Moderated Multiple Regression Result

Variables	**Coefficient**	**Std. Err.**	**t-statistic**	**P-value**
Constant	-0.4166255	0.1534168	-2.72	0.007
ETR	0.0482682	0.0946746	0.51	0.610
CAI	0.3888745	0.1384157	2.81	0.005
BTD	1.1828630	0.1139109	10.38	0.000
TAS	-0.0373501	0.1408412	-0.27	0.791
TCN	-0.0122987	0.0218639	-0.56	0.574
BIND	0.5887093	0.2445322	2.41	0.017
ETR × BIND	-0.1368167	0.2584201	-0.53	0.597
CAI × BIND	-1.0513530	0.3491678	-3.01	0.003
BTD × BIND	-0.7701353	0.3440320	-2.24	0.026
TAS × BIND	0.1982059	0.3851419	0.51	0.607
TCN × BIND	0.0567086	0.0670861	0.85	0.398
FSZ	0.0276421	0.0110827	2.49	0.013
R-Square	0.8591			
Adjusted R	0.8548			
F –Stat	198.7			0.000

Source: STATA Output (2026)

The regression results presented in Tables 4 and 5 compare the base model with the moderated model to determine whether the inclusion of board independence (BIND) as a moderating variable improves the explanatory power of the model. The base model estimated using the Panel Corrected Standard Error (PCSE) technique recorded an R-squared value of 0.8543, indicating that approximately 85.43% of the variation in the financial performance of listed manufacturing firms in Nigeria is explained by effective tax rate, capital intensity, book-tax difference, tax savings, thin capitalization, board independence, and firm size. After introducing the interaction terms between board independence and the tax planning variables in the moderated model, the R-squared increased to 0.8591. This indicates that the moderated model explains approximately 85.91% of the variation in financial performance. The increase of approximately 0.48% points in the explanatory power of the model suggests that the inclusion of the moderating variable and its interaction terms provides additional explanatory value, although the improvement is relatively modest.

Regarding the moderating effects, the interaction between board independence and effective tax rate (ETR × BIND) is negative but statistically insignificant (β = -0.1368, p = 0.597), indicating that board independence does not significantly moderate the relationship between effective tax rate and financial performance. Similarly, the interaction between board independence and tax savings (TAS × BIND) is positive but statistically insignificant (β = 0.1982, p = 0.607), while the interaction between board independence and thin capitalization (TCN × BIND) is also positive but statistically insignificant (β = 0.0567, p = 0.398). These findings suggest that board independence does not significantly alter the influence of effective tax rate, tax savings, or thin capitalization on the financial performance of listed manufacturing firms in Nigeria.

However, the interaction between board independence and capital intensity (CAI × BIND) is negative and statistically significant (β = -1.0514, p = 0.003), indicating that board independence significantly moderates the relationship between capital intensity and financial performance. Likewise, the interaction between board independence and book tax differences (BTD × BIND) is negative and statistically significant (β = -0.7701, p = 0.026), suggesting that the effect of book tax differences on financial performance varies significantly depending on the level of board independence. These findings imply that board independence plays an important moderating role in strengthening corporate governance and influencing how specific tax planning strategies affect the financial performance of listed manufacturing firms in Nigeria.

4.7 Discussion of Findings

The coefficient of the effective tax rate (ETR) is -0.004538, indicating a negative relationship between the effective tax rate and financial performance. This suggests that an increase in the effective tax rate is associated with a slight reduction in return on assets, holding all other variables constant. However, the corresponding p-value of 0.710 indicates that this relationship is statistically insignificant at the conventional levels of significance. Therefore, there is insufficient evidence to conclude that the effective tax rate has a significant influence on the financial performance of listed manufacturing firms in Nigeria. This finding is consistent with the studies of Eneisik and Moses (2021), Felix and Aruna (2021), and Omesi and Appah (2021) who found a negative but insignificant relationship. However, the result contradicts the findings of Muideen et al., (2024), Chukwudi et al., (2020), and Fagbenle et al. (2019) who also reported a negative and significant relationship between effective tax rate and financial performance. Further contracdicts Niyi et al., (2024), Kayode and Folajinmi (2020), and Akpanowo et al., (2024) who documented a positive and significant effect. It also differs from Otuya and Omoye (2021) who reported a positive but insignificant effect. In line with Hoffman Tax Planning Theory, firms engage in tax planning to minimize tax burden and maximize after-tax returns.

The coefficient of capital intensity (CAI) is -0.023068, indicating that firms with higher investment in fixed assets relative to total assets tend to experience a reduction in financial performance. This negative relationship suggests that increased capital investment may not immediately translate into improved profitability, possibly because of the high cost of maintaining capital assets or the long gestation period associated with such investments. The p-value of 0.039 indicates that this relationship is statistically significant at the 5 percent level. This implies that capital intensity has a significant negative effect on the financial performance of listed manufacturing firms in Nigeria. This finding is in line with Muideen et al., (2024), Chukwudi et al., (2020), and Fagbenle et al. (2019) who also reported a negative and significant relationship between capital intensity and financial performance. It also agrees with Eneisik and Moses (2021), Ado et al. (2021), and Omesi and Appah (2021) who found a negative but insignificant relationship. On the contrary, the result contradicts Niyi et al., (2024), Akpanowo et al., (2024), Fitriani and Indrati (2024), John and Okoro (2021), and Ferawati (2021) who documented a positive and significant effect. It further differs from Muhammed (2022) and Otuya and Omoye (2021) who found a positive but insignificant relationship. Based on Optimal Taxation Theory, firms have the discretion to choose investment and financing options that minimize tax liabilities.

The coefficient of book tax differences (BTD) is 0.931210, indicating a strong positive relationship between book tax differences and financial performance. This implies that firms with larger differences between accounting income and taxable income tend to report higher returns on

assets. The p-value of 0.000 shows that this relationship is statistically significant at the 1 percent level. Consequently, book tax differences have a significant positive influence on the financial performance of listed manufacturing firms in Nigeria. This finding supports the studies of Muideen et al., (2024), Efor and Akagbobi (2022), Osho and Orisamika (2022), and Chukwudi et al., (2020) who also reported a positive and significant relationship between book-tax difference and financial performance. However, the result contradicts Angelina and Darmawan (2021) who found a negative and insignificant relationship. In the context of Hoffman Tax Planning Theory, book-tax difference is often viewed as a reflection of tax planning activities. The theory posits that firms engage in strategies to align accounting income with tax obligations in order to maximize after-tax earnings.

The coefficient of tax savings (TAS) is -0.150956, indicating an inverse relationship between tax savings and financial performance. This suggests that firms reporting higher tax savings tend to experience lower returns on assets after controlling for other variables in the model. The corresponding p-value of 0.000 indicates that this negative relationship is statistically significant at the 1 percent level. This finding suggests that while firms may pursue tax-saving strategies, excessive tax savings may not necessarily translate into improved financial performance and could reflect the costs or risks associated with aggressive tax planning practices. This finding contradicts Muideen et al. (2024) and Felix and Aruna (2021) who reported a positive and significant, and positive but insignificant relationship respectively between tax savings and financial performance. However, it aligns with Omesi and Appah (2021) who found a negative and insignificant relationship. In line with Hoffman Tax Planning Theory, firms engage in tax planning activities to reduce tax liabilities and increase after-tax income. While the theory expects tax savings to improve firm outcomes, the negative and significant coefficient in this study suggests that in the context examined, the tax savings realized did not translate to better financial performance. This could be due to costs associated with aggressive tax planning, regulatory scrutiny, or the way tax savings were utilized by firms during the period under review. Thus, tax savings alone may not guarantee improved performance if not properly managed.

The coefficient of thin capitalization (TCN) is 0.007877, indicating a positive relationship between thin capitalization and financial performance. This implies that firms with relatively higher debt financing tend to experience a slight increase in return on assets. However, the p-value of 0.319 indicates that this relationship is statistically insignificant. Therefore, there is insufficient empirical evidence to conclude that thin capitalization has a significant effect on the financial performance of listed manufacturing firms in Nigeria. This finding aligns with Akpanowo et al., (2024), Kayode and Folajinmi (2020), Fagbenle et al. (2019), and Otuya and Omoye (2021) who also reported a positive and significant relationship between thin capitalization and financial performance. However, the result contradicts Niyi et al., (2024) who found a negative and insignificant relationship, and John and Okoro (2021) who documented a negative and significant relationship. In line with Hoffman Tax Planning Theory, firms use debt financing as a tax planning strategy because interest payments are tax-deductible.

The coefficient of board independence (BIND) is -0.028010, indicating a negative relationship between board independence and financial performance. This suggests that an increase in the proportion of independent non-executive directors is associated with a slight reduction in return on assets. However, the p-value of 0.658 reveals that this relationship is statistically insignificant. Consequently, there is no sufficient empirical evidence to conclude that board independence significantly influences the financial performance of listed manufacturing firms in Nigeria during the study period. This outcome is inconsistent with Martin and Omoye (2024), Wu Chiu-Hui (2021), Peter et al. (2020), and Osebe et al., (2019) who also documented a positive and significant relationship between board independence and financial performance. In contrast, the finding agrees with Ftouhi and Dabboussi (2019) who reported a negative and significant relationship.

The interaction between board independence and effective tax rate (ETR × BIND) has a coefficient of -0.1368167 with a p-value of 0.597, indicating a negative but statistically insignificant moderating effect. This finding suggests that board independence does not significantly alter the relationship between the effective tax rate and financial performance. Consequently, increasing the proportion of independent directors does not significantly influence how firms' effective tax rates affect profitability.

The interaction between board independence and capital intensity (CAI × BIND) has a coefficient of -1.0513530 with a p-value of 0.003, indicating a negative and statistically significant moderating effect. This finding implies that board independence significantly moderates the relationship between capital intensity and financial performance. Specifically, higher levels of board independence reduce the positive effect of capital intensity on profitability, suggesting that independent directors encourage more prudent and efficient utilization of capital investments rather than excessive investment in fixed assets. This outcome highlights the governance role of independent directors in ensuring that capital expenditures contribute to sustainable financial performance.

The interaction between board independence and book tax differences (BTD × BIND) has a coefficient of -0.7701353 with a p-value of 0.026, indicating a negative and statistically significant moderating effect. This finding suggests that board independence significantly moderates the relationship between book tax differences and financial performance by weakening the positive influence of book tax differences on profitability. The result implies that independent directors promote more conservative financial reporting and tax planning practices, thereby limiting the extent to which large book tax differences contribute to reported financial performance. This finding underscores the important governance role played by independent directors in ensuring that tax planning strategies are implemented responsibly and in the long-term interests of shareholders.

The interaction between board independence and tax savings (TAS × BIND) has a coefficient of 0.1982059 with a p-value of 0.607, indicating a positive but statistically insignificant moderating effect. This finding suggests that board independence does not significantly strengthen or weaken the relationship between tax savings and financial performance. Although independent directors may improve oversight of tax planning activities, their presence does not significantly change the effect of tax savings on profitability.

The interaction between board independence and thin capitalization (TCN × BIND) has a coefficient of 0.0567086 with a p-value of 0.398, indicating a positive but statistically insignificant moderating effect. This suggests that board independence does not significantly influence the relationship between debt financing and financial performance. Consequently, the governance benefits provided by independent directors do not appear sufficient to alter the effect of thin capitalization on profitability among the sampled firms.

5.1 CONCLUSION

The findings revealed that book tax differences and firm size have positive and statistically significant effects on the financial performance of listed manufacturing firms in Nigeria. This suggests that firms with larger legitimate book tax differences and larger firm size tend to perform better financially. The findings underscore the importance tax planning and organizational scale in enhancing financial performance.

The findings revealed that capital intensity and tax savings have negative and statistically significant effects on the financial performance of listed manufacturing firms in Nigeria. This suggests that firms with higher investment in productive assets and tax savings strategies may influence firm operations and tend to perform better financially.

Furthermore, the findings indicate that thin capitalization have positive but statistically insignificant effects on financial performance. This suggests that although debt financing strategies may influence firm operations, it effect on profitability are not statistically significant among listed manufacturing firms in Nigeria. Consequently, firms should not rely solely on debt financing strategies as mechanisms for improving financial performance but should instead adopt balanced and tax planning policies.

The findings also revealed that the effective tax rate have negative but statistically insignificant effect on financial performance, indicating that variations in firms' tax burdens do not significantly influence profitability. This implies that changes in effective tax rates alone are insufficient to improve financial performance and should be complemented by sound operational and strategic management practices. The findings revealed that board independence have negative and statistically insignificant effects on the financial performance of listed manufacturing firms in Nigeria. This suggests that board independence does not directly enhance firm financial performance.

The findings further revealed that board independence significantly moderates the relationship between capital intensity and financial performance as well as the relationship between book tax differences and financial performance. This demonstrates that independent directors play an important governance role by strengthening oversight of investment decisions and ensuring that tax planning strategies are implemented in ways that enhance firm performance.

Finally, the findings indicate that board independence does not significantly moderate the relationships between effective tax rate, thin capitalization, tax savings, and financial performance. This implies that the effectiveness of these tax planning measures depends more on firm-specific operational, financial, and regulatory factors than on the level of board independence. Therefore, while board independence remains an important corporate governance mechanism, it does not significantly alter the effects of all tax planning strategies on the financial performance of listed manufacturing firms in Nigeria.

5.2 RECOMMENDATION

Based on the findings of this study, the following recommendations are proposed to enhance financial performance and corporate governance among manufacturing firms in Nigeria:

Firm boards and management should view tax planning as part of value creation, not just tax minimization. Regulators and investors can also infer that a very low ETR is not always a sign of efficiency; it may signal risk-taking behavior that harms long-run profitability.

Firm management should focus on efficient utilization of assets rather than accumulation, and policymakers should ensure that tax incentives tied to capital investment are matched with operating conditions that allow firms to actually use those assets productively.

Firm boards and management should know that debt remains an important part of tax planning for these firms. However, management should be cautious because the benefit holds only as long as the firm can service the debt and regulators do not tighten thin capitalization limits. Policymakers may need to review existing rules to ensure debt is not used mainly for tax avoidance at the expense of long-term financial stability.

Firm's tax savings should be strategic rather than aggressive. Management need to weigh the short-term cash benefit against long-term risks and ensure tax planning supports value creation. For regulators, the result suggests closer scrutiny of large tax savings to distinguish legitimate incentives from harmful tax avoidance.

Managers can use book-tax difference as part of value-enhancing tax planning, but they must ensure the differences are defensible and backed by real transactions. Regulators should focus on whether large gaps are due to incentives meant to encourage investment or due to abusive avoidance that undermines the tax base.

5.3 Limitations of the Study

Despite the contributions of the study, it has some limitations like other empirical studies. The study is limited to listed manufacturing firms in Nigeria. As a result, the findings may not be generalizable to unlisted firms, other sectors like banking, insurance, or to other developing economies with different tax regimes and governance structures.

Data Limitation; the study relies on secondary data from annual reports. This means the study is limited by the quality, accuracy, and disclosure practices of the firms. Some firms may engage in tax planning activities that are not fully disclosed in financial statements, leading to potential measurement error.

Measurement Limitation; tax planning is measured using proxies like effective tax rate, capital intensity, thin capitalization, tax savings, and book-tax difference. These proxies do not capture all forms of tax planning strategies such as transfer pricing or tax havens, which may be relevant but are not publicly available.

Time Period Limitation; the study covers a specific time period. Changes in tax laws and FIRS regulations after the study period may affect the applicability of the findings to future periods.

5.4 Suggested Areas for Further Research

Future studies can extend this research to other sectors such as banking and insurance firms in Nigeria. This will help determine if the moderating effect of board independence is consistent across different industries.

Further research can examine the moderating role of other corporate governance variables such as CEO duality, board expertise, board gender diversity, audit committee independence, and ownership structure on the tax planning and performance relationship.

Future studies can adopt alternative proxies for tax planning such as discretionary permanent differences, tax haven usage, or survey-based measures to capture tax planning activities not disclosed in financial statements.

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