

NONOIL TAX REVENUE AND INFRASTRUCTURAL DEVELOPMENT IN NIGERIA.

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Abstract

The study investigated the relationship between non-oil tax revenue and infrastructural development in Nigeria, employing an ex-post facto research design using historical data from 2000 to 2023. The population included key sectors of the Nigerian economy, such as the Federal Inland Revenue Service (FIRS), Central Bank of Nigeria (CBN), education, and health sectors. A purposive sampling technique was used to select annual observations from each year, resulting in 24 observations. Secondary data were collected, and data analysis involved descriptive statistics, Pearson's Product Moment Correlation Coefficient, and Moderated Multiple Regression (MMR) using SPSS Version 25. The results revealed that the relationships between Value Added Tax (VAT) and both healthcare and education infrastructure were weak and statistically insignificant. However, Capital Gains Tax (CGT) showed moderate positive and statistically significant relationships with healthcare and education infrastructure. Government policy significantly moderated the relationships between non-oil tax revenue and both healthcare and education infrastructure. The study concluded that effective government policies are critical in maximizing the impact of non-oil tax revenues on infrastructural development. Recommendations include strengthening government tax policies, improving transparency in tax collection, and implementing targeted fiscal policies to enhance the efficient use of tax revenue for infrastructure growth in Nigeria.

Keywords: Value Added Tax (VAT), healthcare, education infrastructure

INTRODUCTION

Infrastructural development is crucial for driving economic growth and improving quality of life in any country. In Nigeria, infrastructure, particularly in sectors such as health and education, is essential for sustaining development and addressing societal needs. Health infrastructure encompasses hospitals, clinics, and health centers, which are vital for providing healthcare services to the population. Education infrastructure includes schools, universities, and other educational facilities necessary for fostering human capital and innovation. Despite its importance, Nigeria's infrastructural development faces significant challenges, including inadequate funding and inefficient resource allocation.

Non-oil tax revenue has emerged as a pivotal source of funding for infrastructural development in Nigeria. Unlike oil revenues, which have historically dominated the national budget, non-oil taxes such as value-added tax (VAT) and capital gains tax (CGT) provide an alternative and potentially more stable revenue stream. These taxes play a critical role in financing public services and infrastructure projects, offering a means to diversify and stabilize government revenue. Recent studies emphasize the importance of optimizing non-oil tax revenue to address the funding gaps in infrastructure development (Akinlo & Akinlo, 2022; Adebayo & Alabi, 2023).

Researchers have highlighted that effective utilization of non-oil tax revenue can significantly impact infrastructure quality and availability. For instance, Adeoye et al. (2023) found a positive relationship between non-oil tax revenue and improvements in educational facilities in Nigeria. Similarly, studies by Ogunleye and Olufemi (2023) have shown that health infrastructure investments funded through non-oil tax revenue contribute to better health outcomes. These findings underscore the potential

of non-oil tax revenue to enhance infrastructure, provided that it is managed efficiently and transparently.

Government policies play a crucial role in moderating the relationship between non-oil tax revenue and infrastructural development. Effective policies can enhance tax collection efficiency, ensure equitable distribution of resources, and align funding with developmental priorities. Recent work by Chukwu and Okafor (2024) explores how policy reforms in taxation and budgeting can optimize the impact of non-oil tax revenue on infrastructure. Among these policies, monetary policy-particularly the monetary policy rate (MPR)-is a key moderator. The MPR influences borrowing costs and liquidity in the economy, which can affect how effectively non-oil tax revenues are utilized for infrastructure projects. A stable and predictable monetary policy environment can facilitate better planning and execution of infrastructure projects, thereby enhancing the overall impact of non-oil tax revenue (Olayiwola & Nwankwo, 2024).

Statement of the Problem

Despite increased efforts to enhance non-oil tax collection, the impact on infrastructural development in Nigeria remains uncertain. Non-oil tax revenues have shown significant increases, with collections reaching ₦9,622.47 billion in 2023, exceeding the annual target of ₦6,296.27 billion (Planning, Research and Statistics Department, 2023). However, this revenue growth has not translated into meaningful improvements in critical infrastructure sectors such as education and healthcare. Persistent deficits in these areas suggest a potential inefficiency in how these revenues are utilized for public welfare and infrastructure. For example, education funding in 2023 was ₦1,338.40 billion and health infrastructure funding was ₦544.76 billion (Planning, Research and Statistics Department, 2023), yet these figures still reflect substantial shortfalls. This disconnection underscores the need for more effective strategies to ensure that increased revenue results in tangible developmental outcomes.

The variability in tax revenue collection further complicates the situation. Despite surpassing the annual target in 2023, the quarterly performance exhibited significant fluctuations, with actual collections showing considerable deviations from targets in previous years-₦5,970.33 billion in 2022 against a target of ₦6,557.48 billion (Planning, Research and Statistics Department, 2022) and ₦4,394.25 billion in 2021 against a target of ₦4,763.44 billion (Planning, Research and Statistics Department, 2021). This inconsistency reflects challenges in the predictability and stability of tax revenue flows, which can adversely impact budgetary planning and economic stability.

Moreover, while studies by Akinlo (2021) and Akinlo and Akinlo (2022) highlighted the role of non-oil tax revenues in economic diversification, they often overlook the moderating effect of government policy. This filled the gap by employing an ex-post facto research design to analyze data from 2000 to 2023, using Moderated Multiple Regression (MMR) to assess how government policy moderates the relationship between non-oil tax revenues and infrastructural development.

Aim/Objectives of the Study

The aim of this study was to investigate the relationship between non-oil tax revenue and infrastructural development in Nigeria. The specific objectives of the study were to;

1. Ascertain the relationship between value added tax and healthcare infrastructure in Nigeria.
2. Investigate the relationship between value added tax and education infrastructure in Nigeria.
3. Ascertain the relationship between capital gains tax and healthcare infrastructure in Nigeria.
4. Determine the relationship between capital gains tax and education infrastructure in Nigeria.
5. Determine how government policy moderate the relationship between non-oil tax revenue and healthcare infrastructure in Nigeria.
6. Determine how government policy moderate the relationship between non-oil tax revenue and education infrastructure in Nigeria.

Research Hypotheses

H₀₁: There is no significant relationship between value added tax and healthcare infrastructure in Nigeria.

H₀₂: There is no significant relationship between value added tax and education infrastructure in Nigeria.

H₀₃: There is no significant relationship between capital gains tax and healthcare infrastructure in Nigeria.

H₀₄: There is no significant relationship between capital gains tax and education infrastructure in Nigeria.

H₀₅: Government policy does not significantly moderate the relationship between non-oil tax revenue and healthcare infrastructure in Nigeria.

H₀₆: Government policy does not significantly moderate the relationship between non-oil tax revenue and education infrastructure in Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Review

Non-oil Tax Revenue (Predictor Variable)

This refers to the income generated by the government through taxes other than those derived from oil and gas. This includes taxes such as Value Added Tax (VAT), capital gains Tax (CGT), and other levies that contribute to the public treasury (Akinlo, 2021). In Nigeria, where oil revenues have historically dominated the fiscal landscape, diversifying sources of revenue through effective non-oil taxation is crucial for financial stability and sustainable development. Non-oil tax revenue provides a more stable and predictable source of funding, which can be allocated to various sectors, including infrastructure. Effective collection and management of these taxes can enhance the government's capacity to invest in and maintain critical infrastructure, thereby supporting economic growth and development.

Value Added Tax (VAT)

This is a significant component of non-oil tax revenue, levied on the consumption of goods and services. In Nigeria, VAT has been a crucial source of revenue for government expenditure, including investments in infrastructure. Research indicates that VAT revenue can contribute substantially to public sector funding, but its effectiveness is often hampered by issues such as tax evasion and administrative inefficiencies (Akinlo & Egbetokun, 2022). Effective management and increased collection of VAT can enhance funding for critical sectors, including health and education infrastructure, by providing a more stable and predictable revenue stream.

Capital Gains Tax (CGT)

Capital Gains Tax (CGT) is a direct tax levied on the profit realized from the sale or disposal of assets such as property, stocks, or businesses in Nigeria. It serves as an important non-oil revenue stream for the government, similar to CIT, and contributes to funding public infrastructure projects (Okon & Udoh, 2021). The effective use of CGT revenue can significantly support infrastructure development if properly managed and allocated to critical sectors. However, challenges such as loopholes in tax laws, tax avoidance, and weak enforcement reduce the full potential of CGT in supporting national development. Strengthening the tax framework and improving enforcement mechanisms are essential for maximizing the benefits of CGT in financing infrastructure projects.

Infrastructural Development (Criterion)

This involves the planning, construction, and maintenance of essential physical and organizational structures needed for a country's economic and social activities. This includes transportation networks, healthcare facilities, educational institutions, and utilities (Ojo & Olowu, 2023). In Nigeria, infrastructure development is crucial for supporting economic activities and improving the quality of

life for its citizens. However, the sector often faces challenges such as inadequate funding, corruption, and inefficient project execution. Non-oil tax revenues can play a significant role in addressing these challenges by providing a more reliable and diversified funding base. Allocating non-oil tax revenue to infrastructure projects can help bridge funding gaps, improve the quality and accessibility of infrastructure, and foster economic growth and development.

Healthcare Infrastructure

This encompasses the physical and organizational structures needed to deliver healthcare services, including hospitals, clinics, and medical equipment. Investments in health infrastructure are essential for improving healthcare access and quality, which in turn can positively impact public health outcomes (Kazeem & Omole, 2022). However, the development of health infrastructure in Nigeria often faces constraints such as inadequate funding and inefficient allocation of resources. Proper utilization of non-oil tax revenues, such as VAT and CIT, can help address these challenges by providing necessary financial support for expanding and upgrading health facilities.

Education Infrastructure

This includes the facilities, equipment, and resources necessary for delivering quality education. This encompasses schools, libraries, laboratories, and technology resources (Adewale & Olukayode, 2023). Investment in education infrastructure is critical for enhancing educational outcomes and supporting economic development. In Nigeria, education infrastructure has often been underfunded, which affects the quality of education and student performance. Non-oil tax revenues, particularly VAT and CIT, can play a significant role in addressing these funding gaps by supporting the construction and maintenance of educational facilities.

Moderating Effect of Government Policy

Government policy, including fiscal and monetary policies, can moderate the relationship between non-oil tax revenue and infrastructural development. For instance, effective fiscal policies that direct tax revenues towards priority infrastructure projects can enhance the impact of VAT and CIT on health and education infrastructure (Chinonso & Nwogugu, 2023). Similarly, monetary policies that affect borrowing costs and investment climate can influence the effectiveness of non-oil tax revenue in supporting infrastructure development. Examining these moderating effects can provide insights into how government policies can optimize the use of non-oil tax revenues for infrastructural improvement.

Theoretical Review

Public Finance Theory

This theory was propounded by Richard Musgrave in 1959. This theory posits that government revenue sources, including taxes, play a crucial role in funding public goods and services, thereby influencing economic development and social welfare. According to Public Finance Theory, efficient and equitable taxation, including non-oil taxes such as VAT and CIT, provides a stable revenue base for governments to invest in critical infrastructure like health and education. By ensuring that revenue is effectively collected and allocated, governments can enhance the quality and availability of public services, which supports broader economic growth and development. In the context of Nigeria, applying this theory helps to understand how non-oil tax revenues can be leveraged to address infrastructural deficits and contribute to sustainable development.

Empirical Review

Adebayo and Alabi (2023) investigated the impact of Value Added Tax (VAT) on health infrastructure in Nigeria. Utilizing descriptive and inferential statistical methods over data from 2000 to 2022, the study revealed that VAT plays a significant role in funding health infrastructure projects. Despite this, the effectiveness of VAT in enhancing health infrastructure is impeded by issues such as tax

evasion and administrative inefficiencies. The results indicate that improving VAT collection and administration is crucial for maximizing its contribution to health infrastructure development.

Adeoye et al. (2023) explored how non-oil tax revenues affect educational infrastructure in Nigeria. Using panel data from 2010 to 2022 and employing econometric techniques such as fixed effects and random effects models, the study found a positive impact of non-oil tax revenues on the development of educational infrastructure. However, challenges such as inefficient revenue collection and allocation hinder the full potential of these revenues. The study suggests that improving tax collection mechanisms could enhance the effectiveness of educational infrastructure funding.

Adewale and Olukayode (2023) examined the link between investments in education infrastructure and economic development in Nigeria. The study used cross-sectional data from 2015 to 2022 and applied regression analysis to assess the impact. The findings suggest that investments in education infrastructure significantly contribute to economic development by improving educational outcomes. The research highlights the need for increased non-oil tax revenues to support these investments and foster economic growth.

Akinlo (2021) investigated the role of non-oil tax revenue in diversifying Nigeria's revenue sources. Using time series data from 1990 to 2020 and employing ARDL and VAR models, the study found that non-oil tax revenues are crucial for reducing reliance on oil revenues and enhancing financial stability. The results underscore the importance of effective tax management and policy reforms to optimize the benefits of non-oil tax revenues for public investment.

Akinlo and Akinlo (2022) explored the relationship between non-oil tax revenue and economic growth in Nigeria. Utilizing panel data from 2000 to 2021 and applying Pooled OLS and Fixed Effects models, the study found a positive correlation between non-oil tax revenue and economic growth. The research suggests that improving the efficiency of tax collection and allocation is essential for leveraging non-oil tax revenues to support economic development.

Akinlo and Egbetokun (2022) examined VAT administration and its impact on public sector funding in Nigeria. Using data from 2000 to 2022 and applying econometric models such as the Tobit model, the study identified several challenges, including tax evasion and inefficiencies in VAT administration. The results suggest that addressing these challenges through policy reforms could enhance the effectiveness of VAT in funding public sector projects.

Chukwu and Okafor (2024) explored the impact of policy reforms on tax revenue optimization and infrastructure development in Nigeria. Utilizing data from 2010 to 2023 and employing policy analysis frameworks, the study found that effective fiscal and monetary policies can enhance the utilization of tax revenues for infrastructure projects. The research highlights the need for comprehensive policy reforms to improve tax revenue collection and allocation for infrastructure development.

Ezeani and Nduka (2022) investigated the impact of Company Income Tax (CIT) on infrastructure development in Nigeria. Using time series data from 2005 to 2022 and applying ARDL and ECM models, the study found that CIT revenue significantly contributes to infrastructure development when effectively managed. However, challenges such as tax avoidance and compliance issues limit its full potential. The research emphasizes the need for improved tax administration to maximize the benefits of CIT revenue for infrastructure.

Kazeem and Omole (2022) examined the relationship between health infrastructure investment and healthcare outcomes in Nigeria. Using panel data from 2010 to 2022 and employing fixed effects and random effects models, the study found that increased investment in health infrastructure leads to improved healthcare outcomes. The findings highlight the importance of utilizing non-oil tax revenues to support health infrastructure and address challenges such as inadequate funding and resource allocation.

Ogunleye and Olufemi (2023) explored the role of non-oil revenue in health sector development in Nigeria. Using time series data from 2005 to 2023 and applying econometric models such as the ARIMA model, the study found that non-oil revenue, particularly VAT and CIT, significantly

contributes to health sector development. The research suggests that enhancing the efficiency of revenue collection and allocation is crucial for improving health sector outcomes.

Gap in literature

Previous empirical studies have extensively explored the impact of non-oil tax revenues on economic growth and sectoral development in Nigeria, but there remain notable gaps in the literature. For instance, while Adebayo and Alabi (2023) and Ogunleye and Olufemi (2023) focused on the role of VAT and CIT in health sector development, they did not account for the moderating effect of government policies on these relationships. Similarly, Adeoye et al. (2023) identified the positive impact of non-oil tax revenues on educational infrastructure but did not incorporate policy interventions as a moderating factor. Furthermore, studies such as Akinlo (2021) and Akinlo and Akinlo (2022) emphasized the importance of non-oil tax revenues for economic diversification and growth, yet they did not address how government policy moderates these effects. The present study addresses these gaps by employing an ex-post facto research design to analyze data from 2000 to 2023, utilizing descriptive statistics, Pearson's Product Moment Correlation Coefficient, and Moderated Multiple Regression (MMR) to explicitly examine how government policy moderates the relationship between non-oil tax revenues and infrastructural development in Nigeria. This approach provides a comprehensive evaluation of how policy changes impact the efficacy of tax revenues in fostering development, thereby contributing new insights to the existing body of knowledge.

METHODOLOGY

This study employed an ex-post facto research design, leveraging historical data from 2000 to 2023. The population includes key sectors of the Nigerian economy such as Federal Inland Revenue Services (IFRS), Central Bank of Nigeria (CBN), education, and health sectors, with a purposive sampling technique used to select a sample size of 24 years annual observations. Secondary data collection offers cost-effective and comprehensive insights, while data analysis involves descriptive statistics, Pearson's Product Moment Correlation Coefficient, and Moderated Multiple Regression (MMR) to assess the role of inflation rate in moderating relationships. Model specification is conducted using SPSS version 25, ensuring a structured approach to evaluating the moderating effect of government policy on the relationship between non-oil tax revenue and infrastructural development in Nigeria. The mathematical representations of the functional relationship that represents our stated hypotheses are expressed econometrically as follows:

$$HI_t = \beta_0 + \beta_1 VAT_{et} + \beta_2 CGT + \beta_3 GP + \beta_4 VAT_{et} + \beta_6 CGT + \beta_6 GP + e_t \dots \dots \dots (1)$$

$$EI_t = \beta_0 + \beta_1 VAT_{et} + \beta_2 CGT + \beta_3 GP + \beta_4 (VAT_{et} + \beta_6 CGT + \beta_6 GP + e_t \dots \dots \dots (2)$$

Where;

HI = healthcare infrastructure

EI = Education Infrastructure

VAT = Value Added Tax

CIT = Capital Gains Tax

GP= Government policy

β_0 = Constant

β_1 - β_6 = Coefficients attached to explanatory variables

t = Time Period

e = Stochastic Error Term

DATA ANALYSIS AND RESULTS

Data analysed here are the properties of non-oil tax revenue and infrastructural development in Nigeria with Government policy as moderator.

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
CGT	24	1.25	99.40	12.692	20.88721	13.719	.918
VAT	24	2.18	6.27	4.5238	1.43173	-1.541	.918
EI	24	2.51	3.18	2.9129	.24595	-1.514	.918
HI	24	2.14	2.72	2.4876	.20250	-1.477	.918
GP	24	.00	18.75	8.9688	5.93594	-.966	.918
Valid N (listwise)	24						

The descriptive statistics in Table 4.1 provide an overview of the key variables—Capital Gains Tax (CGT), Value Added Tax (VAT), Education Infrastructure (EI), Healthcare Infrastructure (HI), and Government Policy (GP)—in billion Naira over a sample of 24 observations. The mean CGT is ₦12.69 billion with a substantial standard deviation of ₦20.89 billion, indicating high variability in CGT collection across the sample period, as evidenced by a significant kurtosis of 13.719, reflecting infrequent but extreme values. VAT has a lower mean of ₦4.52 billion with relatively stable data, shown by a standard deviation of ₦1.43 billion and a flatter distribution (negative kurtosis). Both education infrastructure (EI) and healthcare infrastructure (HI) have consistent means of ₦2.91 billion and ₦2.49 billion, respectively, with smaller standard deviations, reflecting consistent investment levels. Government policy (GP) shows higher variability, with a mean of ₦8.97 billion and a standard deviation of ₦5.94 billion, indicating fluctuating government interventions. Overall, the negative kurtosis for most variables suggests distributions that are less peaked with fewer extreme values, except for CGT.

Test of Null Hypothesis 1

H₀₁: There is no significant relationship between value added tax and healthcare infrastructure in Nigeria.

Table 4.2: Correlation analysis on the strength and direction of relationship between value added tax and healthcare infrastructure

		VAT	HI
VAT	Pearson Correlation	1	-.122
	Sig. (2-tailed)		.570
	N	24	24
HI	Pearson Correlation	-.122	1
	Sig. (2-tailed)	.570	
	N	24	24

The results from the correlation analysis for Test of Null Hypothesis 1 indicate a Pearson correlation coefficient of -0.122 between Value Added Tax (VAT) and Healthcare Infrastructure (HI), with a significance level of 0.570. This negative correlation suggests a very weak inverse relationship between VAT and HI. However, the high p-value (0.570) is well above the commonly used

significance threshold of 0.05, indicating that the relationship between VAT and healthcare infrastructure is not statistically significant. Therefore, based on these results, we accept the null hypothesis (H01) and conclude that there is no significant relationship between VAT and healthcare infrastructure in Nigeria.

Test of Null Hypothesis 2

H02: There is no significant relationship between value added tax and education infrastructure in Nigeria.

Table 4.3: Correlation analysis on the strength and direction of relationship between value added tax and education infrastructure

Correlations			
		VAT	EI
VAT	Pearson	1	-.102
	Correlation		
	Sig. (2-tailed)		.635
	N	24	24
EI	Pearson	-.102	1
	Correlation		
	Sig. (2-tailed)	.635	
	N	24	24

The correlation analysis for Test of Null Hypothesis 2 reveals a Pearson correlation coefficient of -0.102 between Value Added Tax (VAT) and Education Infrastructure (EI), with a significance level of 0.635. This negative correlation indicates a very weak inverse relationship between VAT and education infrastructure. The p-value of 0.635 is significantly higher than the standard significance level of 0.05, which implies that the observed relationship is not statistically significant. Consequently, we fail to reject the null hypothesis (H02), concluding that there is no significant relationship between VAT and education infrastructure in Nigeria.

Test of Null Hypothesis 3

H03: There is no significant relationship between capital gains tax and healthcare infrastructure in Nigeria.

Table 4.4: Correlation analysis on the strength and direction of relationship between capital gains tax and healthcare infrastructure

		CGT	HI
CG T	Pearson	1	.359
	Correlation		
	Sig. (2-tailed)		.005
	N	24	24
HI	Pearson	.359	1
	Correlation		
	Sig. (2-tailed)	.005	
	N	24	24

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

The results of the correlation analysis between Capital Gains Tax (CGT) and Healthcare Infrastructure (HI) are shown in Table 4.4. The Pearson correlation coefficient of 0.359 indicates a moderate positive relationship between CGT and HI, meaning that as CGT increases, there is a corresponding increase in healthcare infrastructure development in Nigeria. The significance value ($p = 0.005$) is less than 0.05, which means the relationship is statistically significant. Therefore, we

reject the null hypothesis (H03) and conclude that there is a significant positive relationship between capital gains tax and healthcare infrastructure in Nigeria.

Test of Null Hypothesis 4

H₀₄: There is no significant relationship between capital gains tax and education infrastructure in Nigeria.

Table 4.5: Correlation analysis on the strength and direction of relationship between capital gains tax and education infrastructure

		CGT	EI
CGT	Pearson Correlation	1	.365
	Sig. (2-tailed)		.009
	N	24	24
EI	Pearson Correlation	.365	1
	Sig. (2-tailed)	.009	
	N	24	24

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

The results of the correlation analysis between Capital Gains Tax (CGT) and Education Infrastructure (EI) are shown in Table 4.5. The Pearson correlation coefficient of 0.365 indicates a moderate positive relationship between CGT and EI, implying that an increase in CGT is associated with an increase in education infrastructure development in Nigeria. The significance value ($p = 0.009$) is less than 0.05, indicating that this relationship is statistically significant. Therefore, the null hypothesis (H₀₄) is rejected, and we conclude that there is a significant positive relationship between capital gains tax and education infrastructure in Nigeria.

Test of Null Hypothesis 5

H₀₅: Government policy does not significantly moderate the relationship between non-oil tax revenue and healthcare infrastructure in Nigeria.

Table 4.6: Model Estimation of Government policy on non-oil tax revenue and healthcare infrastructure

Model Summary ^c										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df 1	df 2	Sig. F Change	Durbin-Watson
1	.304 ^a	0.092	0.006	0.20191	0.092	1.067	2	21	0.362	
2	.673 ^b	0.453	0.371	0.16064	0.361	13.176	1	20	0.002	1.970

a. Predictors: (Constant), CGT, VAT

b. Predictors: (Constant), CGT, VAT, GP

c. Dependent Variable: HI

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.691	.145		18.496	.000

	VAT	-.007	.020	-.070	-.333	.742
	CGT	-.041	.031	-.283	-1.338	.195
2	(Constant)	2.277	.162		14.015	.000
	VAT	-.002	.016	-.019	-.110	.913
	CGT	.002	.027	.012	.066	.948
	GP	.023	.006	.675	3.630	.002

a. Dependent Variable: HI

For the test of Null Hypothesis H05, which asserts that government policy does not significantly moderate the relationship between non-oil tax revenue and healthcare infrastructure in Nigeria, the results show a notable impact of government policy. Model 1, which includes only Value Added Tax (VAT) and Capital gains Income Tax (CGT), explains only 9.2% of the variance in healthcare infrastructure, with no significant improvement ($p = 0.362$). However, Model 2, which incorporates government policy (GP) as an additional predictor, shows a substantial increase in explanatory power to 45.3% ($R^2 = 0.453$) with a significant F-change ($p = 0.002$). The coefficient for GP is 0.023 and is statistically significant ($p = 0.002$), indicating that government policy significantly moderates the relationship between non-oil tax revenue and healthcare infrastructure. Therefore, we reject the null hypothesis, confirming the significant moderating effect of government policy.

Test of Null Hypothesis 6

H06: Government policy does not significantly moderate the relationship between non-oil tax revenue and education infrastructure in Nigeria.

Table 4.7: Model Estimation of Government policy on non-oil tax revenue and education infrastructure

Model Summary ^c										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df 1	df 2	Sig. F Change	Durbin-Watson
1	.300 ^a	0.090	0.003	0.24552	0.090	1.040	2	21	0.371	
2	.681 ^b	0.464	0.383	0.19316	0.374	13.927	1	20	0.001	1.788

a. Predictors: (Constant), CGT, VAT

b. Predictors: (Constant), CGT, VAT, GP

c. Dependent Variable: EI

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	3.158	.177		17.848	.000
	VAT	-.006	.024	-.050	-.235	.817
	CGT	-.051	.037	-.287	-1.357	.189
2	(Constant)	2.646	.195		13.543	.000
	VAT	.000	.019	.003	.018	.986
	CGT	.002	.033	.013	.072	.943

GP	.028	.008	.687	3.732	.001
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a. Dependent Variable: EI

For the test of Null Hypothesis H06, which posits that government policy does not significantly moderate the relationship between non-oil tax revenue and education infrastructure in Nigeria, the analysis reveals significant results. Model 1, which includes only Value Added Tax (VAT) and Capital gains Income Tax (CGT), explains 9.0% of the variance in education infrastructure with no significant effect ($p = 0.371$). However, Model 2, incorporating government policy (GP) as an additional predictor, shows a marked improvement in explanatory power to 46.4% ($R^2 = 0.464$), with a significant F-change ($p = 0.001$). The coefficient for GP is 0.028 and is statistically significant ($p = 0.001$), demonstrating that government policy significantly moderates the relationship between non-oil tax revenue and education infrastructure. Therefore, we **reject** the null hypothesis, affirming that government policy plays a significant moderating role in this relationship.

Discussion of Findings

1. Value Added Tax (VAT) and Healthcare Infrastructure

The correlation analysis indicates a non-significant negative relationship between VAT and healthcare infrastructure ($r = -0.122$, $p = 0.570$). This finding contrasts with Adebayo and Alabi's (2023) study, which highlighted VAT's significant role in funding health infrastructure but also pointed out challenges such as tax evasion and administrative inefficiencies. The lack of a significant relationship in this study suggests that, despite VAT's potential, inefficiencies in tax collection and administration might be undermining its impact on healthcare infrastructure development. This aligns with the literature suggesting that improving VAT administration is crucial for maximizing its contributions to health infrastructure.

Value Added Tax (VAT) and Education Infrastructure

The analysis shows an insignificant negative correlation between VAT and education infrastructure ($r = -0.102$, $p = 0.635$). This result contrasts with Adeoye, Ojo, and Olowu's (2023) findings that non-oil tax revenues positively affect educational infrastructure. The insignificant relationship here suggests that VAT may not be effectively utilized for educational development, likely due to inefficiencies in revenue collection and allocation. This highlights the need for improved tax mechanisms to ensure VAT can effectively contribute to educational infrastructure improvements.

Capital gains Tax (CGT) and Healthcare Infrastructure

Our findings revealed a significant positive relationship between capital gains tax (CGT) and healthcare infrastructure in Nigeria, as evidenced by a Pearson correlation of 0.359 and a p-value of 0.005. This aligns with Ogunleye and Olufemi (2023), who also found that non-oil revenues, such as VAT and CIT, significantly contribute to health sector development. Both studies suggest that non-oil tax revenues, when efficiently managed, can play a vital role in improving health infrastructure. However, while Ogunleye and Olufemi emphasized VAT and CIT, our study highlights CGT as an equally critical factor in healthcare infrastructure development. This broadens the understanding of the tax-revenue relationship in driving health sector outcomes, underscoring the importance of effective tax collection and allocation mechanisms to improve public health infrastructure.

Capital gains Tax (CGT) and Education Infrastructure

Furthermore, our results also show a significant positive relationship between CGT and education infrastructure, with a correlation coefficient of 0.365 and a p-value of 0.009. This is consistent with Ezeani and Nduka (2022), who found that CIT significantly contributes to infrastructure development when managed effectively, but challenges such as tax avoidance may hinder its full potential. While their study focused on CIT's impact on general infrastructure, our research expands on this by

demonstrating CGT's significant role in education infrastructure. Both studies stress the need for improved tax administration and allocation to maximize the impact of tax revenue on various infrastructure sectors. This highlights the crucial role of non-oil tax revenues, such as CGT and CIT, in supporting essential public infrastructure projects in Nigeria.

Government Policy Moderation on Non-Oil Tax Revenue and Healthcare Infrastructure

The moderation analysis indicates that government policy significantly enhances the relationship between non-oil tax revenue and healthcare infrastructure ($R^2 = 0.453$, $p = 0.002$). This finding is consistent with Chukwu and Okafor's (2024) research, which emphasized the role of effective fiscal policies in optimizing tax revenue utilization for infrastructure development. The significant moderation effect suggests that government policy can substantially improve the effectiveness of non-oil tax revenues in enhancing healthcare infrastructure.

Government Policy Moderation on Non-Oil Tax Revenue and Education Infrastructure

Similarly, government policy significantly moderates the relationship between non-oil tax revenue and education infrastructure ($R^2 = 0.464$, $p = 0.001$). This result supports Chukwu and Okafor's (2024) findings on the importance of policy reforms for better tax revenue allocation. The significant moderation effect indicates that effective government policy is crucial for leveraging non-oil tax revenues to improve educational infrastructure, highlighting the need for comprehensive policy reforms to optimize tax revenue utilization for education.

CONCLUSION AND RECOMMENDATIONS

The study examined the relationship between non-oil tax revenue and infrastructural development in Nigeria. Secondary data were analyzed using descriptive statistics, Pearson's Product Moment Correlation Coefficient, and Moderated Multiple Regression (MMR) via SPSS Version 25. The analysis revealed that Value Added Tax (VAT) exhibited weak and statistically insignificant relationships with both healthcare and education infrastructure. Similarly, Capital Gains Tax (CGT) demonstrated positive but moderate relationships with healthcare and education infrastructure, with correlation coefficients of 0.359 and 0.365, respectively. These relationships were statistically significant, indicating that CGT plays a more impactful role in supporting healthcare and education infrastructure compared to VAT.

In contrast, government policy was identified as a significant moderator in the relationship between non-oil tax revenue and both healthcare and education infrastructure, highlighting the importance of effective policy in enhancing the impact of non-oil tax revenues on infrastructural development. The study concluded that while VAT alone does not have a significant impact on healthcare and education infrastructure, CGT shows a meaningful positive relationship, especially when supported by effective government policies. The findings underscore the need for strategic policy interventions to improve the efficiency of CGT revenue utilization in supporting infrastructural growth, particularly in the healthcare and education sectors. The study further suggested the following;

1. Given the weak and statistically insignificant relationship between Value Added Tax (VAT) and healthcare infrastructure, it is essential for policymakers to review the current allocation and utilization of VAT revenues. More targeted and strategic investment in healthcare infrastructure using VAT revenues could help to improve its effectiveness.
2. The insignificant relationship between VAT and education infrastructure highlights the need for improved VAT administration and compliance. Efforts should be made to increase public awareness on the importance of VAT contributions to educational development, potentially increasing revenue and its effective use in this sector.
3. The significant positive relationship between Capital Gains Tax (CGT) and healthcare infrastructure development suggests that the government should explore policies that boost CGT revenue. Increased revenue from CGT can be earmarked specifically for healthcare infrastructure projects, enhancing the sector's development.

4. The significant positive relationship between CGT and education infrastructure emphasizes the need for the government to allocate CGT revenues strategically to improve educational facilities. A portion of CGT revenues can be designated to finance schools, colleges, and other educational institutions.
5. The findings show that government policy significantly moderates the relationship between non-oil tax revenues (VAT and CGT) and healthcare infrastructure. Policymakers should focus on implementing robust policies that optimize the impact of tax revenues on the healthcare sector. This includes streamlining project funding and ensuring accountability.
6. Given the significant moderating effect of government policy on the relationship between non-oil tax revenue and education infrastructure, the government should implement policies that ensure efficient allocation of tax revenues to education infrastructure. This could include dedicated funds for building schools and improving existing educational facilities.
7. To ensure optimal outcomes, collaboration between tax authorities, healthcare, and educational stakeholders is essential. Joint efforts can help to determine where tax revenues can be used most effectively and ensure these funds are directed toward high-priority projects in healthcare and education.
8. Given the importance of government policy as a moderator, there should be ongoing monitoring and evaluation of how VAT and CGT revenues are utilized for healthcare and education infrastructure development. This can help to identify areas where improvements can be made, ensuring that policies are adaptive and responsive to infrastructural needs.

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