

TAX PLANNING STRATEGIES AND FINANCIAL PERFORMANCE OF LISTED PHARMACEUTICAL COMPANIES IN NIGERIA

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ABSTRACT

The study examined tax planning strategies and financial performance of listed pharmaceutical companies in Nigeria. The objectives of the study among others where; examine the relationship between capital intensity and profit after tax of listed pharmaceutical companies in Nigeria. assess the relationship between effective tax rate and profit after tax of listed pharmaceutical companies in Nigeria. determine the moderating effect of firm size on the relationship between tax planning strategies and financial performance of listed pharmaceutical companies in Nigeria. the study employed an ex-post-facto and correlational research design. The population and sample size of this study consisted of 7 listed Pharmaceutical (Healthcare) companies on the Nigeria Exchange Group from (2006 – 2020). The instrumentation was secondary data, The formulated research questions were analyzed with descriptive statistics. The hypotheses were tested using the Ordinary Least Square (OLS) Model regression analysis with the aid of E-view (10). Findings of the study were that that there is no significant relationship between capital intensity and profit after tax of listed pharmaceutical companies in Nigeria. there is a significant relationship between effective tax rate and profit after tax of listed pharmaceutical companies in Nigeria. Firm Size does not significantly influence the relationship between Tax Planning Strategies and the Financial Performance of listed Pharmaceutical Companies in Nigeria. Based on the findings of the study, it is recommended that firms should ensure that proper analysis of strategies, cost, and benefits therefrom is done before embarking on it. Also, as a major to reduce abuse of privileges, shelters and loopholes in the tax law, the revenue should ensure less complexity in the tax law and regulations. the existence of a significant relationship between effective tax rates and measures of financial performance in this study is an indication that companies can maximize effective tax rates in order to improve their financial performance.

Keywords: tax planning strategies, financial performance, capital intensity, profit after tax, effective tax rate and firm size.

INTRODUCTION

One of the fundamental objectives of businesses worldwide is the maximization of shareholders' wealth. This objective is key to most businesses and every effort to ensure its realization remains a task that is paramount to management. Corporate tax managers have several responsibilities but importantly the responsibility of strategizing on ways to minimize the company's overall tax liability is most crucial. Theoretically, a firm's tax liability has an even relationship with its profitability. The proportional relationship between tax liability and profitability arguably brings about the concept of tax planning. Tax planning strategies involve taking shelter through in-depth knowledge and understanding of loopholes in the tax law by economic units or businesses to reduce tax liability or outright avoidance of tax payment (Oyeshile & Adegbe, 2020; Olurankinse & Aruna, 2021).

According to Appah (2022), tax planning relates to a process whereby taxpayers utilize the loopholes in the tax laws to minimize tax liabilities. Olurankinse and Aruna, (2021), It is a conscious effort on the part of the taxpayer to spread out or eliminate tax liability without going against all the relevant tax laws; deploying all available guidelines, policies, allowances, exemptions, incentives, and relief for the purpose. Chukwudi, et al., (2020), argued that tax planning is any step or action activity

deployed by a firm that does not go contrary to the relevant tax laws that expressly lead to the minimization of a corporation's tax liability. It involves utilizing the advantages of the dynamism and loopholes existing in tax legislation to minimize the corporate tax burden. These shelters, dynamism, and incentives in tax enactment as specified in CITA, PITA, and other laws include the following: recognition of pioneer status, rules applicable to commencement and cessation, investment allowance, claims of capital allowance, exemption on interest on the loan to a foreign company wanting to do business in Nigeria and the timing of asset acquisition (Ogundajo & Onakoya, 2016; Oyeshile & Adegbe, 2020).

Statement of the Problem

Fagbemi, et al., (2019) argued that due to the multiplicity and overburdening of Nigeria's tax system, corporate organizations, are forced into designing and implementing corporate strategies that identify the loophole in the tax law which ultimately help in minimizing, postponement, or outright avoidance of tax payments to reduce its negative effect on financial performance. Looking at the financial performance of pharmaceutical firms in Nigeria, a major challenge that confronts them is mirrored by high corporate tax rates, poor tax planning, and multiple other taxes that ultimately affect the firm's profitability and liquidity. These according to authors and financial managers have a significant impact on the financial performance of firms, the pharmaceutical companies are not an exemption.

High tax liability, tax complexity, and poor tax planning have been fingered as some of the factors responsible for the non-performance of firms including pharmaceutical and manufacturing companies in Nigeria (Fagbemi et al., 2019). These factors cause a reduction in the company's profitability, return on equity, return on capital employed, and other economic activities (Ogundajo & Onakoya, 2016; Nwaobia & Jayeoba, 2016; Appah, 2022). Corroborating the preceding point above, Tsado and Gunu (2016) opined that tax planning strategies had triggered the company's tax expenses which had ended up reducing asset tangibility and return on equity. The views weren't different as Salawu, et al., (2017), asserted that not only that manufacturing firms used tax management initiatives to avoid payment of some taxes but even multinationals and other big companies had severally initiated tax strategies to ensure reduction in their tax bills. They posited that most multinational organizations maintained lower profits over the years due to their ineffective tax planning schemes. Similarly, Kiabel and Akenbor (2014), noted that good tax planning mixed with sound corporate governance produces a positive and significant impact on firms.

Therefore, in the face of the growing literature and public anxiety about the concerns relating to the high tax rate, multiple taxations, and poor tax planning especially as it concerns the financial performance of pharmaceutical companies of various sizes, necessitated this research for evidence to either confirm or refute the fears. Also, to close the conspicuous gap in the literature on empirical evidence on tax planning strategies and financial performance involving pharmaceutical companies in Nigeria, this study became very necessary.

Conceptual Framework

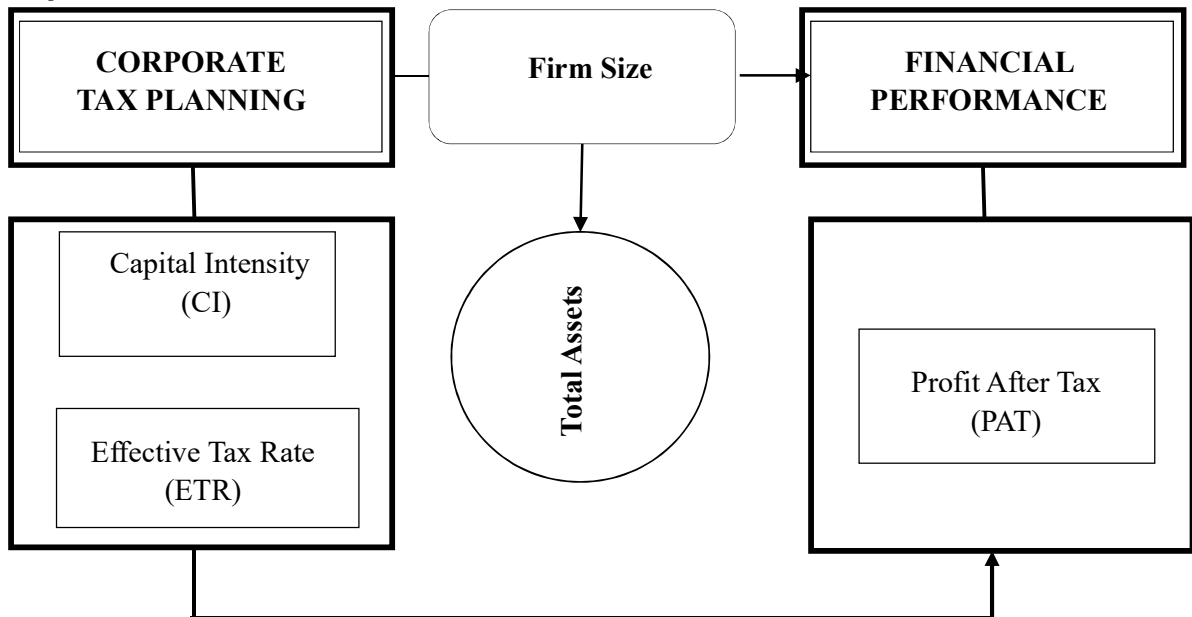


Figure 1.1 A Conceptual Framework of the Relationship between Tax Planning Strategies and Financial Performance.

Source: (Ohaka & Agundu, 2012; Ogundajo & Onakoya, 2016; Nwaobia, et al., 2016; Olaoye & Bamisaye, 2018; Oyeshile & Adegbe, 2020; Erasmus & Uwikor 2020).

Aim and Objectives of the Study

This study aims to investigate the relationship between tax planning strategies and the financial performance of listed pharmaceutical companies in Nigeria. The specific objectives are, to:

1. examine the relationship between Capital Intensity and Profit after Tax of listed Pharmaceutical Companies in Nigeria.
2. assess the relationship between Effective Tax Rate and Profit after Tax of listed Pharmaceutical Companies in Nigeria.
3. determine the moderating effect of Firm Size on the relationship between Tax Planning Strategies and Financial Performance of listed Pharmaceutical Companies in Nigeria.

Research Hypotheses

In line with the objectives of the study, the following hypotheses stated in the null form were tested:

H₀2: There is no significant relationship between Capital Intensity and Profit after Tax of listed Pharmaceutical Companies in Nigeria.

H₀2: There is no significant relationship between Effective Tax Rate and Profit after Tax of listed Pharmaceutical Companies in Nigeria.

H₀3: Firm Size does not significantly influence the relationship between Tax Planning Strategies and the Financial Performance of listed Pharmaceutical Companies in Nigeria.

Conceptual Framework Review

Tax Planning Strategies

Tax planning is the summation of the legal strategies and activities employed by businesses or organizations to ensure effective management of revenue and expenditure of the business in order to minimize, avoid, or delay tax payment within the confines of the tax laws. Kiable and Nwikipasi (2001), define it as the activities that deal with the planning and operation of business within the

context of existing legislation in such a way that the business realizes the optimal or best tax position while achieving its set goal". Erasmus and Uwikor (2020), simply stated that tax planning strategies refer to the legal activities that businesses involved into manage their revenue and spending with the goal of avoiding, minimizing, or delaying tax within the limit of the tax rules. It involves the in-depth understanding and application of relevant shelters, loopholes, and incentives in tax enactments by economic units or businesses, and these incentives will usually include shelters given in recognition of the pioneer status, the rules applicable to the commencement and cessation of a going concern, the allowances and reliefs given in respect of the acquisition of assets used for the purpose of the business, investment in rural areas, among others (Ogundajo & Onakoya, 2016; Ezejelue & Ihendinihu, 2006).

Pniowsky (2023), stated that tax planning is the legal practice of organizing an individual or corporate business affairs to reschedule, decrease or eliminate taxes payable to the government. This is to say that through effective tax planning, an economic unit can deploy legal means to identify loopholes in tax law within a jurisdiction with a firm aim of reducing tax liabilities. The preceding activities arguably culminate in tax saving, thus for corporate entities involved the use of suitable incentive provisions of the tax law such as the Company Income Tax Act, Personal Income Tax Act, Value Added Tax Act, and other enactments could better their tax saving (Erasmus & Uwikor, 2020). Effective tax planning involves a diligent and sound knowledge of an entity's history of operations and relevant tax rules plus carefully thought out proposals for implementation. Achieving effective and efficient tax planning is a strong desire so demanding. This is because objectives of the business and realistic goals must be set.

Dimensions of Tax planning Strategies

Capital Intensity (CI)

Every business operation requires the use of funds. Capital intensity, therefore, is the amount of fixed or real capital present and available to a business in comparison to other factors of production, especially labour. Sadiyaand and Qaisar (2012) see capital intensity as the amount of money invested by businesses to improve their output, and that the more money spent by the business to create the same unit, the more capital-intensive the firm is. It is seen as the level at which an economic unit's financial resources are invested in property, plants, and equipment. According to Shahean and Malik (2012), these non-current assets are more heavily invested in capital-intensive corporations with the aim of achieving tax savings. Gilbert, et al., (2016) giving their view on the workability and deployment of capital intensity to improve firms' financial situation noted that because capital-intensive firms keep a large proportion of their funds in assets base when compared to their opposite firms, they are more assured to decrease their distress than the later. Capital intensity (CI) is the ratio of fixed assets to total assets of a going concern (Lee & Kang, 2011). At the level of aggregate economy and or production process, the capital intensity may be calculated as a ratio of capital to labour.

Mohammad, et al., (2013), stated that capital intensity causes a decrease in the financial distress of firms because, by allocating much expense to fixed assets, capital intensity is considered operational leverage to the business organization. To support the preceding position, Gilbert et al., (2016) proposed that capital intensity may have a positively improving role in the financial stand of corporate organizations since capital firms keep a larger proportion of fixed assets as an assurance to reducing financial distress when compared with their opposite firms lesser investment in fixed assets. Tax-deductible expenses such as investment allowance, industrial building deductions, wear and tear allowances, etc are all available to businesses that invest in noncurrent assets (Githaiga, 2013). The thinking here is that, since assets are programmed for long-term use with expenses already allocated to them, the operational cost would be reduced. This thought was exemplified by Zhang et al., (2016) when they examined the impact of corporate tax avoidance on firms' financial performance and disclosed that capital intensity aids the value of the firm and at the same time fosters firms' growth and profitability. Similarly, Gamlath and Rathirane, (2013), noted that the impact of

intensity and tangibility of capital is a driving force that improves the financial stand of corporate firms. Lee, et al., (2011) who investigated the moderating effects of capital intensity on the relationship between leverage and financial distress in the U.S. restaurant industry also reported that capital intensity decreases the degree of financial distress among restaurants in the U.S. However Pattiasina, et al., (2019) examined the relationship between corporate social responsibility and tax avoidance in Indonesia and used capital intensity as a moderating variable and reported contrary to the foregoing views that capital Intensity as the moderation variable has no significant effect on the relationship between corporate social responsibility and tax avoidance. Oyeshile and Adegbie (2020) see capital intensity or tangibility of capital as the amount of real capital present in a firm in comparison to other factors of production, especially labour. They posited that at the level of the production process it is estimated as capital to labour ratio. Olurankinse and Aruna (2021) in their study deployed capital intensity to proxy Tax Planning and reported a positive and significant relationship between capital intensity and financial performance of Development Banks in Nigeria. Other notable prior studies that capital intensity was employed as a measure of tax planning also include Otuya and Omoye (2021), and Nwaobia, et al., (2016).

Capital intensity is derived as the ratio of fixed assets to total assets of a going concern.

$$\text{Capital Intensity} = \frac{\text{Fixed assets}}{\text{Total assets}}$$

Effective Tax Rate (ETR)

The actual percentage of a company's tax burden that is brought down or reduced without impacting negatively on the accounting income of either an individual or corporation is referred to as the effective tax rate. The effective tax rate is primarily used to assess corporations' tax performance by comparing the real corporate tax loads to the percentage of a firm's tax expenditure to its profit before tax. As a result, it is the most accurate way to assess actual corporation tax costs. It is imperative to note that this rate is different from the stipulated percentage that is backed by law (statutory tax rate) that taxpayers are expected to pay from their incomes. According to Madugba, et al., (2016), there are different rates for different taxes applicable to different groups of taxpayers, and importantly for corporate organizations in business though depending on the type of business venture the statutory rate is 30%. They explained that direct tax is levied on the income, profits, and properties of individual and corporate bodies whereas indirect tax is taxes imposed on goods and services rendered which are shifted in part or in full to either the final consumer who does not even know when they pay neither the actual amount they pay. However, our focus here is on direct tax which corporate firms fall in, and for pharmaceutical companies, the rate is not different. It is important to note that an effective tax rate that is lower than the statutory tax rate is a plus to the firm and is capable of improving the firm value and vice versa.

The effective tax rate is a revelation of the aggressiveness of a firm's tax planning technique. The average tax rate for a firm is known as the effective tax rate. The average effective tax rate is the ratio of total tax expenses to the pre-tax income and various methods of computation exist in the literature (Phillips, 2003; Rego, 2015). A corporation's effective tax rate is the average rate at which its pre-tax earnings are taxed. It is a metric regularly used for determining a company's tax burden; a fundamental summary statistic of tax performance that describes how much a firm pays in taxes compared to its profit before taxes and demonstrates active tax planning of the said corporation (Erasmus & Uwikor, 2020).

The effective tax rate is calculated by dividing the tax paid by a company by the profit before tax of the company. Instead of the applicable percentage backed by law on taxable income, the effective tax rate is deployed in financial reporting to calculate the total tax paid as a percentage of the company's accounting income. According to Derashid and Zhang (2003), an effective tax rate as a measure of tax planning reduces a company's tax liability without necessarily lowering its accounting income. Olarewaju and Olayiwola (2019) noted that lower effective tax rates are significantly related

to high leverage companies and that greater investment in fixed assets by the companies' largely lower investment in inventory. Noor and Fadzillah (2010) explaining the role of effective tax rate as a measure of increasing firm value, concluded during their examination of the Malaysian public companies listed on Bursa Malaysia, that larger companies are able to bear higher effective tax rates. The primary goal of the effective tax rate as a proxy for tax planning is to increase the firm's value, which is directly related to the planning and quality of the firm's managerial organization (Badertscher, et al., 2015; Erasmus & Uwikor, 2020). Nwaobia, et al., (2016) stated that taxpayers are always uncomfortable performing their civic duty of paying the tax due to the complexity of the tax structure and that this action plus the structural complexity of the tax law results in effective tax rates that are significantly higher than the statutory rate of corporate income tax. They noted firms endeavor to manage their tax planning strategies to gain a lower effective tax rate. Wang, et al., (2021) posited that a well-managed corporate tax avoidance strategy reflects in the reduction of the effective tax rates which in turn enables the enterprise to pay less tax and raise the firm value. Similarly, in the study carried out by Olurankinse and Aruna (2021), deploying effective tax rate to proxy tax planning, discovered an insignificant relationship between effective tax rate and return on equity, noting that the empirical outcome may be as a result of poor management of effective tax rate in the organizations. However, in contrary, Evangelos, et al., (2020) in their investigation reported a positive and significant association between board independence and effective tax rate of listed companies on the Athens Stock Exchange.

Effective tax rate is therefore derived as the ratio of corporate tax paid divided by the company profit before tax.

$$\text{Effective Tax Rate} = \frac{\text{Corporate Tax Paid}}{\text{Profit Before Tax}}$$

Financial Performance

Financial performance is the analysis of a firm or corporate organizational policies and operational activities in monetary terms. The financial performance of companies is influenced by the nature of the business operated, and possibly legal, political, and environmental regulations, which constitute an essential component of public policy within the organizations' scope of operations. It also defines the risks attached to such business and constitutes a significant factor in the profitability of the firm's operation. Firm performance is largely seen as the outcome of its operational activities within a period under consideration. It is a business result from activities of a firm prepared by management and presented to stakeholders covering either a period or periods of time (Oyeshile & Adegbe, 2020). Mashovic (2018) asserted that its measures are given in monetary terms, especially in terms of revenue or profit.

Measures of Financial Performance

Profit After Tax (PAT)

Profit after tax (PTA) is referred to as the net profit available for shareholders after paying all expenses and taxes by the business concern. Tax is an integral part of all ongoing businesses. After the payment of all necessary operating expenses, interest on loans, etc the business is left with a profit upon which taxes are calculated. After payment of taxes, the entity is left with a profit known as profit after tax. This is a common and broadly used financial performance indicator in terms of profitability. Evidence abounds in the literature on the importance of this variable in profitability analysis. Olaoye and Bamisaye (2018), in their study to ascertain the impact of deferred tax on the financial performance of firms with specific analysis on the effect of both deferred tax asset and deferred tax liability on firms' performance, employed profit after tax to measure financial performance. They posited that deferred tax assets and deferred tax liability exert a negative impact on the performance of firms.

Profit after tax is derived as:

PAT = revenue less cost of sales and other allowable expenses, and tax expense.

Theoretical Review

Managerial Opportunism Theory

The interaction of tax planning activities and the agency problems inherent in public companies were the major consideration of the proponents of the Managerial Opportunism theory. The theory of Managerial Opportunism was propounded by Desai and Dharmapala in 2006 and was further advanced by Desai, et al., (2007). Their interest was basically to create a balance between tax planning activities that tend to reduce the tax burden and the self-interest of opportunist managers in companies. They argue that tax planning activities can create a shield for managerial opportunism and the diversion of rents. This is to say that straightforward diversion and other forms of earnings manipulation can be facilitated when managers undertake tax avoidance activity. Therefore, in their view that tax planning has the direct effect of increasing corporate profitability and firm value only for firms with strong governance institutions. Where there are weak governance institutions, increased opportunities for managerial rent diversion dominate these effects.

Empirical Review

Simeon, et al., (2019), carry out a study to ascertain the influence of tax planning on the financial performance of manufacturing companies listed on Nairobi Securities Exchange from the period 2010 to 2017. The study adopted a positivist research philosophy and an explanatory research design. Secondary data were obtained from the sampled companies' financial statements and were analyzed using descriptive, inferential statistics and SPSS version 23. A multiple linear regression model was adopted to study the association between the variables while utilizing panel data. The study findings showed that there is no significant statistical association between tax planning and the financial performance of the manufacturing companies listed on the Nairobi Securities Exchange. The results of the study indicated that capital intensity, research and development expenditure, and company size have a positive insignificant association with financial performance. Further, the debt-to-equity ratio indicated an insignificant negative relationship with financial performance. The study concluded that the financial performance of manufacturing firms listed on the Nairobi Securities Exchange is not influenced by tax planning. The study recommends that the manufacturing companies invest more in non-current assets and increase expenditure on research and development to realize a significant positive impact on financial performance.

Erasmus and Uwikor (2020), investigated the relationship between tax planning strategies and the financial performance of quoted banks in Nigeria. The study adopted the ex post facto research design. The population of this study consists of fourteen quoted banks in Nigeria. Secondary data from 2006 to 2019. The study adopts the use of descriptive statistics for univariate analysis while hypotheses were tested using an ordinary least square regression statistical tool with the aid of E-view 10 econometric statistical software. The findings show that effective tax rate, thin capitalization, and capital intensity have a negative and insignificant impact on the return on equity of quoted banks in Nigeria. Evidence shows that effective tax rate, thin capitalization, and capital intensity have a negative and insignificant impact on earnings per share of quoted banks in Nigeria. Empirical evidence revealed that effective tax rate, thin capitalization, and capital intensity have a positive and significant impact on the net interest margin of quoted banks in Nigeria. The study concludes that tax planning strategies reduced tax liabilities leading to the financial performance of quoted banks in Nigeria and thus recommended that Bank should adopt effective tax rates, thin capitalization, and capital intensity as tax planning strategies and optimally utilize the best options that improved financial performance.

Appah (2022), investigated the effects of corporate governance characteristics on the tax planning of listed pharmaceutical firms in Nigeria. The study used an ex post facto correlational research design and a population of eleven (11) pharmaceutical firms made up the population of the study. Data were collected from the published financial statements of the sampled firms. In this study,

the independent variable consisted of board size, board compensation, board financial expertise, gender diversity, and board meetings while tax planning was measured by tax savings and book-tax difference. The secondary data collected from the annual reports were analyzed using univariate, bivariate, and multivariate analysis. The multiple regression results disclosed that board size and board financial expertise positively and insignificantly impact tax savings; board compensation and board meetings negatively and insignificantly affect tax savings while gender diversity negatively and insignificantly influences tax savings. Board financial expertise positively and significantly influences book-tax difference while board size, gender diversity, board compensation, and board meetings negatively and insignificantly impact book-tax difference. The study concluded that corporate governance characteristics influence tax planning of listed firms in Nigeria and hence recommended amongst others that shareholders must preserve a structure to guarantee that the board is given financial incentives for effective tax planning that will assist to solve the agency problem where management exploits shareholders through tax planning practices. Oyeshile and Adegbe (2020), carry out a study to evaluate the effect of corporate tax planning on the financial performance of quoted food and beverages firms in Nigeria. The study adopted an ex-post facto research design with a population of fifteen (15) quoted food and beverages firms on the Nigerian Stock Exchange and used also as the sample for ten years period, 2008 to 2018. The data was secondary and were analyzed using descriptive and influential statistics. The result of the study shows that whereas all the variables of corporate tax planning (effective tax rate, capital intensity, thin capitalization) have no relationship with financial performance measured with return on capital employed of quoted food and beverages firm, there is a significant positive relationship between the later and return on assets of the industry. The research concluded that corporate tax planning has a significant positive effect on firm performance. The study recommends that firms should avail themselves of various corporate tax planning mechanisms/strategies and that they should optimally utilize the best option that will enhance the performance of the company. Also that there is a need for strong collaboration between the Federal Inland Revenue Service, Corporate Affairs Commission, and the Organised Private Sector groups to develop a policy framework to avoid abuse and negative impact of tax planning.

Nwaobia, et al., (2016), examined the effect of tax planning strategies on firm liquidity in Nigeria. The study adopted an ex-post facto research design, and used secondary data from published financial statements of the sampled companies covering 154 firm-year observations were obtained. Data obtained were analyzed using descriptive and regression analysis. The result reveals that tax planning strategies of capital intensity, thin capitalization, and lease option exert negative effects on firm liquidity while tax planning strategies of industry incentive and firm size have positive effects on firm liquidity. They concluded that tax planning as a balancing act requires possession of specialist knowledge and skill to effectively craft in order for it to positively impact firms' liquidity as well as enhance firm value. They recommended that appropriate measures and skills should be applied to determine the right mix of strategies that would reduce tax liability and increase firm liquidity.

Bashiru, et al., (2020), investigated corporate governance attributes on tax planning of listed Nigerian conglomerate firms for the period 2014 to 2018. The study employed an ex-post facto research design and panel data was used from the published financial statements of the sampled firms for the period under review. The population of the study consisted of all conglomerate firms listed on the Nigerian Stock Exchange for the period under review which also represents the sample size. The data collected from the published financial statement were analyzed using a panel regression technique to evaluate the relationship between independent, dependent, and control variables. Hausman specification test was conducted to choose between fixed and random effect estimation and the results revealed a negative and significant relationship between CEO tenure, firm size, and effective tax rate and a positive relationship between board size and effective tax rate.

METHODOLOGY

The study employed an ex-post-facto and correlational research design. The population and sample size of this study consisted of all listed Pharmaceutical (Healthcare) companies on the Nigeria Exchange Group. The population includes 7 listed pharmaceutical (healthcare) companies on the Nigerian Exchange Group as of 31st December 2020, after delisting 2 others (Evans Medical and Nigeria German company) in July of that same 2020 (<https://www.ngxgroup.com>), within a specified period (2006 – 2020). We adopted this period due to the availability of data and the very reason that the span of time would permit a valid conclusion. The instrumentation was secondary data, The formulated research questions were analyzed with descriptive statistics. The hypotheses were tested using the Ordinary Least Square (OLS) Model regression analysis with the aid of E-view (10).

Measurement of Variables

Variables	Variable Time	Measurement	Sources
Profit after tax (PAT)	Dependent Variable	Sales less cost of sales, interest, and other allowable expenses	Olaoye and Bamisaye (2018)
Capital Intensity (CI)	Independent Variable	Fixed asset divided by the total asset	Otuya and Omoye (2021); Oyeshile and Adegbe (2020); Nwaobia, et al., (2016);
Effective Tax Rate (ETR)	Independent Variable	Total tax cash expenses divided by pre-tax income expenses	Wang (2021); Oyeshile and Adegbe (2020); Ba’aba and Bashiru (2019); Inua (2018); Erasmus and Uwikpor, (2020).
Firm Size (FMS)	Control Variable	Log of total assets	Timothy, et al., (2020); Imuetinyan et al., (2019)

Source: Researcher’s Field Work, 2023

Model Specification

In this study, there are two main constructs; the independent variable and the dependent variable. Tax planning strategies (TPS) as the independent variable is proxied by capital intensity (CI), and effective tax rate (ETR) while the dependent variable is financial performance (FP) measured with profit after tax (PAT) and these were controlled by firm size (FS). The model for the variables is denoted in the explanatory equations below:

$$\text{Financial Performance} = f(\text{Tax Planning Strategies}) \text{-----} (1)$$

As noted in the literature, there are firm-specific features that are likely to affect the degree of tax planning by companies. In order to control the influence of these firm-specific features, the model was further specified as:

$$\text{Financial Performance} = f(\text{Tax Planning Strategies, Firm Features}) \text{-----} (2)$$

Since financial performance is represented by two proxies of profit after tax (PAT) we recast equation (2) by decomposing it as follows:

$$\text{PAT} = f(\text{CI, ETR, FS}) \text{-----} (2a)$$

To meet their respective empirical form, equations (2a) and (2b) are therefore restated into the basic panel econometric form as below:

$$PAT = \beta_0 + \beta_1 CI_{it} + \beta_2 ETR_{it} + \beta_3 FS_{it} \text{ -----3(a)}$$

Where:

PAT = Profit After Tax

CI = Capital Intensity

ETR = Effective Tax Rate

FS = Firm Size (FS) as moderator

e = error term

i = cross-sectional variable

t = time series variable

For the effect of the moderator variable (FS) on the relationship, we created an interaction term model:

$$FP = \beta_0 + \beta_1 TPS_{it} + \beta_2 FS_{it} + \beta_3 TPS_{it} * FS_{it} \text{ ----- 4}$$

Where $TPS * FS$ = interaction term

Data Analyses and Results Interpretations

Univariate Descriptive Analysis

Descriptive Statistics for Profit After Tax; Capital Intensity; Effective Tax Rate; Firm Size

	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
CI	1.242778	0.595	64	0.03	6.69	90
ETR	0.201956	0.38	2.85	-9.4	1.26	90
FS	7544532	2855750	42862000	223907	8973629.00	90
PAT	360301.1	114746	2961000	-464094	740609.90	90

The descriptive statistics in Table 1 is for all measures and dimensions of the dependent and independent variables. First, we note that the number of observations is ninety (90) firm-year observations which are comprised of a fifteen (15) year period (2006-2020) of study for each firm and six (6) companies (cross-sections) in the sample. Capital intensity (CI) had a mean of 1.2428 and median and maximum values were 0.595, and 64 respectively - while the minimum value was 0.03. From the above, it can be observed that there is a wide dispersal in values relating to capital intensity. The standard deviation for capital intensity was 6.69.

Further, Effective tax rate (ETR) had a mean value of 0.2019 with a standard deviation of 1.26. The maximum and minimum effective tax rates for any of the companies were 2.85 and -9.4 and a median value of 0.38. It is worthy of note that the company income tax rate in Nigeria is 30%. Thus, the mean effective tax rate of the companies under review appears to be substantially lower low at 20.19% than the actual rate. This is likely a result of a number of factors including low to negative profitability and high debt rate in the firms' capital structure.

Firm size (FS) measured in terms of size of assets had a mean value of 7,544,532 with maximum and minimum values of 4,2862,000 and 223,907 respectively. Finally, profit after tax (PAT) had a mean value of 360,301.1 with maximum and minimum values of 2,961,000 and -464,094.

Panel Least Squares (Fixed Effects Model)

Table 2: presents the results of Panel Least Squares (Fixed Effects Model) for measures of financial performance and dimensions of tax planning.

Table 2: Panel Least Squares (Fixed Effects Model) for Profit After Tax; Capital Intensity; Firm Age; Thin Capitalization; Effective Tax Rate; Firm Size

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.325797	4.716265	1.553305	0.1245
LNCI	0.011136	0.018062	0.616555	0.5393
LNETR	-0.36768	0.175446	-2.095685	0.0394
LNFS	0.288987	0.343993	0.840094	0.4035

R-squared: 0.620411; F-statistic: 12.58511; Prob. (F-statistic): 0.0000; Durbin-Watson statistic 2.062543

Table 4.8 shows the panel least squares (Fixed Effects) estimation result for profit after tax; capital intensity; firm age; thin capitalization; effective tax rate; and firm size. It shows that there is a positive relationship between profit after tax (LNPAT) and capital intensity (CI) with a coefficient of regression value of 0.011136 between the variables. This indicates that capital intensity increases in tandem with profit after tax. However, the relationship between the variables was not statistically significant considering that the probability of the t-statistic had a value of 0.5393.

Furthermore, effective tax rate (LNETR) had a negative relationship with profit after tax (LNPAT). The coefficient of regression for the relationship between the variables gave a value of -0.36768 - implying that a unit increase in effective tax rate is predicted to result in a -0.36768 unit decrease in profit after tax. The relationship between the variables is further shown to be statistically significant as the probability of t-statistic with a value of 0.0394 was less than the critical probability limit of 0.05 - thus implying effective tax rate is an important predictor and determining factor of profit after tax of listed pharmaceutical companies in Nigeria.

In all, about 62.04% of the variations in profit after tax (LNPAT) of pharmaceutical companies in Nigeria can be explained by corporate tax planning activities measured in terms of capital intensity (LNCI); firm age (LNFA); thin capitalization (LNFC); effective tax rate (LNETR); and the moderating variable - firm size (LNFS). The probability of f-statistic with a value of 0.0000 indicates that the model is a good fit for the research data. Finally, the Durbin-Watson statistic with a value of 2.062543 is indicative of the near absence of auto-serial correlation in the stated model.

Test of Hypotheses

Hypothesis One

There is no significant relationship between Capital Intensity and Profit after Tax of listed Pharmaceutical Companies in Nigeria.

Table 3: Hypothesis 1

Critical t-Statistic	1.987
Critical Probability of t-Statistic	0.05
Calculated t-Statistic	0.616555
Calculated Probability of t-Statistic	0.5393
Number of Observation	90

Hypothesis one in table 3 shows that the calculated t-statistic for the relationship between capital intensity and profit after tax had a value of 0.6166 with a probability of the t-statistic value of 0.5393. On the other hand, the critical t-statistic gave a value of 1.987 and critical probability of t-value of 0.05. A close observation indicates that the calculated t-statistic is less than the critical t-statistic. This implies that the null hypothesis is not rejected. Thus, it is concluded that there is no significant relationship between capital intensity and profit after tax of listed pharmaceutical companies in

Nigeria. This result is further corroborated by the calculated probability of the t-statistic (0.5393) which is higher than the critical (default) probability value.

Hypothesis 2

Ho₂: There is no significant relationship between Effective Tax Rate and Profit after Tax of listed Pharmaceutical Companies in Nigeria.

Table 4: Hypothesis 2

Critical T-Statistic	1.987
Critical Probability of T-Statistic	0.05
Calculated t-Statistic	-2.095685
Calculated Probability of T-Statistic	0.0394
Number of Observation	90

Hypothesis four in Table 4.15 shows that the calculated t-statistic for the relationship between effective tax rate and profit after tax had a value of -2.095685 with a probability of the t-statistic value of 0.0394. On the other hand, the critical t-statistic gave a value of 1.987 and critical probability of t-value of 0.05. A close observation indicates that the calculated t-statistic is greater than the critical t-statistic. This implies that the null hypothesis is rejected. Thus, it is concluded that there is a significant relationship between effective tax rate and profit after tax of listed pharmaceutical companies in Nigeria. This result is further corroborated by the calculated probability of the t-statistic (0.0394) which is lower than the critical (default) probability value.

Hypothesis 3: Firm Size does not significantly influence the relationship between Tax Planning Strategies and the Financial Performance of listed Pharmaceutical Companies in Nigeria.

Moderating Variable Analysis

Table 4:

Panel EGLS Random Effects Model for the Relationship between Financial Performance and Tax Planning Strategies, and the moderating variable (Firm Size and Tax Planning Strategies)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.722528	4.542714	-0.159052	0.874
TPS	1.492954	1.026828	1.453947	0.1496
FS	1.104058	0.313637	3.520183	0.0007
TPSXFS	-0.104622	0.074441	-1.405427	0.1635

R-squared: 0.138392; F-statistic: 4.604458; Prob. (F-statistic): 0.004896;
Durbin-Watson statistic: 1.847772

From table 3: it is observed that corporate tax planning (TPS) as a single variable is positively related to financial performance - thus, increasing the use of corporate tax planning strategies is predicted to lead to improvement in financial performance. However, the relationship between the variables was not statistically significant considering that the probability of the t-statistic of 0.1496 was more than the critical probability limit of 0.05. On the other hand, firm size had a statistically positive relationship with financial performance. The moderating factor calculated as a product of firm size and corporate tax structure (TPS*FS) had a non-significant negative relationship with financial performance - implying that the effect of the moderating variable on the relationship between financial performance and corporate tax planning of listed pharmaceutical companies in Nigeria is not statistically significant. This is further affirmed by the low coefficient of determination (R-

squared) value of 0.138392 which implies that corporate tax planning, firm size, and corporate tax planning multiplied by firm size (TPS*FS) is only about 13.84%.

Table 5 Summary of Hypotheses Results

S/N	Hypotheses	Computed T-statistic	Probability of T-statistic	Critical T-statistic	Sign of B Coefficient	Critical P-Value	Decision
1	Ho1	0.616555	0.5393	1.987	Negative	0.05	Do Not Reject Null Hypothesis
4	Ho2	-2.095685	0.0394	1.987	Positive	0.05	Reject Null Hypothesis
9	Ho3	-1.4054	0.1635	1.987	Negative	0.05	Do Not Reject Null Hypothesis

CONCLUSIONS

In accordance with the purpose of the study, which is to investigate the relationship between tax planning strategies and the financial performance of listed pharmaceutical companies in Nigeria, with specific attention to the effect of firm size on the relationship; this study has produced conclusive evidence that capital intensity is not a significant indicator of tax planning in terms of financial performance constraining capacity. However, effective tax rate is the only tax planning indicator that produces evidence of significant negative influence in terms of financial performance constraining capacity. On the influence of firm size on the relationship between tax planning strategies and financial performance of listed pharmaceutical companies, empirical evidence showed a negative significant relationship.

RECOMMENDATIONS

It is recommended that firms should ensure that proper analysis of strategies, cost, and benefits therefrom is done before embarking on it. Also, as a major to reduce abuse of privileges, shelters and loopholes in the tax law, the revenue should ensure less complexity in the tax law and regulations. Finally, the existence of a significant relationship between effective tax rates and measures of financial performance in this study is an indication that companies can maximize effective tax rates in order to improve their financial performance. Thus, there is a need for collaboration between the Federal Inland Revenue Service and the Organized Private Sector groups to develop a policy and procedure to avoid abuse.

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