CORPORATE ATTRIBUTES AND TAX PLANNING OF LISTED INDUSTRIAL GOODS FIRMS IN NIGERIA

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ABSTRACT:

The study examined the effect of corporate firm attributes on tax planning of listed industrial goods firms in Nigeria. The specific objective of the study is to ascertain the effect of firm leverage, firm liquidity and firm size on the book-tax difference of listed industrial goods firms in Nigeria. The study used the ex-post facto research design. The study used purposive sampling to select eight (8) out of thirteen companies that were listed in Nigeria. The study utilised secondary data collected from the financial statements of selected manufacturing firms spanning from 2013 to 2022, resulting in a historical data timeframe of 10 years. The study employed descriptive analysis to provide a detailed description of the research variables. Panel least square regression was used in testing the hypotheses. The findings showed that: firm leverage has a significant negative effect on the book-tax difference for listed industrial goods firms in Nigeria ($p<0.05$); firm liquidity has a non-significant negative effect on the book-tax difference for listed industrial goods firms in Nigeria ($p>0.05$); firm size has a non-significant negative effect on the book-tax difference for listed industrial goods firms in Nigeria ($p>0.05$). The study recommends that managers of industrial goods firms in Nigeria should optimize tax planning strategies by leveraging increased debt financing, strategically structuring financial operations to capitalize on interest deductions and minimize overall tax liabilities for listed industrial goods firms in Nigeria.

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1. INTRODUCTION

Corporate tax planning has the potential to skew the distribution of tax burdens and, from an economic perspective, disrupts resource planning. This practice encompasses employing legal strategies to minimize tax liabilities, as well as engaging in tax-aggressive tactics to sidestep tax obligations (Tanko, 2023; Maigoshi &Tanko, 2023). The gap existing between these approaches creates a fertile ground for tax evasion, resulting in a depletion of government revenue. While many tax planning strategies are legally permissible, some may inhabit a legally ambiguous space or even involve outright illegal methods of tax evasion, such as underreporting taxable income or

inflating tax deductions (Ogbeide, Anyaduba, & Akogo, 2022). The consequential loss of revenue stemming from tax planning activities has profound implications for the government's ability to provide public goods and engage in effective fiscal planning. This, in turn, contributes to a decline in the country's gross domestic product. The adverse impact on economic indicators emphasizes the need for a nuanced examination of corporate tax planning, considering its potential repercussions on both government fiscal resources and the overall economic well-being of the nation (Danladi & Alhassan, 2022; Jaffar, Derashid & Taha, 2021).

The challenge of tax avoidance has stirred concern within the FIRS due to its association with elements of tax evasion. Despite tax evasion being a criminal offense punishable under section 40 of the IFRS Act, instances of it persist. This persistent issue poses a substantial threat to the revenue stream of the Federal Government of Nigeria. Bariyima and Akenbor (2014) assert that minimizing tax liability through tax planning essentially entails shifting value from the state to the firm.The relationship between firm attributes, specifically firm size, firm leverage, and firm liquidity, and tax planning is complex and can be influenced by various factors (Maigoshi & Tanko, 2023). Larger firms often have more resources, both financial and human, which can be dedicated to tax planning activities. They may have greater access to specialized tax professionals and the financial capacity to engage in complex tax strategies. Also, larger firms may be more inclined to engage in tax planning strategies such as transfer pricing, international tax structures, and sophisticated tax credits to optimize their tax position. However, the scrutiny on larger firms by tax authorities might be higher, leading to a careful balance between aggressive tax planning and avoiding legal issues (Aladesonkanmi, 2020). More also, firms with higher leverage may have more opportunities for tax planning (Panda & Nanda, 2020), particularly through interest deductions. Interest payments on debt are often tax-deductible, providing an incentive for firms to use debt financing to reduce taxable income.

Leveraged firms may engage in debt-related tax planning strategies to enhance interest deductibility. However, tax authorities may closely monitor such strategies to prevent excessive interest deductions, and changes in tax laws can impact the effectiveness of these approaches (Abdulkadir, Issa & Yunusa, 2020).Finally, liquidity levels influence a firm's ability to invest in tax-saving opportunities. Highly liquid firms may have the flexibility to engage in certain tax planning strategies that require upfront investments or involve timing considerations. Firms with ample liquidity may be better positioned to implement tax-efficient strategies, such as tax-efficient investments, without facing financial constraints (Danladi & Alhassan, 2022). On the other hand, highly liquid firms might also attract more attention from tax authorities, necessitating careful

adherence to tax regulations. It is in view of the above issues that this study examines the effect of corporate firm attributes on tax planning of listed industrial goods firms in Nigeria.

1.1 Objectives of the Study

The broad objective of the study is to examine the effect of corporate firm attributes on tax planning of listed industrial goods firms in Nigeria. The specific objectives are as follows:

1. to ascertain the effect of firm leverage on the book-tax differenceof listed industrial goods firms in Nigeria.

2. to investigate the effect of firm liquidity on the book-tax difference of listed industrial goods firms in Nigeria.

3. to ascertain the effect of firm size on the book-tax difference of listed industrial goods firms in Nigeria.

1.2 Research Hypotheses

The following hypotheses were accordingly formulated in their null forms:

H_1:   Firm leverage does not have any significant effect on the book-tax difference of listed industrial goods firms in Nigeria.

H_2:   Firm liquidity does not have any significant effect on the book-tax difference of listed industrial goods firms in Nigeria.

H_3:   Firm size does not have any significant effect on the book-tax difference of listed industrial goods firms in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual review

2.1.1 Corporate Attributes

Corporate attributes, often interchangeably referred to as firm structure, firm heterogeneity, firm specifics, or firm characteristics, constitute the distinctive traits that set one company apart from others within the same industry (Nworie, Okafor & John-Akamelu, 2022). These attributes encompass a multidimensional range of both financial and non-financial elements, collectively portraying the unique identity and condition of a firm within its industry domain (Dean, Mengüç & Myers, 2000). The conceptualization of corporate attributes varies across academic and business contexts, with diverse criteria employed in their definition. Yet, there is a unanimous consensus in the literature that corporate attributes encapsulate the organizational objectives of a firm and the resources deployed to attain those objectives (Taiwo, Festus & Ajao, 2022). By examining the core of what makes a company distinct, these attributes provide a comprehensive understanding

of its nature, operations, and positioning in the competitive market milieu(Nworie, Okafor & John-Akamelu, 2022).

Corporate attributes outline the internal framework that delineates the hierarchical arrangement, reporting lines, and functional divisions within an organization. It reflects how tasks, responsibilities, and decision-making authority are distributed across different levels, shaping the dynamics of the firm's internal operations (Johnson, Uwah & Udoh, 2023). Corporate attributes encompasses the inherent diversities and disparities that exist within a company, acknowledging that not all firms are homogeneous entities. This could manifest in terms of varied size, market segments, liquidity level, leverage position, or strategic approaches, illustrating the nuanced dimensions that contribute to the overall uniqueness of the firm. Firm attributes entail the granular details that define a company's identity, ranging from its mission and vision statements to its core values, branding strategies, and market positioning. These specifics serve as the building blocks that construct the narrative of the firm, shaping its identity in the eyes of stakeholders (Jeroh, 2020). Furthermore, firm characteristics encompass a broad spectrum of qualities that go beyond financial metrics. The attributes of the firm provide a holistic view of the firm, capturing not only its economic performance but also its societal impact and ethical standing.

2.1.2 Firm Leverage

Firm leverage pertains to the combination of equity and liabilities employed by a company to finance its assets (Nworie, Obi, Anaike &Uchechukwu-Obi, 2022). In the process of financing investments, a company has the option to utilize debt, equity, and, in certain cases, preference capital. Notably, the interest rate on debt remains fixed, irrespective of the company's rate of return on assets. The primary objective of employing financial leverage is to generate earnings on the fixed charge funds that surpass their costs. As a company increases its debt, the level of financial leverage also rises (Bhat, Chanda & Bhat, 2023). The repercussions of financial leverage are felt on the earnings of ordinary shareholders. Companies strategically embrace financial leverage to augment shareholders' returns, especially in favorable economic conditions (Niu, Wang &Su, 2023). The underlying assumption is that obtaining fixed-charge funds, such as loans from financial institutions or debentures, can be achieved at a cost lower than the firm's rate of return on net assets.

Furthermore, leverage is characterized as a metric indicating how much a firm relies on equity and debt to fund its assets (Danladi & Alhassan, 2022). Consequently, firm leverage mirrors the amount of debt integrated into the capital structure of the firm. There is a prevalent belief that an

increase in leverage within the capital structure contributes to an elevation in the firm's overall value and the market price of its shares. This strategic use of leverage in financial decision-making underscores its significant role in shaping a company's capital structure and influencing its overall financial performance and market standing (Maigoshi & Tanko, 2023).

2.1.3 Firm Liquidity

Firm liquidity refers to the extent to which a company possesses readily accessible assets and resources that can be quickly converted into cash or used to meet short-term financial obligations (Nworie & Agwaramgbo, 2023). It is a crucial financial metric that gauges a company's ability to cover its immediate liabilities and withstand unexpected financial challenges without compromising its operational continuity (Lee, 2023).

Liquidity is typically associated with the availability of cash and assets that can be easily converted into cash, such as short-term investments and accounts receivable. Maintaining adequate liquidity is essential for businesses to meet their day-to-day financial commitments, including paying suppliers, meeting payroll, and settling short-term debts (Sani, 2023). It acts as a financial safety net, providing a buffer against unforeseen expenses or fluctuations in cash inflows. The liquidity of a firm is often assessed using liquidity ratios, such as the current ratio and quick ratio, which provide insights into its ability to meet short-term obligations. A higher liquidity ratio generally indicates a better capacity to cover short-term liabilities (Joseph & Adelegan, 2023).Maintaining an optimal level of liquidity is a delicate balance for businesses. Excessive liquidity might imply underutilized resources, leading to missed investment opportunities, while insufficient liquidity can expose a company to financial risks (Nworie & Agwaramgbo, 2023). Effective liquidity management is a key aspect of financial stewardship, ensuring that a firm remains resilient and adaptable in the face of changing market conditions and unforeseen challenges.

2.1.4 Firm Size

Firm size encompasses the cumulative assets utilized by a company in its operational activities (Ogbeide, Anyaduba & Akogo, (2022). This variable is derived as the natural logarithm of the total assets held by the firm. Additionally, firm size is indicative of the scope and diversity of production capabilities, as well as the range of services it can presently provide to its customers. The magnitude of a firm's size holds paramount importance in assessing the company's performance, chiefly due to the principle of economies of scale embedded in the traditional neoclassical perspective of a firm (Aladesonkanmi, 2020). In the competitive business environment, large-sized firms wield greater competitive prowess when juxtaposed with their smaller counterparts. Moreover, firms of substantial size possess the capability to capitalize on

diverse business opportunities during times of competition that necessitate significant capital investments. This advantageous position emanates from their access to extensive resources, providing them with enhanced opportunities to maximize profits within the competitive milieu (Nworie & Mba, 2022). In essence, the size of a firm is not merely a quantitative metric but a determinant that influences its competitive strength, resource availability, and overall capacity to thrive in dynamic market conditions.

Firm size serves as a metric classifying a company as either large or small. This classification is typically determined based on the total assets held or the total sales generated by the company. Assets, defined as economic resources under the control of an entity, possess a cost (or fair value) that can be objectively measured at the time of acquisition. Firm size can be quantified using either the natural logarithm of total assets or the natural logarithm of total sales (Aladesonkanmi, 2020). In this research study, the natural logarithm of total assets was chosen by the researcher due to the comprehensive nature of total assets, representing all resources acquired by the company through past transactions, with the potential to yield economic benefits in the future.

2.1.5 Tax Planning

Tax planning is a strategic financial management process undertaken by individuals or businesses to optimize their tax liabilities within the legal framework (Kibiya & Aminu, 2019). It involves making informed decisions on various aspects such as income, expenses, investments, and business structures to minimize the overall tax burden. The primary goal of tax planning is to ensure compliance with tax regulations while maximizing tax efficiency (Tanko, 2023). This process often includes leveraging deductions, credits, and exemptions provided by tax laws, as well as strategic financial maneuvers to achieve the most favorable tax outcome. Effective tax planning is essential for individuals and businesses alike to enhance financial well-being and sustainability (Maigoshi & Tanko, 2023). Businesses engage in tax planning to enhance their profitability by reducing corporate tax liabilities. This may include structuring business transactions in a tax-efficient manner, utilizing available tax credits and incentives, and exploring opportunities for international tax planning. Business owners may also consider the most advantageous business structure, taking into account factors such as the size of the company, industry regulations, and future growth plans (Jaffar, Derashid & Taha, 2021).

Investment-related tax planning is a critical component, as it focuses on optimizing returns while minimizing the tax impact on investment gains. This may involve selecting tax-advantaged investment accounts, strategically timing capital gains and losses, and utilizing tax-efficient

investment strategies to enhance after-tax returns.In essence, tax planning is an ongoing and dynamic process that requires careful consideration of individual circumstances and changing tax laws. By taking a proactive approach, individuals and businesses can position themselves to achieve financial success while mitigating the impact of taxes on their wealth and income. Engaging with experienced tax professionals, staying informed about tax law changes, and regularly reviewing financial strategies are integral parts of a robust tax planning framework (Lawal, 2021; Aladesonkanmi, 2020).

2.1.6 Book-Tax Difference

Book-tax differences refer to variations between a company's financial statements (book income) and its taxable income reported to tax authorities (Hepfer,2023). These differences arise due to variations in accounting rules and tax regulations. Companies often maintain separate sets of records for financial reporting and tax purposes, leading to disparities in the recognition of income, expenses, and other financial elements. Book-tax differences can result from items such as depreciation methods, recognition of revenue, and the treatment of certain expenses. Understanding and analyzing these differences are crucial for accurate financial reporting, tax compliance, and strategic decision-making. Effective management of book-tax differences requires a comprehensive understanding of both accounting principles and tax regulations (Wahab & Holland, 2015).

Book-tax differences represent a crucial aspect of tax planning as they embody intentional strategic decisions made by individuals or businesses to optimize their taxable income within the legal framework (Blaylock, Shevlin & Wilson, 2012). These differences arise due to variations in accounting standards and tax regulations, providing opportunities for entities to strategically manage their financial reporting to achieve favorable tax outcomes (Tang & Firth, 2011). By leveraging permissible accounting methods and recognizing income, expenses, and deductions differentially for financial reporting and tax purposes, entities can influence their taxable income, ultimately minimizing their overall tax liability. Effectively addressing book-tax differences requires a meticulous understanding of accounting principles and tax regulations, allowing entities to align their financial reporting practices with tax planning strategies for optimal fiscal outcomes (Jackson, 2015).

2.2 Theoretical Review

2.2.1 Agency Theory

The study tangentially provides a backdrop for the context of agency theory, a framework that elucidates the dynamics of the relationship between principals and agents within a firm (Hanlon & Heitzman, 2010). The crux of agency theory lies in the inherent conflicts of interest that arise due to the separation of ownership and control between a firm's management and owners (Bauer & Kourouxous, 2018). Within this framework, it is posited that the management, possessing more information than shareholders, may pursue aggressive decision-making strategies. In essence, agency theory contends that the disconnect between ownership and management fosters conflicts of interest, resulting in a diminution of value for shareholders. The nature of these conflicts can significantly influence the behavior of tax planning. For instance, if shareholders opt to incentivize managers with performance bonuses, managers might be inclined to manipulate income distribution to sustain these bonuses, making tax planning an avenue for income manipulation. This perspective finds support in the work of scholars such as Lanis and Richardson (2012).

By integrating corporate governance into the analysis, these studies seek to unravel how the governance structure of a firm, influenced by the principles of agency theory, shapes the strategic decisions, including tax planning, undertaken by the management. This nuanced approach acknowledges the intricate interplay between agency dynamics, corporate governance, and tax planning behavior within the organizational landscape.Tax planning serves as a reflection of management's interests as it involves the deliberate reduction of a company's profit. This intentional reduction can distort information presented in financial reports, creating the potential for information asymmetry between the company and its stockholders (Napitupulu, 2019). Within the realm of financial reporting decisions, a firm's tax decisions emerge as a crucial area where the perspectives of both management and shareholders are manifested. The process of making tax decisions is inherently influenced by the divergent interests of management and shareholders (Evana, 2019; Zemzem&Ftouhi, 2013).

Management's interests, according to Evana (2019), are often aligned with increasing compensation through higher profits, while shareholders aim to limit income tax expenses by paying accrued taxes and bolstering the firm's stock price. This inherent conflict of interest between management and shareholders significantly influences decision-making processes, particularly in areas crucial to a firm's performance, such as tax policies.

In this context, numerous studies have explored the intricate relationships between tax avoidance and agency problems (Bauer & Kourouxous, 2018). The formulation of tax planning decisions relies on the decision-makers' careful consideration of trade-offs between tax avoidance yield and

associated costs. Consequently, management may engage in opportunistic activities, concealing certain transactions related to taxable income to maximize the gap in both conflict of interest and information asymmetry between management and shareholders (Desai & Dharmapala, 2006). This deliberate manipulation of information reflects the nuanced interplay between management's pursuit of self-interest and the shareholders' quest for a favorable financial position, underscoring the complexity inherent in tax planning decisions within an organizational context.

2.3 Empirical Review

Tanko (2023) examined the impact of financial attributes on corporate tax planning in listed manufacturing firms in Nigeria. Data were sourced from annual reports of sampled manufacturing firms and analyzed using the panel data methodology. The study employed fixed effect estimation for interpreting the parsimonious model and random effect for the moderated model. The results indicated a positive and significant influence of financial leverage on tax planning, while firm growth exhibited a negative and significant impact on the tax planning of these listed manufacturing firms.

Maigoshi and Tanko (2023) analyzed the tax planning strategies of publicly listed manufacturing companies in Nigeria from 2012 to 2022, considering the moderating role of real earnings management (REM). Utilizing data from annual reports of 41 publicly listed manufacturing firms, the study employed a correlational design with panel data analysis, revealing that financial leverage positively and significantly affects tax planning. Moreover, REM was found to have a positive and significant influence on tax planning, acting as a significant moderator in the relationship between financial attributes and tax planning. The recommendation emphasizes ethical and legal tax planning practices aligned with relevant regulations.

Ogbeide, Anyaduba, and Akogo (2022) examined the impact of firm attributes on tax aggressiveness in Nigeria, employing a longitudinal research design focused on 13 listed commercial banks. Utilizing panel data regression techniques and evaluating forecast abilities with MAPE and Theil's inequality coefficient, the findings revealed that firm size and complexity have a significant positive relationship with tax aggressiveness, while firm age and profitability exerted significant negative impacts on tax aggressiveness. These studies collectively underscore the nuanced dynamics of financial attributes and tax-related strategies in the Nigerian business landscape, providing valuable insights for both academia and industry practitioners.

Danladi and Alhassan (2022) conducted an examination into the impact of firm size, profitability, liquidity, and leverage on tax aggressiveness within the Nigerian banking sector. The study

encompassed a population of fourteen Deposit Money Banks (DMBs) listed on the Nigerian Stock Exchange as of December 31, 2021, with a sample size of ten banks selected through a judgmental technique based on those with international authorization. Utilizing secondary data collection methods from annual financial statements spanning five years (2017-2021), the research employed descriptive statistics and Ordinary Least Square (OLS) regression for analysis. The results revealed that firm size, leverage, and liquidity significantly influence tax aggressiveness, whereas profitability exhibited an insignificant effect within the Nigerian banking sector. The study concluded that firm characteristics serve as reliable indicators for predicting the extent of aggressive tax planning in this sector, recommending that tax policy initiatives should concentrate on asset expansion and value creation.

In a separate study, Jaffar, Derashid, and Taha (2021) investigated the prevalence of aggressive tax planning (ATP) among companies listed in the Access, Certainty, Efficiency (ACE) Market of Bursa Malaysia. This research further explored the relationship between company characteristics, ethnicity, and ATP using a balanced pooled sample of 105 firm-year observations from 2014 to 2018. The study drew data from DataStream and annual reports. The findings highlighted a significant relationship between profitability and financial distress with ATP, while variables such as size, capital intensity, inventory intensity, leverage, and ethnicity were not identified as determinants of ATP. This study contributes novel insights into the ACE Market in Malaysia, shedding light on the attitudes of small firms toward ATP and providing valuable information for understanding the dynamics of tax planning behaviors in this market.

Lawal (2021) ascertained the determinants of aggressive corporate tax planning within listed manufacturing companies in Nigeria. The specific objectives of the study were fourfold: (i) to assess the influence of earnings management practices on aggressive corporate tax planning; (ii) to investigate the impact of tax practitioners on aggressive corporate tax planning; (iii) to explore the extent to which a firm's capital intensity influences aggressive corporate tax planning; and (iv) to ascertain the influence of a firm's leverage on aggressive corporate tax planning. Employing an Ex-post facto research design, the study encompassed a population of seventy-four listed manufacturing companies, with a sample size of fifty-five selected across seven sectors. The analysis utilized Descriptive Statistics and Robust Least Square (RLS) Estimation Techniques on data collected from the annual reports and accounts of the sampled companies spanning five years (2015-2019). The findings indicated that earnings management practices significantly and positively influence aggressive corporate tax planning, revealing that managers engage in minimizing taxes aggressively through financial reporting mechanisms. Additionally, the study highlighted a positive and significant effect of the use of tax experts on aggressive corporate tax

planning. However, firm leverage and capital intensity were found to have a negative and significant influence on aggressive corporate tax planning among listed manufacturing companies in Nigeria.

Aladesonkanmi (2020) examined the impact of firm characteristics on tax planning within the Nigerian Listed Deposit Money Banks (DMBs). Specifically, the study assesses the effects of profitability, leverage, firm age, and firm size on tax planning in these Nigerian DMBs. Employing an ex-post facto research design, the study focuses on a population of fifteen DMBs listed on the Nigerian Stock Exchange as of December 31, 2018, with a sample size of twelve selected based on data availability. Secondary data from twelve annual reports and accounts spanning seven years (2012-2018) were subjected to panel data regression analysis. The findings reveal that profitability, firm age, and firm size significantly impact tax planning, while leverage exhibits an insignificant effect on tax planning in Nigerian DMBs. The study concludes that profitability, firm age, and firm size play influential roles in shaping the tax planning system within Deposit Money Banks in Nigeria. Recommendations include encouraging Nigerian listed DMBs to maximize asset utilization for higher returns and leveraging tax planning opportunities by engaging professionals to navigate tax laws effectively.

Panda and Nanda (2020) investigated the determinants of the effective tax rate (ETR) for Indian manufacturing firms across different sectors. Employing the Arellano–Bond dynamic panel regression model and the impulse response functions of the panel vector auto-regression model, the study identifies key drivers of ETR and analyzes the response of ETR due to shocks in its determinants. The study concludes that ETR is significantly influenced by firm size, profitability, growth rate, and non-debt tax shield across most sectors, while debt ratio, asset tangibility, and firm age impact ETR differently across sectors. In the entire manufacturing sector, firm size, profitability, growth, and non-debt tax shield drive ETR positively, whereas asset tangibility influences ETR negatively. Interest coverage ratio (ICR) and firm age do not emerge as significant drivers of ETR. Notably, ETR responds positively to immediate shocks in firm size but negatively to shocks in asset tangibility.

Abdulkadir, Issa, and Yunusa (2020) explored the impact of firm-specific attributes on corporate tax aggressiveness among listed manufacturing companies in Nigeria. Firm attributes, including profitability, leverage, capital intensity, firm growth, and firm size, were measured, while corporate tax aggressiveness was proxied using the effective tax rate (ETR). Applying robust fixed effect regression to data obtained from the annual reports of 48 listed manufacturing companies on the Nigeria Stock Exchange from 2015 to 2019, the study draws on agency theory and political

cost theory. The findings reveal that leverage and capital intensity significantly and positively influence corporate tax aggressiveness, whereas profitability exhibits a significant negative influence. However, firm size and firm growth were found to have an insignificant relationship with corporate tax aggressiveness. Diagnostic tests were conducted to ensure the robustness of the results, providing insights into the nuanced dynamics of corporate tax behavior in the Nigerian manufacturing sector.

Yahaya and Yusuf (2020) conducted a comprehensive analysis of company characteristics and aggressive tax avoidance within Nigerian listed insurance companies, evaluating the impact of firm size, profitability, leverage, and firm age on aggressive tax avoidance. Utilizing an ex-post facto research design, data were extracted from the audited annual reports of a random sample of twenty listed insurance companies between 2010 and 2018. The study employed a two-step system GMM panel model estimator for model estimation. Results indicated that firm size and leverage had a positive and significant impact on aggressive tax avoidance, while firm profitability and age exhibited a negative and significant effect. Specifically, firm size and leverage positively influenced aggressive tax avoidance in Nigerian listed insurance companies, whereas firm profitability and age had a negative impact on aggressive tax avoidance. The study concluded that company characteristics play a pivotal role in influencing aggressive tax avoidance among insurance companies in Nigeria.

Kibiya and Aminu (2019) examined the impact of firms' attributes on the tax planning of listed conglomerate firms in Nigeria. Employing a correlational research design, the study focused on five out of six listed companies in Nigeria, extracting data from their annual reports and accounts for a period of 12 years (2006-2017). Multiple regressions were utilized for the statistical analysis, revealing a negative and significant impact of profitability (proxied by return on assets), Tobin's Q, and firm growth on tax planning (proxied by the effective tax rate). The study concluded that firms with higher return on assets and value experience a lower tax burden. The recommendation emphasizes that companies' management should cultivate an in-depth understanding of tax laws to capitalize on opportunities that reduce tax liability, thereby enhancing returns and value.

3. MATERIAL AND METHOD

The study used the ex-post facto research design. An ex-post factostudy is one in which the data collected cannot be manipulated because the events studied have taken place already in the past (Cooper & Schindler, 2005). According to Nigerian Exchange Group's factsheet (2022), there are thirteen (13) publicly-listedindustrial goods firms in Nigeria. The population of the study is shown below in Table 1.

Table 1 Population of the Study

1. Austin Laz & Company Plc.
2. Berger Paints Plc.
3. Beta Glass Plc.
4. Bua Cement Plc.
5. Cap Plc.
6. Cutix Plc.
7. Dangote Cement Plc.
8. Greif Nigeria Plc.
9. Lafarge Africa Plc.
10. Meyer Plc.
11. Notore Chemical Ind. Plc.
12. Premier Paints Plc.
13. Tripple Gee And Company Plc.

Source: NGX Factsheet (2022)

The study used purposive sampling to select eight(8) out of thirteen companies that were listed on the NGX. The chosen firms were required to have submitted their financial reports to the NGX for the time period between 2013 and 2022. All of the companies that fit the criteria were included in the study and are Berger Paints Plc., Beta Glass Plc., Cap Plc., Cutix Plc., Dangote Cement Plc., Greif Nigeria Plc., Lafarge Africa Plc., and Tripple Gee and Company Plc.The study utilised secondary data collected from the financial statements of selected manufacturing firms spanning from 2013 to 2022, resulting in a historical data timeframe of 10 years. Table 2 shows the operational measurement of the variables of the study.

Table 2 Operational Measurement of Variables

Variable	Type	Operational Definition
1) Firm leverage	Independent	Liabilities/Total asset
2) Firm liquidity	Independent	Current asset/Current liabilities
3) Firm size	Independent	Natural log of total asset
4) Book tax difference	Dependent	Profit Before Tax $-$ $\dfrac{\text{current tax expense}}{\text{Statutory tax rate}}$

Source: Researcher's Compilation, 2024

The regression function below was deployed.

$$BTD_{it} = \alpha_0 + \beta_1 LEV_{it} + \beta_2 LIQ_{it} + \beta_3 SIZ_{it} + \mu_{it} \ldots \ldots \ldots \ldots \ldots \ldots \ldots (1)$$

Where,

BTD = Book-tax difference

LEV = Firm leverage

LIQ = Firm liquidity

SIZ = Firm size

α_0 = Intercept

$\beta_1 - \beta_3$ = are the parameters to be estimated in the equation

i = firm

t = period

The study employed descriptive analysis to provide a detailed description of the research variables. Panel least square regression was used in testing the hypotheses.

3.1 Decision Rule

In the process of hypothesis testing, the acceptance of the null hypothesis (H0) occurs when the calculated p-value equals or exceeds the chosen level of significance, commonly set at 5% or 0.05. Conversely, the rejection of the null hypothesis in favour of the alternative hypothesis takes place when the p-value is less than the specified level of significance. The acceptance of the alternative hypothesis signifies that the observed effect is considered significant, while the acceptance of the null hypothesis implies that the effect is deemed insignificant.

4. RESULT AND DISCUSSIONS

4.1 Data Analysis

The descriptive statistical analysis is shown below.

Table 3 Descriptive Analysis

	BTD	LEV	LIQ	SIZ
Mean	0.000936	0.464898	1.575618	7.155170
Median	0.001658	0.413430	1.556960	6.698352
Maximum	0.740679	2.229656	3.492682	9.424631
Minimum	-1.808517	0.194872	0.342954	5.239405
Std. Dev.	0.244836	0.241201	0.652627	1.167561
Skewness	-4.907385	5.085529	0.584698	0.577379
Kurtosis	40.04824	37.20309	3.598295	2.089772
Jarque-Bera	4896.338	4244.340	5.751471	7.206604
Probability	0.000000	0.000000	0.056375	0.027234
Sum	0.074843	37.19186	126.0495	572.4136

| Sum Sq. Dev. | 4.735630 | 4.596048 | 33.64783 | 107.6926 |
| Observations | 80 | 80 | 80 | 80 |

Source: Analysis Output from Eviews 12

The mean Book-Tax Difference (BTD) is 0.000936, suggesting that, on average, there is a minimal difference between the book and tax incomes of the listed industrial goods firms in Nigeria. The skewness of -4.907385 indicates a highly skewed distribution, leaning towards negative values, signifying that there might be a prevalence of negative BTD values. The kurtosis value of 40.04824 is exceptionally high, indicating heavy tails and a significant departure from a normal distribution. The probability of Jarque-Bera being 0.000000 further reinforces the departure from normality, indicating that the distribution of BTD is not normally distributed.

The mean value of firm leverage (LEV)is 0.464898, suggesting an average leverage level for the listed industrial goods firms in Nigeria. The skewness of 5.085529 indicates a highly skewed distribution towards positive values, suggesting a potential presence of extreme positive values in the data. The kurtosis value of 37.20309 is high, indicating heavy tails in the distribution. The probability of Jarque-Bera being 0.000000 confirms the departure from normality in the distribution of firm leverage.

The mean value of firm liquidity (LIQ) is 1.575618, indicating a moderate average liquidity level for the listed industrial goods firms. The skewness of 0.584698 indicates a slightly skewed distribution, and the kurtosis value of 3.598295 suggests moderately heavy tails. The probability of Jarque-Bera being 0.056375 indicates that while there might be a departure from normality, it is not as pronounced as in the case of BTD and LEV.

Firm size (SIZ) averaged 7.155170. The skewness of 0.577379 indicates a slightly skewed distribution, and the kurtosis value of 2.089772 suggests moderately heavy tails. The probability of Jarque-Bera being 0.027234 suggests a departure from normality, though less pronounced than in the case of BTD and LEV.

4.2 Test of Hypotheses

Panel least square regression was used in testing the hypotheses at 5% level of significance. The regression output is shown below in Table 4.

Table 4 Regression Output

Dependent Variable: BTD

Method: Panel Least Squares

Date: 01/01/24   Time: 08:34

Sample: 2013 2022

Periods included: 10

Cross-sections included: 8

Total panel (balanced) observations: 80

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LEV	-0.883356	0.090994	-9.707809	0.0000
LIQ	-0.049591	0.033492	-1.480674	0.1428
SIZ	-0.027468	0.019988	-1.374209	0.1734
C	0.686282	0.208650	3.289157	0.0015
R-squared	0.625474	Mean dependent var		0.000936
Adjusted R-squared	0.610690	S.D. dependent var		0.244836
S.E. of regression	0.152765	Akaike info criterion		-0.871128
Sum squared resid	1.773618	Schwarz criterion		-0.752027
Log likelihood	38.84511	Hannan-Quinn criter.		-0.823377
F-statistic	42.30766	Durbin-Watson stat		1.914180
Prob(F-statistic)	0.000000			

Source: Analysis Output from Eviews 12

The adjusted R-squared value of 0.610690 indicates that the independent variables (firm leverage, firm liquidity, and firm size) collectively explain approximately 61.07% of the variation in the dependent variable, which is the book-tax difference (BTD). This suggests a relatively strong explanatory power of the model. The adjusted R-squared is a modified version of the R-squared that adjusts for the number of predictors in the model, providing a more accurate measure of the model's goodness of fit.

The F-statistic of 42.30766 is associated with a p-value of 0.000000, which is less than the significance level of 0.05. This low p-value indicates that at least one of the independent variables in the model has a statistically significant effect on the dependent variable. In other words, there is strong evidence to accept the null hypothesis that all coefficients are different from zero. The Durbin-Watson statistic of 1.914180 is used to test for the presence of autocorrelation in the residuals (errors). The statistic ranges from 0 to 4, where a value close to 2 suggests no autocorrelation. In this case, the value of 1.914180 indicates a slight positive autocorrelation, although it is not far from the ideal value of 2. The coefficients associated with each variable provide insights into their respective effects on the book-tax difference (BTD).

4.2.1 Hypothesis I

H_o: Firm leverage does not have a significant effect on the book-tax difference of listed industrial goods firms in Nigeria.

The coefficient for firm leverage is -0.883356, and the associated probability (Prob.) is 0.0000. This implies a statistically significant negative relationship between firm leverage and the book-tax difference. As firm leverage decreases, the BTD tends to increase. This suggests that firms with lower leverage might engage in tax planning strategies that result in a larger variance between their book income and taxable income.Therefore, we accept the alternate hypothesis that firm leverage has a significant negative effect on the book-tax difference for listed industrial goods firms in Nigeria (p<0.05). This result aligns with the findings by Lawal (2021) but contradicts the findings byTanko (2023); Maigoshi and Tanko (2023); Abdulkadir, Issa, and Yunusa (2020) and Yahaya and Yusuf (2020).

4.2.2 Hypothesis II

H_o: Firm liquidity does not have a significant effect on the book-tax difference of listed industrial goods firms in Nigeria.

The coefficient for firm liquidity is -0.049591, and the associated probability is 0.1428. Although the coefficient is negative, indicating a potential negative relationship, the result is not statistically significant at conventional significance levels (p > 0.05). Therefore, we accept the null hypothesis that firm liquidity has a non-significant negative effect on the book-tax difference for listed industrial goods firms in Nigeria (p>0.05). This finding contradicts that ofDanladi and Alhassan (2022) which found a positive effect in the Nigerian banking sector.

4.2.3 Hypothesis III

H_o: Firm size does not have a significant effect on the book-tax difference of listed industrial goods firms in Nigeria.

The coefficient for firm size is -0.027468, and the associated probability is 0.1734. Similar to firm liquidity, the negative coefficient suggests a potential negative relationship between firm size and the book-tax difference. However, the result is not statistically significant at 5% significance level.Therefore, we accept the null hypothesis that firm size has a non-significant negative effect on the book-tax difference for listed industrial goods firms in Nigeria ($p > 0.05$). This result is supported by Abdulkadir, Issa, and Yunusa (2020) but is inconsistent with those found by Ogbeide, Anyaduba, and Akogo (2022); Danladi and Alhassan (2022); Panda and Nanda (2020); Yahaya and Yusuf (2020).

CONCLUSION AND RECOMMENDATIONS

In the realm of corporate finance and taxation, understanding the nexus between corporate firm attributes and tax planning is paramount for both businesses and policymakers. This study examined the specific context of listed industrial goods firms in Nigeria, investigating the effects of firm leverage, firm liquidity, and firm size on the book-tax difference—a crucial metric reflecting the variance between financial accounting income and taxable income. The observed negative effect of firm leverage on the book-tax difference implies that as leverage increases, the variance between financial accounting income and taxable income decreases. This finding could be attributed to the influence of debt financing on interest deductions. Higher leverage often results in increased interest expenses, which can serve as a deductible expense, consequently reducing taxable income. Firms with substantial leverage may strategically structure their financial operations to capitalize on interest deductions, aligning with tax planning efforts to minimize overall tax liabilities.

The negative and insignificant correlation between firm liquidity and the book-tax difference suggests that more liquid firms tend to have a smaller gap between financial accounting income and taxable income. This outcome may be linked to the conservative tax planning strategies of firms with ample liquidity. Such companies may prioritize minimizing tax risks and maintaining strong liquidity positions, leading them to adopt accounting practices that align more closely with tax regulations. Additionally, highly liquid firms may be better positioned to invest in tax-efficient assets, further contributing to the reduction in the book-tax difference.

The finding that firm size has a negative but insignificant effect on the book-tax difference indicates that larger industrial goods firms in Nigeria tend to exhibit a smaller variance between financial accounting income and taxable income. This could be attributed to the increased

visibility and scrutiny larger firms face from tax authorities and stakeholders. Large firms often employ sophisticated tax planning strategies, benefiting from dedicated tax departments and resources. Additionally, these companies may face greater regulatory oversight, compelling them to adopt conservative accounting practices to align with tax regulations and minimize the risk of audits or disputes.

Based on the above findings, we recommends the following:

1. Managers of industrial goods firms in Nigeria should optimize tax planning strategies by leveraging increased debt financing, strategically structuring financial operations to capitalize on interest deductions and minimize overall tax liabilities for listed industrial goods firms in Nigeria.

2. Industrial goods firms should explore tax-efficient investment opportunities to strategically deploy excess liquidity, aligning financial objectives with tax planning goals.

3. Firms should enhance transparency and compliance by implementing robust internal controls and engaging specialized tax teams to ensure that tax planning strategies seamlessly align with regulatory requirements for larger industrial goods firms in Nigeria.

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