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THE IMPACT OF CORPORATE TAX PLANNING ON THE FINANCIAL PERFORMANCE OF LISTED COMPANIES IN NIGERIA

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ABSTRACT

Corporate tax planning represents an area of financial planning that offers companies and tax managers an opportunity to reduce tax liability and enhance company financial performance. The study attempts to examine the impact of corporate tax planning on the financial performance of listed companies on the Nigeria Stock Exchange (NSE) using the secondary method to retrieve financial data from the Thompson Reuters DataStream, and annual reports of listed companies. The study employed multiple regression as a method of analysis on 84 companies listed on the board of NSE with 756 observations for the duration of nine years from 2010-2018. The study found that the inventory intensity reveals no relationship with Return on Asset (ROA). The result implies that a percentage increase in inventory intensity of the company might not in any way increase financial performance. Also, capital intensity reveals a negative significant relationship with ROA. This outcome implies that a significant rise in capital intensity would lower financial performance. However, the study further reveals that leverage is positively and significantly related to ROA. This implies that extremely geared companies tend to increase their ROA. Agency and Tax planning theory are the main theories supporting this research. The findings suggest that firms need to employ the services of tax experts and implement more healthy tax planning strategies for higher financial performance. Finally, this study will assist relevant scholars and users of financial information in making informed decisions.

JEL Classification: M4, M40, M41

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1. INTRODUCTION

Tax planning by firms is regarded as a highly significant activity which serves as one of many instruments employed to manage firm tax activities (Mgammal and Ku Ismail, 2015). Scholes et al. (2014) define tax planning as strategies employed by firms to maximize the estimated discounted after-tax cash flows. This indicates that taxpayers can organize their tax affairs in such a way to pay the lowest level of tax and cannot be forced to pay anything more. Tax planning should nevertheless be carried out with restraint so any attempt to reduce tax does not overstep the boundaries of the law by evading it. One of the most significant obligations of the managers responsible for paying taxes on behalf of the corporation is to plan on how to cut down the overall corporate tax burden. Theoretically, the tax liability of a company is comparably associated to its profitability; realizing company shareholder wealth maximization ambition through different approaches of improving profitability raises greater difficulty on the company's ability to lower its tax burden. Moreover, tax planning is an essential segment of corporate strategy and it means some element of capital structure decisions provides the company and tax manager with the window of opportunity to cut down the company's tax liability resulting in increased financial performance (Ogundajo and Onakoya, 2016).

According to Ogundajo and Onakoya (2016), the company tax burden is said to be positively related to profitability. Moreover, attaining wealth maximization objective of the company through several ways of improving profitability decreases company ability to pay out high taxes which result in decreasing its tax burden. Also, tax planning strategies were ascertained to have a positive influence on company financial performance and liquidity as it might result in higher profits after tax. Furthermore, companies financed by debt benefitted from tax shields because debt lowers the taxable amount when compared to equity financing (Kariuki, 2017).

Financial performance is said to be the act of conducting a financial activity. In other words, the financial performance also refers to the extent to which financial objectives have been or are attained. It involves evaluating outcomes of a company's operations

and policies from the financial point of view. The most applicable proxies for measuring financial performance are return on assets, growth, liquidity, leverage and profitability (Yahaya and Lamidi, 2015). Other proxies for measuring financial performance are Return on Equity (ROE), Earnings per share (EPS), return on sales (ROS) and Tobin's Q (Gugong, Arugu, and Dandago, 2014; Payne, Benson, and Finegold, 2009; Ellinger et al., 2002). Also, financial performance could be employed in measuring or evaluating companies across different sectors or from the same sector for comparison. Financial performance is also considered as a fundamental objective that companies specifically the profit-oriented companies aim or yearn to achieve (Kajirwa, 2015). Financial performance emphasizes more on the entries that affect the financial reports or directly affect the company statements. In general, financial performance indicators have to do with items such as asset base, capital employed, sales turnover, dividend growth among others (Omondi and Muturi, 2013). Investors are mainly concerned with the company's financial performance as far as investment is concerned (Nyamita, 2014).

Despite the relevance and increasing importance of corporate tax planning to companies, only a very limited number of studies have examined the corporate tax planning impact on financial performance in Nigeria. Most of the previous researches (for examples Lestari and Wardhani, 2015; Kawor and Kportorgbi, 2014; Wahab and Holland, 2012) have concentrated more on the technologically advanced countries. From the African point of view, studies on corporate tax planning with financial performance obtained inconclusive and mixed results. According to Sani and Madaki (2016), companies from the oil and gas sector have not taken full advantage of the benefit of various stimuli obtainable as a result of tax planning activities. Also, Ogundajo and Onakoya (2016) found that aggressive tax planning such as in the case of thin capitalization, tax law stimulus and other beneficial windows in the Nigerian tax legislation have not been fully implemented by Nigerian firms. Another related study by Salawu (2017) found a positive and significant relationship between firm value (Tobin Q) and Effective Tax Rates (ETR).

The Nigerian tax system is currently experiencing difficulties resulting from multiple taxations, lack of accountability, the judiciary on taxpayers matters arising, lack of proper tax review, conflicts between jurisdiction of tax authorities, non-payment of tax refunds, lack of skilled manpower, complex nature of tax laws, lack

of clarity and harsh method of collection by the government, among many others (Hart, 2018). Despite that, the state's tax system, being a genuine fiscal mechanism for national growth, should be easy-going for taxpayers. Apart from being the primary source of livelihood for people, a competent tax system can also decrease unemployment and stimulate economic growth through its impact on capital formation and investment. On the other hand, the challenges facing the Nigerian tax system appear to have persuaded companies to develop means of decreasing tax liability, some of which are against the law (Olarewaju and Olayiwola, 2019; John and Enoch, 2013). However, costs of business operation in Nigeria as a result of higher corporate taxes are one of the major causes of tax deficiencies. Corporate tax is a compulsory obligation imposed by the government on companies; it was further argued that one of the significant costs of business operation in Nigeria that have established a serious constraint on financial performance is taxation (Okoye and Akenbor, 2010). It is against this background, the discrepancies and the enormous tax burden of the Nigerian companies that drives this research on the relationship between corporate tax planning and financial performance of listed companies in Nigeria. In such a situation, it is extremely important to figure out various strategies companies used in reducing taxes and the subsequent relationship with financial performance.

Given the relevance of this concept of corporate tax planning and its impact on listed company financial performance in Nigeria, and the mixed findings from other studies globally, there is a gap that the current study seeks to address by examining the impact of corporate tax planning on financial performance of listed companies in Nigeria. The remaining part of the paper is structured as follows. The first section starts with the introduction of the study; the second section deals with literature review and the hypothesis development evidence from previous studies. The third section explains the methodology and model selection used in conducting the research, followed by the fourth section that summarizes the empirical results. Finally, the fifth section offers the conclusion of the study.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A large number of studies have examined the effect of corporate tax planning and firm financial performance. Among the studies are the one conducted by Chen et al. (2010) which used the panel data

method of analysis. The result of the study reveals that in-depth tax planning is positively related to higher firm performance. Another similar research was by Desai and Dharmapala (2009), on corporate tax avoidance and firm value. The study revealed a positive relationship between tax planning and performance of properly managed firms. Mgammal and Ku Ismail (2015), conducted research on corporate tax planning activities: the overview of concepts, theories, restrictions, motivations and approaches. They concluded that the primary drives for conducting tax planning activities by companies are for the projected financial benefits.

Financial performance is said to be the extent to which the aims of the company and in which financial objectives have been met or will be met (Yahaya and Lamidi, 2015). A company financial performance is contingent upon how effectively it makes use of its assets from its fundamental role of conducting business and its subsequent revenue generation. Financial performance can also be referred to as the fundamental objective that companies particularly the profit-oriented companies aim or desire to achieve (Kajirwa, 2015). Company financial performance deals with items such as asset base, sales turnover, dividend growth and the capital employed among others (Omondi and Muturi, 2013). Financial performance measurement can be carried out via accounting measures resulting from the company financial reports such as gross profit margin, return on assets and return on equity (Mwangi and Murigu, 2015). Furthermore, ROA is the most commonly used measurement of financial performance in accounting research (Ogundajo and Onakoya, 2016). This is because it has been shown to constitute a firm's financial performance well and also signify firm ability to generate profit from assets.

Tax planning has generally been described as the technique of structuring one's affairs to postpone, eliminate or even decrease the amount payable to government as taxes (Mgammal and Ku Ismail, 2015). Tax planning is said to be a systematic arrangement of one's financial activities in a manner without breaching provisions of the law; the full benefit is taken to permit tax exemptions, allowances, concessions, deductions, rebates and other benefits allowed within the framework of the Income Tax Act (Vasanthi, 2015). Several measurements of tax planning were used in previous studies, depending on researcher interest or data accessibility within the specific or general approach to tax planning. Previous scholars employ different proxies of tax planning used by the publicly and privately accessible data. Several kinds of research on tax planning,

either directly or indirectly consider tax reductions to be the outcome of tax planning. The most widely used measures by researchers are the effective tax rates (Abdul Wahab, 2011; Rego and Wilson, 2012) and book-tax gaps (Hanlon and Heitzmen, 2010; Plesko, 2003). The tax saving measurement is also seen as a persistent issue among scholars due to debate on the precision of measures in presenting a tax planning activity (Armstrong, Blouin, and Larcker, 2012). This is because tax liability-associated data could not be retrieved by the external interested parties involved. In addition, the effective tax rate is considered to be the appropriate measurement of corporate tax planning when compared with the book-tax gap measurement since it can eliminate the measurement errors related to tax expense on foreign income and the tax credit (Abdul Wahab, 2011; Hanlon and Heitzmen, 2010).

Noor, Fadzillah, and Mastuki (2010) identified several financial factors that might be used to examined the disparities of tax planning in companies. The study examined the financial information such as inventory intensity, capital intensity, ROA and leverage ratio and these were found to have a significant relationship with the company tax planning activities. In a related study, Beuselinck and Deloof (2014) described the possibilities of adjustment on the inventory intensity level between the holding company to their subsidiaries. The holding company employed this approach by way of absorbing the level of inventory intensity to the subsidiary companies accounts to increase the benefits obtained from the tax planning activities. Also, this approach allows subsidiary companies to have a well-organized inventory management system to lower their corporate tax liability, particularly through the transfer pricing technique. In view of this, the corporate taxpayers from the subsidiary company would have a more operational cost which will significantly influence business income level.

Besides the importance of the inventory intensity ratio in the company's transaction activities, the capital intensity ratio has also been documented to significantly influence the company tax planning activities The capital intensity is said to be the companies' level of investment in fixed assets and by implication the level of capital assets associated incentives a company can benefit from and it has been proven to be a good tax planning strategy and this is because incentives and allowances on capital intensity can be enjoyed by the companies (Nwaobia, Jerry, and Ogundajo, 2016; Ohaka and Agundu, 2012). The companies would mostly be involved in making a certain amount of investment for developing

properties, plant and equipment for their production activities. Moreover, advanced countries, provide some form of tax incentive for the capital intensity level to use by the corporate taxpayers for their tax planning (Gordon and Li, 2009).

Leverage ratio is one of the financial determinants that have been supported to significantly influence tax planning activities considering that the financial ratios produce some of the exempted tax values that are of great concern to debt level. Furthermore, corporate managers tend to exploit these figures to control their tax planning activities. The leverage ratio is found to have a negative relationship with the actual payment of income tax from the transaction activities (Gallemore and Labro, 2015). Thus, aggressive corporate tax planning employed by corporate managers would mostly enhance this ratio to obtain more tax relief. Accordingly, when the corporate managers increase their leverage ratio, this would give rise to lower tax liability sustained by the companies from transaction activities.

Tax planning is a legitimate means of reducing tax liabilities under the law. Moreover, tax planning strategies have been widely accepted and corporate managers always look for avenues to reduce avoidable and unnecessary costs, intending to strengthen the financial performance. Advocates of tax planning further claimed that corporate taxpayers have the right to arrange their tax affairs to decrease payable tax provided that such actions are within the jurisdiction of the law (Gorton and Souleles, 2007). Nevertheless, aggressive tax planning is no longer regarded as lawful activity provided elements of tax evasion are proven by the relevant tax authorities. Thus, the corporate tax planning mechanism can be employed to draw more stakeholders involved in capital market activities. On the other hand, these mechanisms can also be abused by the unreliable corporate taxpayers to evade tax in their business activities (Rashid et al., 2015).

This study is founded on the bases of two theories, tax planning theory and the agency theory. From the tax planning theory perspective, as put forward by Hoffman (1961), because of the complex nature of the tax structures and processes, ambiguities within the permissible process are unavoidable hence helping corporate taxpayers to benefit from the tax positions. From the agency theory perspective, tax planning is said to be another form of tax avoidance that contains greater proportions of the agency problem between the investors and corporate managers. Following agency perception of tax, the managerial avoidance is considered as

a great issue that needs to be settled by stakeholders. Also, avoidance is seen as another technique of agency problem: from the perspective of resource diversion or managerial opportunism (Desai and Dharmapala, 2009). Conflicts of interest between firm management and firm owners affected by the separation of ownership and control, however, are among the well explored and most important issues within accounting literature. Despite both contracting parties, managers and shareholders, being subject to taxation, tax planning has been generally omitted from the theoretical agent-principal relationship. This is surprising taking into account several instances in which taxes persuade decision making. Taxation lowers the benefit that managers and shareholders receive from their contractual relationship. The contractual relationship may even be hindered as a result of taxation, for example, if the manager's anticipated utility falls below his reservation utility (Bauer, Kourouxous, and Krenn, 2018). These two theoretical viewpoints often play a role in the conflict of interest between the parties in corporate tax planning.

Inventory intensity is an essential element that corporate managers are anxious about considering that its effective management might lower business production cost. In a nutshell, the inventory intensity is also considered to be a major influence on several ETR (Tax Planning activities) among the business transaction activities (Rashid et al., 2015). The result from Rashid et al. (2015) reveals a negative relationship between inventory intensity and the effective tax rate (ETR) from the selected firms quoted on the Bursa Malaysia. Furthermore, Cannon (2008) conducted research on the effect of inventory improvement and financial performance. The study revealed no relationship between inventory and overall financial performance. On the other hand, Nawaz et al. (2016) studied the effect of inventory performance on the industrial financial performance of Pakistan. The results from this study reveal that inventory performance has a positive and significant relationship with the industrial financial performance as measured using return on assets (ROA). In another related study Capkun, Hameri, and Weiss (2009) examined the relationship between inventory intensity and financial performance in US manufacturing firms. The study also found a significant positive relationship between inventory and measures of financial performance for manufacturing firms. This has been confirmed by Park and Kim (2020) who examined the effect of inventory turnover on financial performance in the US restaurant industry together with the moderating role of exposure to commodity price risk. The results from this study indicate a positive relationship

between inventory turnover and corporate financial performance. As a result of the above discussion, we can see that inventory intensity has mixed findings with financial performance. Against this background, the following hypothesis was formulated:

H1: There is a significant positive relationship between inventory intensity and financial performance of listed companies in Nigeria.

Firm investment decisions, especially in relation to tangible assets, could affect financial performance because tax provision mostly permits companies to write-off the total cost of those assets in a shorter period when compared to their economic activities. In a study Salawu (2017) researched the effect of corporate governance on the tax planning of non-financial quoted firms in Nigeria. The outcome revealed a significant and positive relationship between capital intensity and firm value. Capital intensity has a significant impact on financial performance of these firms as it directly affects liquidity and profitability which are measures of performance (Almazari, 2013). This has been confirmed by Shaheen and Malik (2012), who reported a positive association between capital intensity and firm value. They argued that capital allowances result in tax savings which increase the firm after tax returns. More investment in capital assets also increases production quality and saves on time which are key determinants to financial performance. On the contrary, Noor et al. (2010) found an adverse and significant relationship between capital intensity and current based ETR. The adverse relationship provides evidence that firms with higher amount of fixed assets tend to possess lower ETRs. From the above literature review, capital intensity is integrated as one of the studied variables to capture Nigerians' investment decision because of government inducements for capital expenditure particularly for the quoted companies. Lee and Xiao (2011) examined the curvilinear relationship between capital intensity and firm performance for publicly traded US hotels and restaurants. They found no relationship between capital intensity and firm performance. According to Leung, Meh, and Terajima (2008), smaller firms with capital constraints have negative associations between capital intensity and firm financial performance. This may be because smaller companies have capital constraints that may greatly affect production quality and efficiency. The impacts of capital intensity and financial performance of manufacturing companies listed on the Nairobi

Securities Exchange align with the findings of Oeta, Kiai, and Muchiri (2019). The findings from Oeta et al. (2019) revealed that capital intensity has a positive insignificant association with financial performance. It concluded that capital intensity does not affect financial performance of manufacturing firms listed on the Nairobi Securities Exchange. However, several studies (e.g., Salawu, 2017; Wang, Campbell, and Johnson, 2014; Noor et al., 2010) provide support for the mixed relationship between capital intensity and ETR. The results from these studies disclose that companies with substantial capital formation (highly/well capitalized) tend to pay higher income tax and therefore reported a higher amount of ETRs. Against this background, the following hypothesis was formulated:

H2: There is a significant positive relationship between capital intensity and the financial performance of listed companies in Nigeria.

In this section, it is important to note that applying financial leverage has also been reviewed in the literature within the context of company financial performance. Lee (2010) examined the effects of capital intensity on firm performance in the U.S. restaurant industry. The study found that leverage is negatively related to firm performance. According to Khan (2012), financial leverage has an adverse and significant relationship on firm performance. Maina and Ishmail (2014) also found a negative and significant relationship between debt to equity ratio and the entire measures of performance. This is further confirmed by Salawu (2017), who studied the effect of corporate governance on the tax planning of non-financial quoted firms in Nigeria. The result reveals that financial leverage is negative and insignificantly related to tax planning by the non-financial quoted firms in Nigeria. On the other hand, Sani and Madaki (2016) studied the effect of corporate tax planning on the market value of oil and gas companies in Nigeria. Their study uncovered a positive and significant relationship between financial leverage and the value of companies in Nigeria. Another similar research by Ogundajo and Onakoya (2016) also studied the effect of corporate tax planning on financial performance of manufacturing companies listed on the NSE. They also found a positive and significant relationship between financial leverage and the ROA of manufacturing companies in Nigeria. Against this background, the following hypothesis was formulated:

H3: There is a significant positive relationship between leverage and financial performance of listed companies in Nigeria.

3. METHODOLOGY

This study employs the ex-post facto research design and empirical survey since the research deals mainly with documentary evidence. The main population of this study is made up of 169 companies listed on the Nigerian Stock Exchange (NSE) as at the end of December 2018. However, some filtering requirements were employed in arriving at the selected sample. First of all, 56 companies forming financial services industry were removed from the population to control for bias because they have a different regulatory requirement from the other listed companies, leaving only a total of 113 companies. These companies were chosen because some of the determinants of corporate tax planning are only applicable to non-financial institutions. Secondly, 18 firms were also removed because they were delisted by the NSE in 2018. From the remaining companies, 11 companies did not reveal complete information. Finally, 84 companies from a population of 169 formed the final sample of this study. With regard to 756 as the total number of observations, the study followed developments in the 84 companies covering a nine year period (2010-2018) to arrive at the 756 as the total number of observations. The 84 companies selected are adequate for the research to pull out a generalized conclusion since they constitute approximately 50% of the research population. The main source of data is secondary as it requires the use of documentary evidence (Annual Reports from the Nigerian Stock Exchange and Thomson Reuters DataStream) for the period of nine years from 2010-2018. Therefore, the database of Thompson Data Stream and annual reports from the Nigerian Stock Exchange were employed to retrieve financial data from the selected companies. The type of data employed in this study is in the form of balanced panel data.

3.1 MODEL SPECIFICATION AND VARIABLE MEASUREMENT

The variables of the study consist of a dependent variable which is financial performance measured as the proportion of net income to total assets (Chen and Chen, 2011). This measurement shows how efficient a company's management is in generating earnings from their economic resources or assets on their balance sheet. The higher the ROA, the higher the company's profit so the better the company's

asset management. So, it will lead to good corporate tax planning resulting in reducing tax liability, so the tendency of tax avoidance will decrease. In accounting research, Ogundajo and Onakoya (2016) document that return on asset is the most widely used method of measuring financial performance since ROA is seen to represent the firm financial position and also indicate ability of firms to take advantage of their assets in generating profit. The independent variables are inventory intensity, capital intensity and leverage. As reported by Slemrod and Weber (2012) and Hanlon and Heitzmen (2010), there is no globally accepted definition of what makes up tax planning. However, conventional use of the concept is wide and involves the series of activities that are both lawful (e.g., transfer pricing decisions, permanently reinvested earnings and corporate debt policy) and the unlawful part (e.g., fraudulent financial reporting and tax evasion). Following most earlier studies, we embrace this comparatively broad concept of tax planning and examine the wide range of different measures very common in the finance, economics and accounting literature. Inventory intensity, capital intensity and leverage were used by previous studies as determinants of corporate tax planning (Nawaz et al., 2016; Ogundajo and Onakoya, 2016; Rashid et al., 2015; Noor et al., 2010).

The study controls for several firm-specific characteristics found to be associated with return on asset. In this study, firm size (FMSIZ) is measured as the natural logarithm of the firm's total assets (Na and Hong, 2017; Ho et al., 2015; Sultana, 2015). We included firm growth (FMGRH) as the measurement of the change in sales divided by the previous sales (Collins, Pungaliya, and Vijh, 2017; Huang, Lao, and McPhee, 2017). Finally, Firm Age (FMAGE) is measured as the number of years of observation minus years of listing (Gao, Li, and Huang, 2017; Kouaib and Jarboui, 2017). This study re-examined the model above using a regression equation which is estimated as:

$$(1) \quad ROA = \alpha^0 + \beta 1\ INVINT_{it} + \beta 2\ CAPINT_{it} + \beta 3\ LEVRG_{it} + \beta 4\ FMSIZ_{it} + \beta 5\ FMGRH_{it} + \beta 6\ FMAGE_{it} + \varepsilon_{it}$$

where

ROA = Financial Performance
α^0 = Constant
INVINT = Inventory Intensity

CAPINT = Capital Intensity
LEVRG = Leverage
FMSIZ = Firm Size
FMGRH = Firm Growth
FMAGE = Firm Age
β = Coefficient
ε_{it} = Error term

In trying to establish the disparity between the dependent variable (financial performance) because of the disparity in any of the explanatory variables (Inventory Intensity, Capital Intensity, Leverage), multiple regression was employed. Multiple regression method employing the panel data approach is fitting and is therefore engaged because panel features of the data, which involves the combination of cross-sectional attributes as well as time series justifies the application and selection of a panel data approach. The following Table 1 presents the summary of variables measurement.

TABLE 1
Summary of Variable Measurement

S/N	Variables	Measurements	Proxies	Sources
Dependent Variable:				
1	Financial Performance	Measured as the proportion of net income to total assets	ROA	(Chen and Chen, 2011)
Independent Variables:				
Corporate Tax Planning:				
1	Inventory Intensity	Inventory / Fixed Asset	INVINT	(Rashid et al., 2015)
2	Capital Intensity	Fixed Asset / Total Asset	CAPINT	(Rashid et al., 2015)
3	Leverage	Long Term Debt / Total Asset	LEVRG	(Rashid et al., 2015)
Control Variables:				
1	Firm Size	Measured as the natural logarithm of the firm's total assets	FMSIZ	(Na and Hong, 2017; Ho et al., 2015; Sultana, 2015)

TABLE 1 *(continued)*

S/N	Variables	Measurements	Proxies	Sources
2	Firm Growth	Measured as the change in sales divided by the previous sales	FMGRH	(Collins et al., 2017; Huang et al., 2017)
3	Firm Age	Measured as the Number of years of observation minus years of listing	FMAGE	(Gao and Huang, 2018; Kouaib and Jarboui, 2017)

4. RESULTS AND DISCUSSION

4.1 DESCRIPTIVE STATISTICS

Table 2 presents a brief overview of the descriptive statistics of all the variables incorporated in the study where the mean, the standard deviation, minimum and the maximum values of all the data are completely captured.

TABLE 2
Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max
ROA	756	0.054	0.096	-0.707	0.524
INVINT	756	0.565	0.909	0.000	8.168
CAPINT	756	0.494	0.233	0.045	0.992
LEVRG	756	0.120	0.130	0.000	0.829
FMSIZ	756	7.982	0.947	6.031	9.995
FMGRH	756	0.151	0.201	-0.192	1.824
FMAGE	756	22.321	13.390	2.000	53.000

Note**:** ROA= Return on Asset; INVINT= Inventory Intensity; CAPINT= Capital Intensity; LEVRG= Leverage; FMSIZ= Firm Size; FMGRH= Firm Growth; FMAGE= Firm Age

Table 2 presents the mean value of 0.054 for the Return on Asset (ROA) with the minimum and maximum value of -0.707 and 0.524 respectively for the Nigerian listed companies. It also records a

mean of 0.565 for Inventory Intensity (INVINT), meaning that the average Inventory Intensity rate for Nigerian listed companies covering the period of this study is 0.565 with the minimum value of 0 and a maximum value of 8.168 respectively. Regarding Capital Intensity (CAPINT), the result displays a positive mean value of 0.494 with a minimum value and a maximum value of 0.045 and 0.992 respectively. Furthermore, the average value of financial Leverage (LEVRG) is 0.120, with a minimum value and a maximum value of 0 and 0.829 respectively.

Also, Firm Size (FMSIZ) measured using the log of total assets with a mean value of 7.982 with a minimum value and a maximum value of 6.031 and 9.995 respectively. Firm Growth (FMGRH) presents an aggregate mean value of 0.151 with a minimum value and maximum value of -0.192 and 1.824 respectively. Finally, Firm Age (FMAGE) records an average age for the companies listed in Nigeria Stock Exchange (NSE) is 22 years given a minimum value and a maximum value of 2 and 53 years, respectively.

4.2 CORRELATION MATRIX

This following section displays the result of the correlation matrix on the relationship between the outcome, explanatory and the control variables. In this study, the Pearson correlation matrix was employed to explain and measure the strengths of the relationship between the studied variables as shown in Table 3. From the Table 3, the highest coefficient is 0.223 between Leverage (LEVRG) and return on asset (ROA). However, the result from this section offers a significant and positive correlation between LEVRG and the ROA at the 1% level of significance and puts forward the appropriate direction of the magnitude of relationship amid the studied variables within the regression model. Meanwhile, FMSIZ was also discovered to be significantly as well as positively correlated with the ROA at the 1% level of significance. Furthermore, CAPINT and FMGRH were also evidently discovered to be significant and adversely correlated with the ROA at the 5% level of significance. Finally, Table 4 displays the outcome of variance inflation factor test known as the (VIF) of the explanatory variables disclosing nonexistence of the multicollinearity issue as the VIF ranges between 1.01 to 1.19.

TABLE 3
Correlation Statistics

	ROA	INVINT	CAPINT	LEVRG	FMSIZ	FMGRH	FMAGE
ROA	1.000						
INVINT	0.015	1.000					
CAPINT	-0.091*	-0.290**	1.000				
LEVRG	0.223**	-0.190**	0.187**	1.000			
FMSIZ	0.226**	-0.176**	0.061	0.001	1.000		
FMGRH	-0.082*	-0.016	0.005	0.044	0.075*	1.000	
FMAGE	0.045	0.231**	-0.244**	-0.127**	0.114**	0.049	1.000

Note**:** ROA= Return on Asset; INVINT= Inventory Intensity; CAPINT= Capital Intensity; LEVRG= Leverage; FMSIZ= Firm Size; FMGRH= Firm Growth; FMAGE= Firm Age

** Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

4.3 REGRESSION RESULTS

To improve the data reliability, validity and soundness, this study carried out diagnostic tests to check that the data is normally distributed. Therefore, normality test, heteroscedasticity as well as multicollinearity test were carried out to provides material evidence that the regression analysis is detached from regression errors that are likely of nullifying the regression hypothetical situation. However, this improves the accuracy and reliability of the resulting regression analysis.

In effect, this section reveals the outcome of diagnostic assumptions and linear regression analysis performed to examine the relationship between the outcome and the three explanatory variables involving inventory intensity, capital intensity, financial leverage and the three control variables categories into firm size, firm growth, firm age for the 84 listed companies on the NSE. The following Table 4 displays the summary of the linear regression matrix of the research model.

TABLE 4
The Relationship between ROA and Corporate Tax Planning

ROA	Coef.	Robust Std. Err.	t-value	p > [t]	VIF	1/VIF
INVINT	0.000	0.004	0.01	0.989	1.19	0.840
CAPINT	-0.029	0.015	-1.91**	0.056	1.15	0.867
LEVRG	0.154	0.026	5.87***	0.000	1.07	0.938
FMSIZ	0.024	0.004	6.74***	0.000	1.07	0.937
FMGRH	-0.043	0.017	-2.59**	0.010	1.01	0.990
FMAGE	-0.000	0.000	-0.59	0.557	1.13	0.882
CONS	-0.098	0.030	-3.23**	0.001		
F(6,749)				15.96		
Prob > F				0.000		
R^2				0.213		
Adj R^2				0.206		
Linktest (Hatsq)				0.338		
Hettest (Chi2)				59.45		
p-Value				0.000		
Ovtest F (3, 746)				2.13		
Prob > F				0.095		
Mean VIF					1.10	
Number of Obs	756	756	756	756	756	756

Note**:** ROA= Return on Asset; INVINT= Inventory Intensity; CAPINT= Capital Intensity; LEVRG= Leverage; FMSIZ= Firm Size; FMGRH= Firm Growth; FMAGE= Firm Age

Table 4 clearly presents R^2 of the multiple coefficients of determination that provides the percentage or measure of the total disparity of the outcome variable. However, the result presents a cumulative R^2 value of 0.213 (21.3%) and the *F* ratio which is found to be significant at 1% ($p < 0.01$), implying that the total variation in ROA is caused by changes in inventory intensity, capital intensity, leverage and the three control variables categorized into firm size, firm growth, and firm age by listed companies in Nigeria. However, this provides proof that the research model is appropriate in describing the cumulative effect of the explanatory variables considering the *F*-statistics of 15.96 and the *F*-value of 0.000. (This is in accordance with the work of Kawor and Kportorgbi, 2014; Wahab and Holland, 2012). The model signifies that when there is any change in corporate tax planning activities by listed companies in Nigeria, ROA will equally be affected by the variation directly. The R^2 as shown in Table 4 is higher than the R^2 of 0.098 as reported by Sukotjo and Soenarno (2018) employing Indonesia listed companies, and also the R^2 of 0.11 as reported by Ogundajo and Onakoya (2016) using Nigerian quoted firms.

However, the result from Table 4 reveals that only four out of six variables were significant with the financial performance predictors (as measured using ROA). INVINT reveals a positive and insignificant relationship with ROA. This can be viewed from Table 4 which displays a *p*-value of 0.989 and the regression coefficient of $\beta = 0.000$. This result signifies that a percentage increase in the inventory intensity of the company might not in any way increase the company's financial performance in Nigeria. This finding is inconsistent with that in Ogundajo and Onakoya (2016), who establish that effective tax rate (ETR) has a negative but insignificant relationship with ROA of Nigerian manufacturing firms. CAPINT reveals a negative and significant relationship with ROA, taking into account a *p*-value of 0.056 and a regression coefficient of $\beta = -0.029$. Moreover, this explains that a significant rise in capital intensity would lower the company's financial performance in Nigeria. This finding is also inconsistent with the finding by Salawu (2017) who found capital intensity has a positive and significant relationship with firm value.

Table 4 further reveals that LEVRG is positive and significantly related to the ROA considering a *p*-value of 0.000 and a regression coefficient of $\beta = 0.154$. This entails that extremely geared companies tend to increase their ROA. This conforms with the findings of Ogundajo and Onakoya (2016) in their study on the

relationship between tax planning and financial performance of Nigerian manufacturing firms; they found that leverage has a positively significant relationship with ROA. Furthermore, this finding supported the work of Noor et al. (2010). Concerning control variables and the ROA, FMSIZ reveals to be positive and significantly related with the ROA taking into account a *p*-value of 0.000 with a regression coefficient of $\beta = 0.024$. Therefore, FMGRH with a *p*-value of 0.010 and a regression coefficient of $\beta = -0.043$ reveals a negative and significant relationship with the ROA whereas FMAGE taking into account a *p*-value of 0.557 and a regression coefficient of $\beta = -0.000$ reveals a negative and insignificant relationship with the ROA.

5. CONCLUSIONS

The study examined the impact of corporate tax planning on the financial performance of listed companies in Nigeria. The study offers evidence on the relationship between the three explanatory variables (Inventory Intensity, Capital Intensity and Leverage) with the outcome variable referred to as financial performance which is measured using ROA. Outcome of regression analysis shows that one out of the three studied variables namely LEVRG was identified to be positive and significantly associated with the ROA. INVINT was found to be positively related to ROA whereas CAPINT was found having no relationship with financial performance as measured by ROA. Our findings are similar to that in Ogundajo and Onakoya (2016) who examined the effect of tax planning on financial performance of manufacturing companies in Nigeria. The positive relationship between LEVRG, and ROA entails that a percentage increase in leverage would result in a percentage increase in financial performance. Also, the positive association between INVINT-ROA suggests that a major increase in inventory intensity would result in decline in financial performance and for the association between CAPINT and the ROA, the result reveals that a decline in the level of capital intensity by companies would result in increased financial performance of the listed companies in Nigeria. Our findings are in line with the one found in the agency and tax planning theory which recommend that a higher proportion of corporate tax planning increases the extent of company financial performance.

This study is limited to only non-financial listed companies in the Nigerian Stock Exchange; as such the findings of the study may not be appropriate for generalization to other types of

companies. About data collection, the financial data were collected from secondary sources. As a result, validity issue may arise. This is because of the weakness of the mentioned sources incorrectly presenting the data from the companies.

The research has several practical and theoretical implications. Companies should ensure appropriate use of creative tax planning strategy such that the tax reductions will be used properly to enhance or to serve as a useful ground for strengthening the firm financial performance. This study also suggests that tax planning measures should be put in place by corporate managers to grow and strengthen the firm financial performance in the course of corporate tax planning. However, companies in general whether listed or unlisted should practice legitimate corporate tax planning strategy that will give rise to enhanced financial performance given that this translates into improved shareholder wealth which is the ultimate goal of a company. Hence the need for tax experts to enlighten and sensitize the companies on the great benefit derived from an effective tax planning activity that might increase shareholder wealth. This study offers theoretical contribution by increasing the overall understanding of the concept of corporate tax planning and financial performance. The study underpins not just tax planning theory but also the agency theory. These implications symbolize the contributions of this study which are believed to serve as guidance to regulators and policymakers on the impact of corporate tax planning on company financial performance.

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