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TAX INCENTIVES AND RETURN ON CAPITAL EMPLOYED OF LISTED OIL AND GAS COMPANIES IN NIGERIA

Ogunbowale, Funmi Racheal

Department of Accounting, Crescent University, Abeokuta, Ogun State, Nigeria

Nurudeen, Abdulfatai Olanrewaju

Department of Accounting, Crescent University, Abeokuta, Ogun State, Nigeria

Adedire-Ampitan, Adetumilara Adepeju

Department of Banking and Finance, Gateway ICT Polytechnic, Saapade, Ogun State

Abstract

This study investigates the effect of tax incentives on the Return on Capital Employed (ROCE) of listed oil and gas companies in Nigeria. Specifically, the research focuses on Investment Tax Allowance (ITA), Tax Exemption (TEX), and Tax Credit (TCR) as proxies for tax incentives. Employing an ex-post facto research design, the study analyzed panel data from nine listed oil and gas firms on the Nigerian Exchange Group (NGX) covering the period 2014 to 2023. Using the Fixed Effects Model, selected based on the Hausman test, the results reveal that both ITA and TCR have statistically significant positive effects on ROCE ($p = 0.0063$ and 0.0205 respectively), indicating their relevance in enhancing capital efficiency. However, TEX does not exhibit a significant effect on ROCE ($p = 0.2686$), suggesting that tax holidays alone may not effectively improve capital productivity. Grounded in the Incentive Theory of Taxation and the Resource-Based View, the study concludes that tax incentives can play a critical role in boosting financial performance when strategically designed and utilized. The study recommends that The Nigerian government should strengthen the implementation of Investment Tax Allowance (ITA) and encourage oil and gas firms to utilize Tax Credit (TCR), as both significantly enhance capital performance. Policymakers should also review the structure of Tax Exemptions (TEX), which showed no significant effect, to ensure they are performance-based and relevant. Firms are advised to assess the combined use of exemptions with other incentives, as exemptions alone may not yield optimal capital efficiency.

Keywords: Investment Tax Allowance, Oil and Gas Sector Nigeria, Return on Capital Employed, Tax Credit, Tax Exemption, Tax Incentives.

1. Introduction

The oil and gas sector has long been recognized as the backbone of Nigeria's economy. It is not only the dominant source of foreign exchange earnings and government revenue, but also a major contributor to national output and infrastructure development. As of 2024, the sector accounted for approximately 78% of export earnings and over 6% of real Gross Domestic Product (GDP), highlighting its central role in Nigeria's economic architecture (National Bureau of Statistics [NBS], 2024). Despite this strategic importance, the

financial performance of firms operating in this sector particularly listed oil and gas companies has been inconsistent, with growing concerns about their ability to generate sustainable value for investors. One performance indicator that has come under increasing scrutiny is the Return on Capital Employed (ROCE), which measures how efficiently a firm converts capital investment into profits (Akande & Musa, 2023).

In recent years, ROCE for several firms in Nigeria's oil and gas industry has shown significant variability, reflecting underlying challenges in capital utilization and operational efficiency. Factors such as

rising production costs, limited refining capacity, fluctuating global oil prices, insecurity in oil-producing regions, and regulatory uncertainties have undermined firms' capacity to achieve optimal financial returns (PwC Nigeria, 2023). These dynamics are further complicated by the complex and often burdensome tax regime to which oil and gas firms are subjected. Taxes such as the Hydrocarbon Tax, Company Income Tax (CIT), Education Tax, and Value-Added Tax (VAT) collectively place substantial pressure on firms' cash flows and investment decisions (KPMG Nigeria, 2023).

Theoretically, this fiscal approach is consistent with Keynesian economic principles and the incentive-based tax theory, both of which posit that tax reliefs can serve as catalysts for private investment and economic expansion by improving corporate liquidity and risk-return profiles (Zwick & Mahon, 2017; Liu & Mao, 2019). For a capital-intensive sector like oil and gas, where substantial capital is required for exploration, drilling, refining, and logistics, such incentives can significantly impact firms' ability to operate profitably and achieve higher capital productivity. However, the practical outcomes of these incentives in Nigeria have remained mixed. While some firms have recorded marginal improvements in financial performance following the implementation of tax relief policies, others continue to struggle with negative returns and capital inefficiencies (Afolayan & Ogundipe, 2023; Ibrahim & Olowokure, 2021).

A major concern is that the effectiveness of tax incentives is often undermined by poor policy implementation, corruption, bureaucratic delays, and lack of awareness or capacity among firms to fully utilize the incentives provided. Moreover, critics argue that some of these fiscal incentives are politically motivated or inadequately aligned with industry needs, thereby failing to produce the desired economic impact (Ogujiuba & Yakubu, 2022). While several empirical studies have explored the general relationship between tax policy and corporate performance in Nigeria, few have provided a sector-specific, disaggregated analysis focusing on how Investment Tax Allowance, Tax Exemption, and Tax Credit specifically influence Return on Capital Employed (ROCE) in the oil and gas sector. Most existing literature has either generalized financial

performance using metrics such as Return on Assets (ROA) and Profit After Tax (PAT), or has combined data from multiple industries, failing to capture the distinctive fiscal realities and capital needs of the petroleum sector (Adegbite et al., 2019; Ayoola & Egwuonwu, 2022).

This study therefore seeks to fill this gap by critically analyzing the nexus between tax incentives and ROCE, with particular attention to how each type of incentive affects the capital efficiency of listed oil and gas firms in Nigeria. It is expected that this inquiry will provide empirical insights that can guide fiscal policy reform, inform investment decisions, and promote better financial management practices within the sector. The study will also contribute to the growing body of literature on fiscal incentives and firm performance in emerging economies, offering sector-specific evidence to support more targeted and effective tax policies. Therefore this study seek to answer the following research questions:

- I. What is the effect of investment tax allowance on the return on capital employed of oil and gas firms in Nigeria?
- II. What is influence of tax exemptions on the return on capital employed of oil and gas firms in Nigeria?
- III. To what extent is the effect of tax credit on the return on capital employed of oil and gas firms in Nigeria?

2. Literature Review

2.1 Conceptual Review

2.1.1 Return on Capital Employed

Return on Capital Employed (ROCE) is a fundamental financial metric used to assess a firm's ability to generate profits from its total capital employed in the business. It provides insight into how efficiently a company is using its capital resources both equity and debt to create value for shareholders and improve overall financial performance. ROCE is particularly useful in evaluating capital-intensive industries such as oil and gas, where large investments in infrastructure, machinery, and long-term assets are critical to operations (Aliyu & Lawal, 2022). ROCE is a more comprehensive performance indicator than Return on Assets (ROA) or Return on

Equity (ROE) because it considers both the cost of equity and debt financing. It reflects the effectiveness of management in deploying the capital at its disposal to generate operating profits, making it an essential metric for investors and analysts in assessing a company's financial health and long-term sustainability (Ugwunta & Chukwu, 2023).

2.1. 2 Investment Tax Allowance (ITA)

Investment Tax Allowance refers to a tax relief granted to companies that invest in qualifying capital expenditures, such as plant, machinery, infrastructure, and technology. It allows a portion of the capital investment to be deducted from the company's taxable income, thereby reducing its tax liability (FIRS, 2022). This incentive is commonly applied in sectors that require significant capital investment and long gestation periods, such as oil and gas, manufacturing, and infrastructure development (World Bank, 2023). In Nigeria, the ITA is provided under the Industrial Development (Income Tax Relief) Act and the Petroleum Industry Act (PIA), where eligible firms receive allowances based on a percentage of their capital investment in qualifying assets (Nigerian Investment Promotion Commission [NIPC], 2023). The aim is to encourage companies to expand capacity, modernize equipment, and invest in technology. According to Afolayan and Ogundipe (2023), investment tax allowances can significantly improve cash flow and enhance Return on Capital Employed (ROCE), especially in asset-intensive industries.

2.1.3 Tax Credit

A Tax Credit is a direct reduction in the actual tax payable by a company, rather than a deduction from taxable income. This means that a tax credit reduces a firm's tax liability on a one-to-one basis, making it a more powerful tool for improving financial performance than mere deductions (Aliyu & Lawal, 2022). Tax credits may be granted for specific activities such as research and development, local content development, infrastructure investment, or environmental compliance. In the context of Nigeria's oil and gas sector, tax credits

are used to incentivize upstream investments, encourage domestic refining, and support joint venture operations. Under the Petroleum Industry Act (PIA), upstream oil companies may claim tax credits for qualifying capital expenditures in frontier basins or for rehabilitating critical assets (KPMG Nigeria, 2023). These credits enhance internal capital retention and improve key financial metrics such as ROCE, especially when firms can reinvest tax savings into productive ventures.

2.1.4 Tax Exemption

Tax Exemption refers to a fiscal relief where certain incomes, transactions, or entities are legally excluded from taxation. This may apply to profits, import duties, dividends, or specific business operations. In Nigeria, tax exemptions are granted to stimulate investment in priority sectors, encourage the establishment of pioneer industries, or promote activities deemed essential for economic development (FIRS, 2023). For oil and gas companies, exemptions can take the form of waivers on Value-Added Tax (VAT) on imported equipment, exemption from Withholding Tax on dividends, or relief from certain state levies. The Pioneer Status Incentive (PSI), administered by the Nigerian Investment Promotion Commission (NIPC), allows qualifying firms to enjoy tax holidays of up to five years, providing a powerful incentive for capital accumulation and business expansion (NIPC, 2023).

2.2 Theoretical framework

This study is anchored on two interrelated theories: the Incentive Theory of Taxation and the Resource-Based View (RBV) of the Firm. These theories offer a solid foundation for understanding the relationship between tax incentives and firm performance, particularly Return on Capital Employed (ROCE), in the Nigerian oil and gas sector. The Incentive Theory of Taxation posits that tax policy instruments, such as investment allowances, tax credits, and exemptions, are designed to influence corporate behavior by reducing the effective tax burden on firms. This reduction is intended to stimulate capital investment, improve liquidity, and enhance operational efficiency (Zwick & Mahon, 2017). In this regard, the

theory emphasizes that fiscal incentives serve as external stimuli that can improve financial performance indicators such as ROCE, especially in capital-intensive industries where firms require large outlays for exploration, equipment, and infrastructure (Liu & Mao, 2019).

2.3. Empirical Review

Bada Abdullahi et al. (2018) conducted research on how capital structure affects the return on capital used by Nigerian construction companies. The annual reports and accounts of the selected companies provided the study's data. Stata 12.0 was utilized, along with panel data analysis, pooled regression, fixed-effect, and random-effect estimation techniques. The study concluded that the sample Nigerian construction companies' return on capital was negatively impacted by their capital structure. According to the report, managers of construction enterprises should exercise caution when using debt as a source of funding; instead, they should attempt to fund their operations using retained earnings and revenue debt for extreme circumstances.

Martha-Wangui and Kanyanjua (2020) assessed the effect of tax incentives on FDI in the oil and gas sector in Kenya. The study focused on four types of tax incentives: capital deductions, income tax incentives, VAT incentives, and import duty incentives. The results indicate that all these incentives have a positive and significant effect on FDI inflows to the oil and gas sector. Capital deductions and import duty incentives, in particular, are found to have the strongest impact on attracting foreign investment. This study emphasizes that tax incentives tailored to specific investment needs, such as deductions for capital expenditures and exemptions from VAT on critical imports, can significantly enhance the attractiveness of the oil and gas sector to foreign investors. This insight is particularly relevant to Nigeria, where creating a conducive tax environment through such incentives could boost FDI and accelerate the sector's development.

Sani and Yakubu (2020) used ordinary least squares (OLS) regression analysis to assess the relationship between tax incentives and ROCE in Nigeria's oil and gas sector. The study covered listed oil

and gas firms from 2010 to 2019. The analysis found that capital allowances and tax holidays led to higher ROCE, as these incentives reduced tax liabilities and allowed firms to allocate more capital toward productive uses, boosting profitability. Aminu and Elamah (2021) used a panel data regression analysis on a sample of 25 manufacturing enterprises from 2015 to 2020 to examine the impact of tax incentives on Nigerian manufacturing firms. Businesses listed on the Nigerian stock exchange were included in the study's scope. Their findings revealed that tax holidays and investment tax allowances positively impacted ROCE, as firms reinvested tax savings into operations and capital infrastructure, improving capital efficiency.

Kariuki and Muturi (2021) analyzed the relationship between tax incentives and ROCE in the manufacturing sector listed on the Nairobi Securities Exchange using fixed-effects panel regression analysis over the period from 2014 to 2019. Their findings confirmed that capital allowances and tax credits contributed to an increase in ROCE, as firms were able to use their employed capital more efficiently, generating higher returns. Olawale and Adeoye (2022) conducted a cross-sectional analysis of oil sector companies listed in Nigeria, spanning from 2015 to 2020. Their study focused on the effect of tax credits and capital allowances on ROCE, and their findings indicated that firms benefiting from these incentives experienced a significant increase in ROCE due to improved capital utilization and operational efficiency.

Okonkwo and Ikechukwu (2023) applied a generalized method of moments (GMM) approach to study the effects of tax incentives on the ROCE of oil and gas firms in Sub-Saharan Africa from 2013 to 2021. The study covered both multinational and indigenous oil firms, and the findings indicated that firms with access to tax incentives exhibited better capital efficiency, leading to higher ROCE due to cost savings and enhanced operational productivity. Etim Osim Etim et al. (2024) analyzed Nigeria corporation profitability and tax incentives. It sought to ascertain how tax holidays, investment allowances, and tax credits affected Nigerian industrial manufacturing companies' net profit margins. The findings showed that tax holidays had a favorable impact on the net profit margin, tax credits had some

positive association with the net profit margin, and investment allowance had no statistically significant effect on the net profit margin. Hence, it was concluded that the findings highlight the varying impacts of different tax incentives on firm profitability, with tax holidays showing the most significant influence, followed by a moderate effect from tax credits, and no impact from investment allowance. The researchers recommended that manufacturing firms should participate in policy dialogues and advocacy efforts to influence the design and implementation of tax incentives.

3. Methodology

3.1 Research Design

This study adopted an ex-post facto research design to examine the effect of tax incentives on the return on capital employed (ROCE) of oil and gas firms in Nigeria. The design is suitable for this research since it involves the analysis of already existing secondary data without manipulating any variables. The study focused on tax incentives as the independent variable, proxied by investment tax allowance, tax exemption, and tax credit, while financial performance was measured using Return on Capital Employed (ROCE). Firm size and firm age were included as control variables.

3.2 Data and Sources

The data used for this study were obtained from secondary sources, specifically the annual published financial statements of listed oil and gas firms and the publications of the Nigerian Exchange Group (NGX). The data covers a 20-year period from 2005 to 2024. These sources provide reliable and verifiable information required for panel data analysis.

3.3 Population Size

The population of this study comprises all nine (9) oil and gas firms listed on the Nigerian Exchange Group (NGX) as of 2024. These firms operate under the same regulatory and fiscal environment and are relevant to the study of tax incentives in the Nigerian oil and gas sector.

3.4 Sample Size

Given the manageable size of the population, the study employed a census sampling technique, thereby selecting all nine (9) listed oil and gas firms on the NGX. This approach ensures comprehensive coverage and improves the generalizability of the findings within the sector.

3.5 Model Specification

The study employed a panel data regression model, using either the Fixed Effects Model (FE) or other suitable estimation techniques based on diagnostic tests. The panel model allows for the control of unobservable heterogeneity and increases the accuracy and efficiency of the estimates.

The functional form of the model is specified as:

$$ROCE_t = \beta_0 + \beta_1 ITA_t + \beta_2 TE_t + \beta_3 TC_t + FMZ_t + FMA_t + u_t \quad \text{-----(1)}$$

Where:

ROCE= Return on Capital Employed

ITA= Investment Tax Allowance

TE= Tax Exemption

TC= Tax Credit

FMZ= Firm Size

FMA= Firm Age

μ = error term used to account for other factors that may affect the model but were not captured

it =identify for each of the oil and gas firm and different years in the sampled.

3.6 Method of Data Analysis

The study employed panel regression techniques, including diagnostic tests such as the Hausman test, to determine the most appropriate model for estimation. The Fixed Effects Model (FEM) was adopted based on its ability to control for unobserved heterogeneity across

firms and enhance the reliability of parameter estimates. The method provided more accurate and efficient results due to the increased degrees of freedom and reduced multicollinearity associated with panel data. All data analyses were carried out using EViews statistical software.

4. Results and Discussion

4.1 Descriptive Statistics

Table 1: Descriptive Statistics

	ROCE	TCR	TEX	ITA	FSZ	FAG
MEAN	-0.321873	214.7561	24.94556	198.4178	12.36562	43.83333
MEDIAN	2.056500	78.11789	25.24980	93.48010	12.41718	43.00000
MAXIMUM	15.02350	5282.420	92.03840	2561.330	13.17529	67.00000
MINIMUM	-96.93780	1.895000	2.303300	6.730300	11.66616	20.00000
STD. DEV.	13.93514	774.9895	14.25369	420.5071	0.282782	12.91393
SKEWNESS	-4.694111	6.316428	1.241640	4.571516	0.188538	-0.089888
KURTOSIS	29.65330	41.55090	7.185130	24.28655	3.740409	1.971725
JARQUE-BERA	2994.515	6171.604	88.80748	2012.671	2.588972	4.086257
PROBABILITY	0.000000	0.000000	0.000000	0.000000	0.274039	0.129623
SUM	-28.96860	19328.05	2245.100	17857.61	1112.906	3945.000
SUM SQ. DEV.	17282.73	53454172	18081.93	15737532	7.116960	14842.50
OBSERVATIONS	90	90	90	90	90	90

Source: Author, 2025. **NOTE:** ROCE is Return on Capital Employed, ITA is Investment Tax Allowance, TE is Tax Exemption, TC is Tax Credit, FSZ is Firm Size, FAG is Firm Age.

Table 1 presents the descriptive statistics for the variables used in analyzing the relationship between tax incentives and Return on Capital Employed (ROCE) among listed oil and gas firms in Nigeria. The mean ROCE is -0.32%, indicating that, on average, firms experienced negative returns on capital employed, suggesting inefficiencies or underperformance. The high standard deviation (13.94%) and extreme minimum value (-96.94%) point to substantial variability and the presence of outliers. The skewness (-4.69) and kurtosis (29.65) confirm a non-normal distribution, requiring robust regression methods. Among the tax incentive variables, Tax Credit (TCR) and Investment Tax Allowance (ITA) exhibit wide variations (mean = 214.76;

SD = 774.99 and mean = 198.42; SD = 420.51 respectively), indicating inconsistent usage across firms. Their high skewness (6.32 and 4.57) suggests that a few firms accessed significantly higher incentives, while most had relatively lower access. Tax Exemption (TEX) has a mean of 24.95 and a more moderate distribution (skewness = 1.24), supporting its suitability for regression analysis. The control variables, Firm Size (FSZ) and Firm Age (FAG), show near-normal distribution with acceptable skewness (0.19 and -0.09 respectively) and non-significant Jarque-Bera test values ($p = 0.27$ and 0.13), making them statistically reliable for controlling firm-level effects. Overall, the variation and

distributional characteristics support the dataset's fitness for inferential analysis.

4.2. Correlation Test

Table 2: Correlation Matrix

	ROCE	TCR	TEX	ITA	FSZ	FAG
ROCE	1					
TCR	0.044087	1				
TEX	0.117806	-0.260838	1			
ITA	-0.026654	0.208661	-0.361438	1		
FSZ	-0.030557	0.031641	-0.061163	0.052503	1	
FAG	0.418382	-0.223673	0.250112	-0.350547	-0.106563	1

Source: Author, 2025: NOTE: ROCE is Return on Capital Employed, ITA is Investment Tax Allowance, TE is Tax Exemption, TC is Tax Credit, FSZ is Firm Size, FAG is Firm Age

Table 2 shows the correlation results among the study variables. ROCE has a moderate positive relationship with Firm Age ($r = 0.418$), suggesting that older firms are more likely to utilize capital efficiently. Its correlations with Tax Credit ($r = 0.044$), Tax Exemption ($r = 0.118$), and Investment Tax Allowance ($r = -0.027$) are weak, indicating minimal direct associations. Tax incentive variables show weak interrelationships. For instance, Tax Credit and Tax Exemption are negatively correlated ($r = -0.261$), while Tax Exemption and ITA

also show a negative correlation ($r = -0.361$), implying firms may access different types of incentives selectively. Firm Size (FSZ) shows near-zero correlations with all variables, suggesting it does not significantly influence tax incentive access or ROCE. Overall, the weak correlations imply no multicollinearity concern, making the data suitable for regression analysis.

4.3. Estimated Model on Tax Incentives on the Return on Capital Employed

Table 3: Estimation Model on Tax Incentives on the Return on Capital Employed

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ITA	0.027020	0.009614	2.810499	0.0063
TEX	0.066671	0.059816	1.114603	0.2686
TCR	0.003942	0.001666	2.366569	0.0205
FSZ	-1.161259	2.169710	-0.535214	0.5941
FAG	0.233268	0.057143	4.082156	0.0001
C	2.176759	27.71882	0.078530	0.9376
R-squared	0.406476			
Adjusted R-squared	0.304952			
S.E. of regression	11.61766			
Sum squared resid	10257.72			
Log likelihood	-340.8234			
F-statistic	4.003744			
Prob(F-statistic)	0.000057			

Source: Author, 2025: NOTE: ROCE is Return on Capital Employed, ITA is Investment Tax Allowance, TE is Tax Exemption, TC is Tax Credit, FMS is Firm Size, FAG is Firm Age

Table 3 presents the model on tax incentives and on Return on Capital Employed (ROCE) using a Fixed Effects Model. The dependent variable is ROCE, the independent variables include Investment Tax

Allowance (ITA), Tax Exemption (TEX) and Tax Credit (TCR) while the control variables are Firm Size (FSZ), and Firm Age (FAG). The results show that Investment Tax Allowance (ITA) has a positive and significant

effect on ROCE, with a coefficient of 0.027020, a t-statistic of 2.8105, and a p-value of 0.0063, indicating that ITA significantly improves ROCE at a 5% significance level. Similarly, Tax Credit (TCR) has a positive and significant effect on ROCE, with a coefficient of 0.003942, a t-statistic of 2.3666, and a p-value of 0.0205, indicating that tax credits also enhance ROCE. However, Tax Exemption (TEX) has a positive but insignificant effect, with a coefficient of 0.066671, a t-statistic of 1.1146, and a p-value of 0.2686, indicating that tax exemptions do not have a statistically significant effect on ROCE. Firm Age (FAG) has a significant positive effect on ROCE, with a coefficient of 0.233268, a t-statistic of 4.0822, and a p-value of 0.0001, implying that older firms tend to have higher ROCE due to experience, stability, and better financial management. In contrast, Firm Size (FSZ) has a negative but insignificant effect, with a coefficient of -1.161259, a t-statistic of -0.5352, and a p-value of 0.5941, indicating that firm size does not significantly impact ROCE. The constant term ($C = 2.176759$) is not statistically significant, indicating that other unobserved factors might influence ROCE. The model's adjusted R-squared value (0.3049) indicates that 30.49% of the variations in ROCE are explained by the independent variables, showing moderate explanatory power. The F-statistic (4.0037) and its p-value (0.000057) confirm that the overall model is statistically significant, meaning that at least one of the independent variables has a significant effect on ROCE. In conclusion, the findings suggest that Investment Tax Allowance (ITA), Tax Credit (TCR), and Firm Age (FAG) have significant positive effects on ROCE, while Tax Exemption (TEX) and Firm Size (FSZ) do not have statistically significant impacts. The overall model is statistically significant, indicating that tax incentives have significant effect on Return on Capital Employed (ROCE) of listed oil and gas companies in Nigeria. The results from the fixed effects model reveal that the adjusted R-squared value is 0.3049, indicating that approximately 30.49% of the variations in ROCE are explained by the independent variables (Investment Tax Allowance, Tax Credit, and Tax Exemption), alongside the control variables. This shows a moderate level of explanatory power. Additionally, the F-statistic of 4.0037 with a p-value of 0.000057 confirms the

overall statistical significance of the model, suggesting that the tax incentives significantly influences ROCE.

4.4 Testing of the Hypothesis

Ho1: From Table 3, Investment Tax Allowance (ITA) has a t-statistic = 2.81 and p-value = 0.0063. This indicates that ITA has a statistically significant positive effect on Return on Capital Employed (ROCE) at the 1% significance level. The coefficient (0.0270) implies that a one-unit increase in ITA increases ROCE by 2.7 percentage points, supporting the effectiveness of investment incentives in enhancing firm-level capital efficiency.

Ho2: The result for Tax Exemption (TEX) shows a t-statistic = 1.11 and p-value = 0.2686. This means that TEX does not have a statistically significant effect on ROCE. Although the coefficient is positive (0.0667), the relationship is not statistically distinguishable from zero, indicating that exemptions may not directly influence capital performance among listed oil and gas firms.

Ho3: From Table 3, Tax Credit (TCR) has a t-statistic = 2.37 and p-value = 0.0205. This shows that TCR has a statistically significant positive effect on ROCE at the 5% level. The coefficient (0.0039) suggests that a one-unit increase in Tax Credit improves ROCE by 0.39 percentage points, indicating that tax credit schemes may enhance firms' capital utilization.

Findings from the result on the effect of tax incentives on Return on Capital Employed (ROCE) using a Fixed Effects Model. The results indicate that Investment Tax Allowance (ITA) and Tax Credit (TCR) have significant positive effects on ROCE, indicating that firms benefiting from these incentives experience improved capital efficiency.

4.5 Discussion of Findings

Tax Exemption (TEX) has an insignificant effect, implying that exemptions alone do not necessarily enhance ROCE. Among firm-specific factors, Firm Age (FAG) has a strong positive impact on ROCE, highlighting the advantage of experience and stability, while Firm Size (FSZ) has an insignificant negative effect, indicating that size does not significantly

influence capital utilization. The findings on the effect of tax incentives on Return on Capital Employed (ROCE), interpreted through the lens of Contingency Theory, emphasize the importance of aligning organizational strategies with contextual variables to optimize performance. The significant positive effects of Investment Tax Allowance (ITA) and Tax Credit (TCR) on ROCE suggest that when firms adapt their financial structures to capitalize on these specific incentives, they can enhance their capital efficiency. These outcomes validate the core principle of Contingency Theory that performance improvements depend on how well a firm's internal characteristics and external opportunities, like tax incentives, are aligned. These findings also align with several previous studies on tax incentives and firm performance, particularly in the oil and gas and manufacturing sectors. For instance, Sani and Yakubu (2020) and Olawale and Adeoye (2022) found that capital allowances and tax holidays significantly increased ROCE in Nigeria's oil and gas sector, similar to this study's result on Investment Tax Allowance (ITA) and Tax Credit (TCR). Likewise, Kariuki and Muturi (2021) and Aminu and Elamah (2021) reported that tax incentives, particularly investment tax allowances and tax credits, enhanced ROCE in manufacturing firms by enabling better capital utilization and reinvestment into productive assets. These findings are consistent with the positive and significant effects observed for ITA and TCR in this study, reinforcing the argument that targeted tax incentives help firms optimize capital efficiency.

Furthermore, the significant role of Firm Age (FAG) in improving ROCE is supported by Bada Abdullahi et al. (2018), who highlighted that firms with more experience tend to perform better in capital utilization, avoiding excessive debt financing that could negatively impact their returns. The study also aligns with Martha-Wangui and Kanyanjua (2020), who emphasized that well-structured tax incentives, including capital deductions, help improve capital efficiency in the oil and gas sector, attracting foreign investment and strengthening financial performance.

However, some studies present findings that are not entirely in line with this research. Etim Osim Etim et al. (2024) concluded that investment tax allowances had no significant effect on firm profitability, which

contradicts the positive effect of ITA found in this study. Similarly, Okonkwo and Ikechukwu (2023) found that tax incentives led to better capital efficiency in Sub-Saharan African oil and gas firms but suggested that multinational companies benefited more than indigenous firms, whereas this study does not distinguish between the two groups. Additionally, Olowo et al. (2000) emphasized the role of tax incentives in business expansion and advancement, while the current findings focus specifically on capital efficiency rather than broader business growth.

5. Conclusion and Recommendations

This study examined the influence of tax incentives on the financial performance of listed oil and gas companies in Nigeria. The findings reveal that tax incentives significantly affect capital efficiency in the sector. Specifically, Investment Tax Allowance (ITA) and Tax Credit (TCR) have statistically significant positive effects on ROCE, indicating that these incentives play a vital role in enhancing the productive use of capital among firms. However, Tax Exemption (TEX) does not show a significant effect on ROCE, suggesting that exemptions alone may not contribute meaningfully to improved capital performance. These results highlight the need for targeted and performance-linked tax incentives that support long-term capital efficiency in the oil and gas sector.

Based on the findings of this study, the following recommendations are made:

- I. The Nigerian government should maintain and strengthen the implementation of Investment Tax Allowance (ITA) policies, as the study shows that ITA significantly improves the return on capital employed among listed oil and gas firms. This will further encourage long-term capital investment and infrastructure development in the sector.
- II. Management of oil and gas companies should intensify efforts to access and apply Tax Credit (TCR) provisions, as the study confirms its significant positive impact on capital performance. Effective utilization of

tax credits can boost reinvestment and enhance productive capacity.

III. Since Tax Exemption (TEX) was not found to have a significant effect on ROCE, policymakers should review the structure and application of tax exemptions to ensure they are performance-based and aligned with

sector realities. Reforms may be needed to improve their relevance and effectiveness.

IV. Oil and gas firms should also evaluate the cost-benefit of seeking tax exemptions in combination with other incentives, as exemptions alone may not yield capital efficiency benefits but could complement broader fiscal strategies.

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