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An Evaluation of the Effects of Tax Planning On the Performance of Firms in The Oil and Gas Sector in Nigeria

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ABSTRACT

This study investigated the effect of tax planning on the performance of firms in the oil and gas sector in Nigeria for the period between 2012 and 2021. Specifically, the study ascertained the effects of thin capitalization on the performance of firms in the oil and gas sector, evaluated how tax incentives affect the performance of firms in the oil and gas sector and analyzed the extent to which earnings management influences the performance of firms in the oil and gas sector in Nigeria. The study adopted an expo-facto research design. This study used secondary data financial statements of 10 firms out of the 12 listed firms in the oil and gas sector. The data comprises annual time series spanning from 2012 through 2021. The research employed only a quantitative method of data analysis. The analysis begins with the description of data with the use of mean, standard deviation, minimum and maximum. This was followed by the pearson correlation matrix to show the relationship between the outcome and predictor variables of the study. Thereafter, a regression analysis was carried out on the panel data with regard to pooled Ordinary Least Square (OLS) estimation, fixed effect estimation, random effect estimation and other position estimation tests which include the Hausman test. The tested hypotheses revealed that EAM exerts a negative and non-significant impact on ROE on the ground of -0.0744611(p=0.656>0.05). On the contrary, TINCAP exerts a positive significant effect on ROE with the coefficient and probability values of 0.0038462 and 0.041 respectively. Finally, TAINC has a positive but insignificant effect on ROE to the tune of 0.008113 (p=0.939>0.05). From the analysis carried out, it was established that tax planning statistically influences the performance of firms in the oil and gas sector in Nigeria.

Keywords: Evaluation, Tax Planning, Performance, Firms, Oil and Gas Sector, Nigeria
Aims Research Journal Reference Format:
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1. INTRODUCTION

Tax is a major source of revenue for the public sector. It can be seen as a compulsory levy with constitutional backing imposed on the income and properties of citizens in a country (Odunayo & John, 2019). In special cases, it is possible for the public sector to have higher means of getting income. Most oil-producing nations have a significant reliance on the revenue gotten from their oil sector, including tax imposed on firms in the sector. For Nigeria, emphasis is placed on the performance of oil and gas firms because they yield a significant portion of the overall revenue derived by the government.

Performance denotes the degree to which a firm achieves its desired objectives (Olurankinse & Mamidu, 2021). For profit-making organizations, performance is measured in monetary terms like return on asset, return on equity, earnings per share, dividend per share, sales volume and return on capital employed, among others (Olurankinse & Mamidu, 2021; Omesi & Appah, 2021). These performance measurement indicators are usually reflected in the financial reports of firms and are used to execute decisions. Different factors could influence the performance of firms in the oil and gas sector, including ,but not limited to tax planning, oil price volatility, fiscal and monetary policies among others. This study delimit these factors to tax planning. Tax in any developing country is one of the major means with which the government achieves its intended targets. According to Fagbemi, Olaniyi and Ogundipe (2019), tax planning denotes the technique used in designing one's affairs with the aim of decreasing, eliminating or even postponing the tax liability payable to the government. Oil and gas firms carry out tax planning strategies with the objective of reducing their tax liability in order to increase their performance. The relationship between tax planning and performance seems to be positive, because effective tax planning strategies would increase the performance of firms.

Tax planning brings together tax managers and tax consultants in order to produce strategies which would counter the high tax rates imposed by the government. Due to corruption in the public sector, revenue earned is embezzled and not properly utilized to the benefit of the citizens. This is why Hoffman (1961) proposed that individuals and firms should try as much as possible to reduce their tax liability since they are not getting the ideal benefit. In the context of this study, some tax planning strategies (earnings management) are unnecessary and might even be a direct violation against the constitution. However, due to the mismanagement of public funds, firms are motivated to render as little tax as they can to the government. This can be achieved through tax planning strategies.

This study segregates tax planning strategies into thin capitalization, tax incentives and earnings management. Thin capitalization, according to Irawan and Novitasari (2021) is one of the common financial strategy implemented by firms to reduce their tax liability because it involves having a higher debt proportion than equity in the capital structure. Since interests on debt are tax-deductible, incurring more debt would lead to lower tax liability while the debt would be used for significant investments which would bolster the performance of the firm. Personal observations show that thin capitalization is common in the oil and gas sector in order to protect the firms against volatility in oil prices and not as a tax planning strategy. Tax incentives can be viewed as a relief which is granted by the government to firms, and even individuals at times in order to diminish the impact of tax on their income in order to improve their performance and encourage savings and investments (Oluwole, Adekunle & Olusola, 2020). These incentives encompass incomes exempted, tax rebates, free-zone incentives, tax holidays, tax rates, capital allowances, double tax treaties, reduced capital gains exempted, import duty exemptions and exempted export duties (Philip, 2018; Tembur, 2016; Tsegba, Musa & Ibe, 2021). Tax incentives have specific terms and conditions that must be met before they are granted.

Earnings management can be seen as the manipulation of financial procedures and techniques in order to produce a pre-planned objective (Wangui, 2017). In the context of this study, earnings management is the act of controlling financial figures and reports in such a way that the overall tax to be charged would be less than the actual tax to be charged. In generally acceptable accounting principles, earnings management is discouraged because it does not present a true and fair view of the financial position of a firm.

In tax planning strategies, it is quite useful if it can be used to achieved reduced tax liability. Tax planning strategy, if properly applied to any individual or firm, should reduce the tax liability of an entity. Money saved from reduction in tax liability can be added to savings, investments or consumption (Lestari & Wardhani, 2015). For firms in the oil and gas sector where tax liability yields a huge amount of revenue to the government, proper utilization of tax planning strategies could reduce the figure they are to pay for tax by some percentage which could run into millions of naira. Firms need to understand the loopholes that are existing in the constitution with which they can gain tax exemptions and tax allowances.

The volatility of the oil and gas sector has made firms in that sector to utilize more of debt than equity in their overall capital structure. As a form of tax planning strategy, this is known as thin capitalization. However, expertise from tax consultants and management is still appreciated in order to get the ideal proportion of debt-equity in the capital structure of the firm (Nwaobia & Jayeoba, 2016). Tax incentives are given occasionally and do not seem to be too common in the oil and gas sector, based on personal observations. Earnings management is prevalent, not only in the oil and gas sector, but other sectors and even for private individuals. It is against this background that this study wishes to investigate the effects of tax planning on performance of firms in the oil and gas sector.

1.1 Statement of the Problem

In Nigeria, the oil and gas sector accounts for a significant percentage of the overall revenue which the government gains. As a result, firms operational in the sector are given a heightened degree of monitoring and regulation to ensure that their operations are in tandem with constituted rules and regulations (Eneisik & Moses, 2021; Lateef, Rashid, Mustapha & Ado, 2019). Managers in oil and gas firms, as well as other stakeholders in the sector place emphasis on the performance of the firms, particularly on the profitability of the firm. Unfortunately, predicting the performance of firms in the oil and gas sector has proven to be a herculean task in recent times.

Volatile oil prices, falsification of figures and misrepresentation of reports are some of the common issues plaguing firms in the oil and gas sector. In the same vein, exorbitant tax rates, embezzlement and corruption by the government (Akintoye, Adegbie & Iheme-Onyeka, 2020). have also adversely affected the performance of firms in the oil and gas sector. In fact, personal observations show that some oil and gas firms have left the country due to unfavourable policies by the government in relation to their operations. The oil and gas sector has become the proverbial goose which lays the golden egg, but there is almost no tangible result to prove the ideal usage of the revenue derived from the sector. In order to secure the interests of their stakeholders, oil and gas firms employ various means to show that their performance is at an ideal level.

Tax avoidance, tax evasion, earnings management, thin capitalization and tax incentives are some of the means with which firms use in reducing their tax liability in order to improve their performance (Ado, Rashida, Mustapha & Ademola, 2021). However, it seems that only a handful of firms have been able to properly create and utilize the connection between performance and tax planning strategies, even in the oil and gas firms. Proper understanding of the nitty-gritty of tax planning would help firms increase their savings and investments which would have a positive impact on their performance.

Numerous scholars have undertaken research on the effect of thin capitalization on the performance of firms. Scholars like Nwaobia and Jayeoba (2016), Eneisik and Moses (2021), Ruud and Li (2021), Irawan and Novitasari (2021) and Umeh, Okegbe and Ezejiofor (2020) discovered a negative relationship between thin capitalization and performance, while scholars like Oyeshile and Adegbie (2020), Ado, Rashida, Mustapha and Ademola (2021) and Otuya and Omoye (2021) discovered a positive relationship between thin capitalization and performance. These mixed findings have created a need for further research to be undertaken. The reason for these mixed findings could have stemmed from disparity in the sector of the research. For instance, Oyeshile and Adegbie (2020) conducted their research among quoted food and beverages firms while Eneisik and Moses (2021) conducted their research among quoted banks.

Tax incentives have proven over time to be a factor which increases compliance among taxpayers. As a result, various studies have been conducted on the impact of tax incentive on the performance of firms. Tembur (2016), Mauda and Saidu (2019), Olurankinse and Mamidu (2021) and Boniface (2019) discovered an insignificant effect of tax incentives on the performance of firms. In contrast, John, Bernard and George (2017), Philip (2018), Alessandra, Marinella, Gianluca and Luca (2018), Anim, Awotwe, Nyarku and Kusi (2020) and Oluwole, Adekunle and Olusola (2020) discovered a significant effect of tax incentive on the performance of firms. Geographical location of the reviewed studies could be a reason for the disparity because Olurankinse and Mamidu (2021) and Mauda and Saidu (2019) conducted their studies in Nigeria, while John, Bernard and George (2017) conducted their study in Kenya.

Earnings management is a very controversial concept in literature. Hoffman's tax planning theory, based on its assumptions supports earnings management even if it involves disobedience to constituted authority. Scholars like Subanidja, Rajasa, Suharto and Atmanto (2015), Nwaobia, Kwarbai and Fregene (2019), Uwuigbe, Ranti and Bernard (2015), Aguguom, Rufus and Rafiu (2018) and Qureshi, Mard and Aubert (2022) discovered a significant effect of earnings management on the performance of firms, while Fatzel, Abdullah, Zamri, Bakar and Jailuddin (2022) and Okafor and Ezeagba (2018) discovered an insignificant effect of earnings management on the performance of firms. The time frame employed by the studies might have been a reason for the dissimilarity in findings. For instance, Fatzel, Abdullah, Zamri, Bakar and Jailuddin (2022) covered 2020 and 2021 fiscal years, while Nwaobia, Kwarbai and Fregene (2019) used data from 2005-2016.

The studies at the disposal of the researcher have affirmed that there is a heightened need for further research on the subject matter to be undertaken due to mixed findings. As a matter of fact, there is a dire need for the subject matter to be conducted in the oil and gas sector in Nigeria because the studies at the disposal of the researcher shows a dearth of literature on the subject matter in relation to the sector. To display uniqueness, the researcher thought it good to use data from 2012 to 2021. From the numerous tax planning strategies a firm might utilize, thin capitalization, tax incentives and earnings management were preferred in this study.

Thus, this study examined the effects of tax planning on the performance of firms in the oil and gas sector in Nigeria for the period between 2012 and 2021 using thin capitalization, tax incentives and earnings management as explanatory variables of tax planning and return on asset as the explanatory variable for performance.

1.2 Research Questions

The following questions were raised to guide the study:

i What is the effect of thin capitalization on performance of firms in the oil and gas sector in Nigeria?
ii How does tax incentives affect the performance of firms in the oil and gas sector in Nigeria?
iii To what extent does earnings management influence the performance of firms in the oil and gas sector in Nigeria?

1.3 Research Objectives

The primary objective of this study was to investigate the effect of tax planning on the performance of firms in the oil and gas sector in Nigeria for the period between 2012 and 2021. Specifically, the study is designed to:

i ascertain the effect of thin capitalization on performance of firms in the oil and gas sector in Nigeria;
ii evaluate how tax incentives affect the performance of firms in the oil and gas sector in Nigeria;
iii analyze the extent to which earnings management influence the performance of firms in the oil and gas sector in Nigeria.

1.4 Research Hypotheses

The following hypotheses have been formulated in their null form to guide the study.

H_{01}: There is no significant impact of thin capitalization on the performance of firms in the oil and gas sector in Nigeria
H_{02}: There is no significant impact of tax incentives on the performance of firms in the oil and gas sector in Nigeria
H_{03}: There is no significant impact of earnings management on the performance of firms in the oil and gas sector in Nigeria

2. EMPIRICAL REVIEW

Thin Capitalization and Performance of Firms

In Nigeria, Nwaobia and Jayeoba (2016) examined the effects of tax planning strategies on firms' liquidity. The statistical tool used in the study was regression analysis. Findings proved among others that thin capitalization exerted a negative effect on firms' liquidity. Akabom and Ejabu (2018) performed a study among multinational firms in order to investigate the effects of thin capitalization and international laws on their performance in Nigeria, using data from 2012-2016. Multiple regression was the selected method of data analysis. Findings showcased that thin capitalization was a revenue-stripping technique and it affected the performance of multinational companies in Nigeria. Another study was conducted in Nigeria by Oyeshile and Adegbie (2020) to know the effect of corporate tax planning on the financial performance of Quoted food and beverages firms in using data from 2008-2018. The data were analysed using descriptive and regression analysis. It was revealed among other findings that thin capitalisation had a significant positive effect on the performance of quoted food and beverages firms in Nigeria.

Umeh, Okegbe and Ezejiofor (2020) undertook a study which evaluated the effect of tax planning on firm value in quoted consumer goods manufacturing firms in Nigeria using data from2009-2018. Ordinary least square regression was used in the study as its method of data analysis. Findings showcased that effective tax rate (ETR) significantly but negatively influenced the firm value, while book tax difference (BTD) insignificantly but positively influenced the firm value. Otuya and Omoye (2021) performed a study which investigated thin capitalisation and performance of multinational companies (MNCs) in Nigeria using data from 2014-2018. Descriptive, correlation and regression analyses were the statistical tools used in the study. Findings showcased among others that thin capitalization had a positive but insignificant association with MNCs financial performance. Ado, Rashida, Mustapha and Ademola (2021) carried out a study which examined the impact of corporate tax planning on the financial performance of listed companies on the Nigerian Stock Exchange (NSE) using data from 2010-2018. Multiple regression was employed to analyze the collated data. Findings proved that leverage was positively and significantly related to ROA.

Eneisik and Moses (2021) investigated the relationship between tax planning strategies and financial performance of quoted banks in Nigeria using data from 2006-2019. Descriptive statistics and ordinary least square regression statistical tool were preferred for analyzing the collected data. The findings displayed that thin capitalization had a negative and insignificant impact on return on equity of quoted banks in Nigeria. A panel-based study was conducted among 34 countries by Ruud and Li (2021) to identify thin capitalization rules (TCRs) and its effect on the profit of multinational corporations (MNCs) using data from 2006-2014. Panel regression was used in the study. Findings showed that negative investment effects were more pronounced for highly-levered firms for which TCRs were more likely to be binding.

In Indonesia, Irawan and Novitasari (2021) used data from 2015-2018 to examine the practice of thin capitalization in manufacture and retail companies in the Stock Exchange. Descriptive statistics and regression analysis were employed in the study. Findings showed that thin capitalization had different effects on the two business sectors; a positive effect on manufacturing company tax avoidance and a negative effect on retail company tax avoidance. Further analysis showed that thin capitalization had no effect on the relation between tax avoidance and tax revenue. Osamor (2022) used data from 2006-2020 to ascertain the impact of thin capitalization on firms' financial performance in Nigeria. Data was analysed using descriptive statistic, unit root test, co-integration and panel data regression. The findings displayed that thin capitalisation had effects on firms' financial performance in both multinational and non-multinational firm in Nigeria.

2.1 Tax Incentives and Performance of Firms

In Indonesia, Lestari and Wardhani (2015) used data from 2010 and 2011 to examine the impact of tax planning (TP) on firm value with board diversity as moderating variable among non-banking and financial firms in the stock exchange. Descriptive statistics and regression analysis were selected for the study. Findings showed among others that there was a positive relationship between TP and firm value. Tembur (2016) carried out a study in Kenya to investigate the effect of tax incentives on financial performance of export processing zone firms for 2016. Multiple regression analysis was used to analyze the data. It was proven that there was a weak positive relationship between tax incentives and financial performance of EPZ firms in Kenya.

In Nigeria, Ogundajo and Onakoya (2016) examined the influence of corporate tax planning on the financial performance of manufacturing firms quoted on the Stock Exchange. The study employed Generalized Least Square (GLS) method of regression to test the hypotheses. Findings proved beyond all doubt that tax law incentives had not been fully utilized by the Nigerian firms. In Kenya, John, Bernard and George (2017) investigated the influence of corporate income tax incentives on the performance of EPZ firms. Descriptive statistics and regression analysis was used in the study. It was discovered that corporate income tax incentives had a positive and significant relationship with performance of EPZ firms measured using ROA. In Nigeria, Philip (2018) investigated the impact of tax incentives on the manufacturing sector growth using data from 2016. Ordinary Least Square regression technique was the preferred statistical tool. Findings showed that investment allowance was positively significant to effect a change on manufacturing firms' ROCE.

Alessandra, Marinella, Gianluca and Luca (2018) explored the impact of fiscal incentives on firm performance in the Dominican Republic using data from 2006 to 2015. Panel data regression was used to analyze the collated data. Findings gave credence to the fact that corporate income tax exemptions positively impacted the performance of individual firms in the Dominican Republic, but uneven tax treatment across firms distorted competition in the industrial sector, with negative effects on overall economic productivity.

Sathaya and Thatphong (2019) explored the association of tax planning (TP) on financial performance (FP) in the Stock Exchange of Thailand from 2014-2016. Multiple regression analysis was the basis for data analysis. It was revealed among others that TP was positive when measured by ETR, while it was negative when measurement was tax divided by asset. In Nigeria, Odunayo and John (2019) examined the relationship between corporate tax planning and financial performance of quoted non-financial companies using data from 2007 to 2016. A panel vector autoregressive was utilized in the study. Findings gave credence to the fact that tax saving had a direct relationship with financial performance, while tax avoidance had an inverse relationship with financial performance.

Mauda and Saidu (2019) evaluated the effect of tax incentives on financial performance of listed consumer goods companies in Nigeria using data from 2000-2017. Pearson's correlation and multiple regressions were the favoured statistical tools used in the study. It was proven that capital allowance and loss relief had positive and significant influence on the performance of the sampled firms while investment allowance had positive but insignificant influence on the financial performance of the sampled firms. In Kenya, Boniface (2019) studied the effects of tax incentives on financial performance of SACCOs in Nairobi County. Correlation analyses and multiple regression analysis were the chosen method of data analysis. Findings showed that there was a weak positive relationship between capital allowance, accelerated depreciation and financial performance of SACCOs in Nairobi County. It further indicated a negative relationship between tax and financial performance.

Undie, Akpan and Sezuo (2020) surveyed the impact of planning for tax incentives, as applicable in Free Trade Zones, on the profitability of companies in the Free Trade Zones (FTZs) in Nigeria. The multiple linear regression model was the method of data analysis used in the study. Findings proved that tax incentives had improved corporate performances and thereby increased investments in the Zones In Ghana, Anim, Awotwe, Nyarku and Kusi (2020) examined the effect of tax administration and tax incentives on the growth of small and medium enterprises in Kumasi Metropolis.

The multiple regression was the chosen method of data analysis. Results disclosed that tax administration accounted for a statistically significant positive weak variance in SMEs' growth, whilst tax incentives accounted for a statistically significant positive moderate variance in SMEs' growth.

In Nigeria, Oluwole, Adekunle and Olusola (2020) examined the effect of tax incentives on the growth and development of manufacturing firms using data from 2013 to 2018. Analysis was executed using ordinary least square regression. It was discovered that corporate income tax incentives, capital allowance incentives, custom duty incentives and excise tax incentives had positive and significant effect on return on asset in Nigeria. Tsegba, Musa and Ibe (2021) surveyed the effect of tax incentives on investment performance of listed manufacturing companies in Nigeria using data from 2015 - 2019. Pooled OLS regression analysis was used to analyze the data. The results proved that tax exempt income had positive and significant effect on investment performance (ROI) while loss relief had negative and significant effect on return on investment. Olurankinse and Mamidu (2021) examined the effect of tax planning on the financial performance of Nigerian Development Banks using data from 2012 to 2019. Pooled regression analysis technique was the preferred analytical tool for the study. It was discovered that effective tax rate had negative and insignificant effect on return on equity while tax savings had positive and insignificant effect on return on equity.

2.2 Earnings management and performance of firms

In Indonesia, Subanidja, Rajasa, Suharto and Atmanto (2015) investigated the determinants of firm value in relation to earnings management and the mechanism of GCG as a moderating variable. A moderated regression analysis (MRA) was used in the study to analyze the data. The results showed that earnings management had a significant impact on the firm value. Uwuigbe, Ranti and Bernard (2015) assessed the effects of firms' characteristics on earnings management of listed companies in Nigeria using data from 2006-2010. Pooled ordinary least square regression was used in the study. Findings revealed that firms' size and corporate strategy had a significant positive impact on earnings management. In Indonesia, Emylia, Mukhtaruddin and Nadia (2017) surveyed the influence of earnings management on company value. Descriptive data analysis method, analysis model and classical assumption check were used to analyze the data. It was revealed among others that earnings management negatively affected the value of the company. In Kenya, Wangui (2017) examined the effect of earnings management practices on financial performance of firms in Nairobi. Multiple regression was used in the study for the collated data. It was revealed that earnings management enhanced the financial performance of firms.

Aguguom, Rufus and Rafiu (2018) examined the trend and impact of earnings quality on the financial performance of firms in Nigeria using data from 2000-2016. Panel data regression was the favoured statistical tool for testing the hypotheses. The findings showcased that earnings quality proxies jointly had a positive significant effect on the financial performance of the firms. Cudia and Dela Cruz (2018) examined the type of earnings management employed by industrial firms in the Philippine Stock Exchange (PSE). Regression analysis was used in the study. Findings revealed that managers used earnings management in an efficient perspective to signal private information to stakeholders. Okafor and Ezeagba (2018) explored the effect of earnings management on performance of corporate organisations in Nigeria using data from 2010-2014 among the consumer goods sector. Simple regression techniques was used in the study. It was revealed that earnings management had negative, but insignificant effect on the performance of corporate firms.

Nwaobia, Kwarbai and Fregene (2019) explored the effect of earnings management on the survival of manufacturing entities in Nigeria using data from 2005-2016. OLS regression was preferred for analyzing the collated data. It was revealed that earnings management (EM) exerted a significant effect on corporate survival. Lateef, Rashid, Mustapha and Ado (2019) investigated the impact of earnings management on financial reporting quality on information asymmetry in Nigeria. Content analysis was the selected statistical tool. Findings showed that both real earnings quality and accruals earning quality models were relevant to understanding the financial reports, that is, lower information asymmetry challenge. In Vietnam, Bui and Le (2021) assessed factors affecting earnings management among manufacturing firms using data from 2017 to 2019. Panel data regression model was used in the study. The results showed among others that financial performance and firm size were not determinants of earnings managements

In France, Qureshi, Mard and Aubert (2022) examined the effects of earnings management on firms' market-adjusted returns. Multivariate-pooled OLS and heteroscedasticity-consistent standard error regressions were the preferred statistical tool in the study. Findings unveiled that the magnitude of earnings management had a positive and significant relationship with firms' market-adjusted return. In Malaysia, Fatzel, Abdullah, Zamri, Bakar and Jailuddin (2022) investigated the impact of earnings management on consumer goods firms' performance during the COVID-19 pandemic hits using data from 2020 and 2021. Descriptive statistics, correlation analysis and multiple regressions were utilized in the study. Findings gave credence to the fact that earnings management had a positive but insignificant impact on firm performance during the pandemic years. In Slovakia, Gajdosikova, Katarina and Pavol (2022) identified firm-specific characteristics that affected how businesses manage their earnings. Chi-square was the preferred method of data analysis in the study. It was showcased that earnings management was common among businesses and influenced the performance of firms.

3. METHODOLOGY

The study adopted ex-post facto research design. The study covered 10 firms out of the 12 listed firms in the oil and gas sector which was achieved through random sampling technique. The data comprised annual time series spanning from 2012 through 2021. The data set for this study was mainly secondary data sourced from the published financial reports of the sampled firms and this stemed from the interest of the researcher to cover the period of the global financial and economic crises and the period of domestic economic recession that affected every sector of the economy. The data comprises annual time series spanning from 2012 through 2021. The model used by Nwaobia and Jayeobe (2016) to examine the effect of tax planning strategies on firms' liquidity in Nigeria was adapted.

The model is given thus:

$$CR = \beta_0 + \beta_1 CAPINT_{it} + \beta_2 TINCAP_{it} + \beta_3 LOPT_{it} + \beta_4 IND_{it} + \beta_5 SIZE_{it} + \mu_{it} \ldots\ldots (1)$$

Where CR is Current Ratio, CAPINT is Capital intensity, TINCAP is Thin Capitalization, LOPT is Lease Option, IND is Industrial Sector Incentives, SIZE is Firm size. However, the model was modified by capturing tax planning with Thin Capitalization, Tax incentives and Earnings Management.

Also, performance was captured with return on equity. All these were predicated on the eagerness of the researcher to achieve the stated objectives.

The models, controlled by total assets and leverage, were specified thus:

ROE = f(TINCAP, TAINC, EAM)..... (2)

Where:
ROE is Return on Equity
TINCAP is Thin Capitalization
TAINC is Tax Incentives
EAM is Earnings Management

The econometric equations in logarithms are present below:

$$\mathrm{ROE} = \beta_0 + \beta_1 \mathrm{TINCAP}_{it} + \beta_2 \mathrm{TAINC}_{it} + \beta_3 \mathrm{EAM}_{it} + \mu_{it} \text{ ..... (3)}$$

Where:
β_0 is the intercept, β_1 - - - - - β_5 are the slop parameters, subscript "it" represents the combination of time and individuality
μ_{it} means error term. It is expected that all the predictors would have a positive effect on performance of firms.

3.1 A-priori Expectation

It was expected that all the predictor variables would have a positive relationship with performance of oil and gas sector. Mathematically, the a-priori is given thus:

$\frac{\mathrm{dROE}}{\mathrm{dTINCAP}} > 0$: This means that thin capitalization was expected to have a positive relationship with financial performance;

$\frac{\mathrm{dROE}}{\mathrm{dTAINC}} > 0$: This means that tax incentive was expected to have a positive relationship with financial performance;

$\frac{\mathrm{dROE}}{\mathrm{dEAM}} > 0$: This means that earnings management was expected to have a positive relationship with financial performance.

3.1 Method of Data Analysis

The study used mean, standard deviation, minimum and maximum to described the data set Pearson correlation matrix was also used to show the relationship between the outcome and predictor variables of the study. Thereafter, a regression analysis was carried out on the panel data with regards to pooled Ordinary Least Square (OLS) estimation, fixed effect estimation, random effect estimation.

The fixed effect is given thus:

$Y_{it} = a_0 + \beta_1 X_{it} + \delta i + \mu_{it}$ 6

ði is a time varying intercept that captures all the variables that affect Y_{it} that very over time but are constant cross-sectional. In substituting the variables under consideration into the fixed effect model,

it had appear thus:

$$ROA = \beta_0 + \beta_1 CSR_{it} + \beta_2 ENC_{it} + \beta_3 COM_{it} + \beta_4 TOA_{it} + \beta_5 LEV_{it} + \delta i + \mu_{it} \text{ ..... (3.6)}$$

The random effect model follows the forms presented below:

$$Y_{it} = a_0 + \beta_1 X_{it} + W_{it,} W_{it} (£_{it} + \mu_{it}) \text{ ..... 3.8}$$

Where $£_{it}$ measures the random deviation from the global intercept a, subscript "it" represents the combination of time and individuality. U_{it} means error term.

3.3 Descriptive Statistics

Table 1: Descriptive Statistics

	ROE	TINCAP	TAINC	EAM
Mean	0.2796444	2.190583	1.847922	0.5548295
Std. Dev.	1.188177	6.646656	6.573154	0.8489467
Min.	0.0002137	-0.4724241	0.0000715	0
Max	10.74894	58.61636	58.61636	6.896293

Source: Author's Computation, 2024.

The results in Table 1 are drawn from an analysis from 2012-2021, a period of 10 years. From Table 1, the descriptive statistics depict that the average value for ROE is 0.2796444 with minimum and maximum values of 0.0002137 and 10.74894 respectively. The standard deviation of 1.188177 shows that the risk is higher, as it is relatively greater than its mean figure. In the same result, the mean value of TINCAP is at 2.190583, with minimum and maximum values of -0.4724241 and 58.61636 respectively and a standard deviation of 6.646656 which shows that the risk is higher, as it is relatively greater than its mean figure.

Also, the mean value of TAINC is at 1.847922 with minimum and maximum values of 0.0000715 and 58.61636. Like ROE, the standard deviation (6.573154) shows that its risk is higher, as it is relatively greater than its mean value. Furthermore, for EAM, its mean value stands at 0.5548295, with a minimum and maximum value of 0 and 6.896293 respectively. Its standard deviation (0.8489467) shows a higher risk, as it is greater than its mean value.

3.4 Correlation Analysis

Table 2: Correlation Matrix

	ROE	TINCAP	TAINC	EAM
ROE	1.000000			
TINCAP	0.349	1.000000		
TAINC	-0.245	0.9781	1.000000	
EAM	-0.09	0.0758	0.0812	1.000000

Source: Author's Computation, 2024.

From the result presented in table 2, it can be deduced that ROE has a negative relationship with TAINC and EAM, indicating that the variables moved in different directions. Contrarily, the predictors have a positive relationship with each other.

3.5 Regression Analysis

Table 3: Estimation Result

	Pooled OLS		Fixed Effect		Random Effect	
Variables	Coef.	Sig. Val.	Coef.	Sig. Val.	Coef.	Sig. Val.
Constant	0.9233159	0.036	0.5062976	0.004	0.7212056	0.002
TINCAP	-0.057476	0.019	-0.2265938	0.020	0.0038462	0.041
TAINC	0.0306035	0.730	0.0208807	0.821	0.008113	0.939
EAM	0.0078011	0.959	-0.0182517	0.905	-0.0744611	0.656
R. Squared	0.3197		0.4305		0.4035	
Adj. R-Square	0.2216		0.3606		0.3017	
F-stat	0.48		12.91		11.07	
Prob (F-stat)	0.0026		0.002		0.0097	

Source: Author's Computation, 2024.

Table 3 above presented the outcome of the pooled OLS result, Fixed effect estimation, and random effect estimation. From the pooled OLS estimation column, the outcome revealed that both TAINC and EAM exert a positive but non-significant effect on the performance of firms in the oil and gas sector in Nigeria to the tunes of 0.03($p=0.0730>0.05$) and 0.0078($p=0.959>0.05$) respectively. On the contrary, TINCAP has a negative but significant effect on the performance of firms in the oil and gas sector in Nigeria with coefficient and probability values of -0.057476 and 0.019. R-square reported to be 0.3197 indicates that the predictor variables considered accounted for about 32% change in the outcome variable, while the remaining change covered by 68% was as a result of other variables not addressed by this study. Likewise, the Prob(F-stat) of 0.0026 which was less than 0.05 proved the model to be fit.

Similarly, from the fixed-effect model result of Table 4, it could be gathered that the R-square value 0.4305, reflects that about 43% of the systematic variation in ROE can be explained jointly by the explanatory variables. Likewise, the Prob(F-stat) of 0.002 which was less than 0.05 proved the model to be fit. On the direction and significance of the predictor variables, the outcome revealed that both TINCAP and EAM harm the performance of firms in the oil and gas sector in Nigeria. However, the negative effect is only significant for TINCAP against the insignificant negative effect of EAM to the tune of -0.2265938(p=0.02<0.05) and -0.0182517(p=0.905>0.05) respectively. Also, TAINC exerts a positive impact on return on equity (ROE) with coefficient estimates of 0.0208807(p=0.821>.05).
Random effect estimation result presented above revealed that when heterogeneity effect across firms and over time is incorporated into the model via the error term, EAM exerts a negative non-significant impact on ROE on the ground of -0.0744611(p=0.656>0.05) respectively. On the contrary, TINCAP exerts a positive significant effect on ROE with the coefficient and probability values of 0.0038462 and 0.041 respectively. finally, TAINC has a positive but insignificant effect on ROE to the tune of 0.008113 (p=0.939>0.05). Reported R-square stood at 0.4035 which implies that about 40.3% of the systematic variation in ROE can be explained jointly by the predictors. **Post Estimation**

3.6 Test

Table 4: Hausman Test

Null hypothesis	Chi-square stat	Probability
The difference in coefficient not systematic	3.8721	0.4236

Source: Authors' Computation, 2024

Table 4 reported chi-square statistics of 3.8721 along its probability value of 0.4236 indicating that there is not enough evidence to reject the null hypothesis that differences in coefficients of fixed effect estimation and random effect estimation are not significant. Therefore, the most consistent and efficient estimation is given by the random effect estimation which revealed that EAM exerts a negative and non-significant impact on ROE on the ground of -0.0744611(p=0.656>0.05). On the contrary, TINCAP exerts a positive significant effect on ROE with the coefficient and probability values of 0.0038462 and 0.041 respectively. Finally, TAINC has a positive but insignificant effect on ROE to the tune of 0.008113 (p=0.939>0.05).

4. DISCUSSION OF FINDINGS

An attempt has been made to examine the effect of tax planning on the performance of firms in the oil and gas sector in Nigeria for 10 years, spanning from 2012 to 2021. The tested hypotheses revealed that tax incentive has a positive but insignificant effect on the performance of firms in the oil and gas sector in Nigeria to the tune of 0.008113 (p=0.939>0.05). This implies that a 1% increase in tax incentives would engender a 0.0081% increase in the performance of firms in the oil and gas sector in Nigeria. The tax incentive report shows that firms with high tax planning values perform better. However, the insignificant effect showed that most of the sampled firms lacked tax planning which most time results in tax liabilities when avoiding tax payments. After tax, they might end up paying higher taxes as a result of their ignorance of tax planning. This outcome agreed with the findings of Tsegba, Musa and Ibe (2021) that tax exempt income had positive and significant effect on investment performance (ROI). However, the findings contradict the study of Olurankinse and Mamidu (2021) that effective tax rate had negative and insignificant effect on return on equity while tax savings had positive and insignificant effect on return on equity.

Also, it was unveiled that earnings management exerts a negative and non-significant impact on the performance of firms in the oil and gas sector in Nigeria on the ground of -0.0744611(p=0.656>0.05), indicating that the return on equity would decrease by 7.4% with just a 1% increase in earnings management. this finding agreed with the modified Jones model that earnings management has a negative insignificant effect on shareholders' fund return. Empirically, this finding is in tandem with the conclusion of Emylia, Mukhtaruddin and Nadia (2017) that earnings management negatively affected the value of the company. The findings not agreed with the study of Subanidja, Rajasa, Suharto and Atmanto (2015) that earnings management had a significant impact on the firm value.

Finally, it was revealed that thin capitalization exerts a positive significant effect on ROE with the coefficient and probability values of 0.0038462 and 0.041 respectively. This implies that a 1% increase in thin capitalization would result in a 0.004% increase in the performance of firms in the oil and gas sector in Nigeria. This discovery fails to corroborate the findings reported by Oyeshile and Adegbie (2020) who revealed that thin capitalisation had a significant positive effect on the performance of quoted food and beverages firms in Nigeria. However, the finding contradict the study of Nwaobia and Jayeoba (2016) who found that thin capitalization exerted a negative effect on firms' liquidity.

5. CONCLUSION

In Nigeria, the oil and gas sector accounts for a significant percentage of the overall revenue that the government gains. As a result, firms operating in the sector are given a heightened degree of monitoring and regulation to ensure that their operations are in tandem with constituted rules and regulations. To secure the interests of their stakeholders, oil and gas firms employ various means to show that their performance is at an ideal level. Tax avoidance, tax evasion, earnings management, thin capitalization and tax incentives are some of how firms use in reducing their tax liability to improve their performance. The studies at the disposal of the researcher have affirmed that there is a heightened need for further research on the subject matter to be undertaken due to mixed findings.

There is a dire need for the subject matter to be conducted in the oil and gas sector in Nigeria because the studies at the disposal of the researcher show a dearth of literature on the subject matter about the sector. To display uniqueness, the researcher thought it good to use data from 2012 to 2021. From the numerous tax planning strategies, a firm might utilize, thin capitalization, tax incentives and earnings management were preferred in this study. Thus, this study examines the effect of tax planning on the performance of firms in the oil and gas sector in Nigeria for the period between 2012 and 2021 using thin capitalization, tax incentives and earnings management as explanatory variables of tax planning and return on asset as the explanatory variable for performance. From the analysis carried out, it was established that tax planning statistically influences the performance of firms in the oil and gas sector in Nigeria.

6. RECOMMENDATIONS

The following recommendations are considered relevant in line with the findings made:

i. The management should expand the company's thin capitalization to maximize tax deductions, thereby, enhancing the performance of the company.
ii. Management should provide routine training seminars for their employees on new and modern tax planning strategies to ensure a reduction in tax liability.
iii. Earnings management practices distort the true and fair view of the statement hence resulting in the incorrect decision when users rely on the financial statement for decision-making. Thus, it is recommended that all discretionary accruals should be eliminated by firms.

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