

The Effect Of Non-Oil Revenue On Economic Growth In Nigeria

Author:

James Chibuike Duru

Kogod School of Business, American University, Washington DC., USA.
4400 Massachusetts Ave NW, Washington, DC 20016
jd3658a@american.edu

Corresponding Authors:

Osman Kabia

Kogod School of Business, American University, Washington DC., USA.
4400 Massachusetts Ave NW, Washington, DC 20016
ok7713a@american.edu

Oluwatoyin Filani

Kogod School of Business, American University, Washington DC., USA.
4400 Massachusetts Ave NW, Washington, DC 20016
of9518a@american.edu

Toluwani Sunday Abayomi

Department of Finance, Faculty of Management Science Ekiti State University, Ado-Ekiti,
362103, Ekiti, Nigeria. abayomitoluwani1@gmail.com

Abstract

The study investigated the effects of non-oil revenue on the growth of Nigerian economy. Specifically, the study examined the effect of value added tax, company income tax and education tax on gross domestic product of Nigeria economy. Sata spanning the period of 1994 to 2023 were used and analyzed using Unit root test, regression analysis, descriptive analysis, correlation analysis, and ARDL modeling approach to cointegration analysis. Findings from the study indicated that in the short run, value added tax exerts negative and significant influence on gross domestic product of Nigeria economy but insignificant in the long-run. Also, in the short run, company income tax exerts positive and insignificant effect on gross domestic product of Nigeria economy but significant in the long run. Moreover, education tax exerts positive and insignificant impact on the gross domestic product of Nigeria economy in the short-run while in the long-run, the same variable exerts negative and significant influence on the gross domestic product of Nigeria economy. Therefore, the study recommended among others that the federal government of Nigeria should ensure that the revenue collecting authorities of the government be made more effective in their operations of collecting revenue for the government, particularly revenue generated from the non-oil revenue sector.

Key Words: Gross Domestic Product, Value Added Tax, Company Income Tax, Education Tax, Population Growth, Nigeria

Date of Submission: 26-07-2025

Date of Acceptance: 06-08-2025

I. Introduction

The level of economic growth of any nation depends largely on the amount of revenue generated and channeled towards the growth of the country. Unfortunately, the continue increase in government responsibilities and her inability to meet up with her financial challenges resulting from increasing size in population and infrastructural decay attributed to dwindling oil price and prevailing inflationary situation of the country which erodes the value of funds available to render essential social service to the people (Nimenibo, Samuel, Eyo, Mni& Friday, 2018) have forced Nigeria government to source for alternative revenue generating source (Adeusi, Uniamikogbo& Erah, 2020). However, public revenue consists of recurrent and capital revenue. While recurrent revenue refers to the money received regularly every year by way of taxes, fees, fines, licenses,

etc capital revenue, on the other hand, consists of all bulk loans and grants received by the government from within the country or from abroad. Nigeria's revenue profile consists of oil and non-oil sectors with the former contributing over 70% of the total revenue to the federation (Ndu&Uguru, 2022), while the latter contributing only the remaining 30%.

Generally, non-oil revenues are revenues generated from sources other than the oil producing activities (such as petroleum revenue from the upstream activity and other oil related operations). Examples of non-oil revenue include revenues from companies not engaged in oil & gas explorations, such as Companies Income Tax, Personal Income Tax, Custom and Excise Duties and Value Added Tax, etc. Thus, amount imposed on these non-oil producing activities by the government is called non-oil tax, and the revenue realized by the government in the imposition of non-oil tax is known as non-oil tax revenue (Adeusi, Uniamikogbo& Erah, 2020). As more revenues are generated, the government is equipped with more funds to carry out developmental projects which would bring about output growth. Therefore, non-oil revenues are primarily aimed at financing public expenditures. Also, they are used to promote other objectives such as equity and to address social and economic concerns (Oladipo, Nkamnebe, Nwokocha & Sani, 2023).

Furthermore, Budget Office of the Federation, BOF (2020) noted that revenue generation is very paramount to enhancing sustainable growth and development in any nation. In China and other developed nations of the world, the introduction of value-added tax (VAT) which is revenue from non-oil has helped to develop the countries tremendously. It has also encouraged the manufacturers to upgrade their outdated technology and make bigger investments in research and development. Statistics reveal that in 2015, VAT contributed 50 percent of the gross domestic product of China's economy (KPMG, 2021). Moreover, in 2019, on average, countries from the Organization for Economic Co-operation and Development (OECD) collected about 32 percent of their total revenue from VATs and 27 percent from Company Income Tax (National Bureau of Statistics, 2021).

Also, some African countries like Kenya, Senegal, Cote d' Ivoire, South Africa, VAT and CIT have become important contributors to total government revenues. VAT is a consumption tax that is relatively easy to administer and difficult to evade and it has been embraced by many countries world-wide (Budgit, 2020). Even in Nigeria, evidence supports that VAT is a significant source of revenue. For example, the revenue from VAT in 1994 when it was introduced was about 4.09 percent. In 2015 non-oil tax revenue collected by all tiers of government in Nigeria averaged 4 percent of national income. However, non-oil revenue was 8 percent in Angola, 16 percent in Ghana, 24 percent in South Africa and 18 percent in Kenya (BOF, 2020). Nigeria generates significantly lower tax revenues than other key economies in Sub Saharan Africa due to poor tax compliance and exemption of some agricultural produce as well as transportation and accommodation from VAT (BOF, 2020). The revenue of Nigeria is too low for the status and size of its GDP.

Revenue generation as a revenue stream for Nigeria's economic growth activities was a challenging problem mainly due to various insurgency forms, including evasion, neglect and unethical activities. These activities are considered sabotaging the economy and are readily presented as reasons for the country's stunted growth (Algoni&Agrawal, 2017). A daunting issue was collecting taxes to fund economic growth activities in Nigeria, mainly due to different forms of evasion, including resistance, fraud, and unethical practices. The Federal Government's over-reliance on the oil sector is harmful to the economy as oil revenues decline (Ilori &Efuntade, 2020). Unfortunately, the government of Nigeria has abandoned the agricultural sector, and power sector neglect has exerted adverse effects on manufacturing sector in Nigeria. Meanwhile, the proliferation of tax evasion in the Nigerian tax system has also decreased tax revenue income, which eventually affects government spending (Odhiambo &Olushola, 2018).

Prior to the 1970s, Nigeria's economy relied primarily on the non-oil sector, with non-oil exports accounting for over 74% of total revenue and oil revenue making up the remaining 26%. However, with the discovery of crude oil in commercial quantities in Oloibiri, particularly during the oil boom of the 1970s, fundamental changes occurred in the country's economic structure, and by 1985, the non-oil sector was facing challenges due to the increasing contribution of oil income to the total income earned by the country, which was put at 73% (Likita, Idisi, &Mavenke, 2018). However, approximately 98% of exports and 83% of federal government revenue came from the sale of oil and gas in 2000 (Odularu 2018). The government began to concentrate more on the oil industry than the non-oil sector due to the increase in revenue generation from the oil sector. Going forward, IMF (2018) observed that between 2011 and 2017, a steep decline in oil revenue caused the combined government income to drop from 17.7% to 5.1% of GDP. During this time, non-oil returns stayed mostly stable at between 3% and 4% of GDP, though they did decline more quickly from 2016 to 2017.

With the outbreak of Covid-19, the apparent necessity to diversify the economy became quite clear when the Nigerian oil price was forced down from an anticipated \$57 per barrel to \$30 per barrel (Nwagbara, 2020). It was this incidence that prompted Nigeria's 2020 budget adjustment, which saw both capital and recurrent expenditures cut by 20% and 25%, respectively (Nwagbara, 2020). The effect of the Covid-19 pandemic on oil revenue validated the claim made by certain experts that oil wealth may become an economic

enemy if it is not properly spent in stimulating economic growth. Investing in viable ventures is usually done with the goal of making a profit, and this is what keeps an economy afloat. Absolute reliance on a single source of money is unhealthy and has a negative impact on all aspects of the economy. Nigeria's vulnerability to crude oil price swings and shocks is a phenomenon that has left the country badly impacted by international crude oil price fluctuations, a condition that has exacerbated the country's volatility.

However, the performance of the non-oil sector in Nigeria has not been consistent over the years. From a high amount of ₦22.14 billion for the period 1970 to 1974, real non-oil exports fell to ₦5.77 billion during the period 1975 to 1979. Real non-oil exports further declined to ₦1.11 billion in the first half of the 1980s but, grew to ₦2.15 billion in the second half of the 1980s then, it recorded another decline to ₦1.82 billion from 1990 to 1994. Subsequently, real non-oil exports grew to ₦2.06 billion, ₦2.56 billion, ₦6.12 billion and ₦7.78 billion during the periods 1995 to 1999, 2000 to 2004, 2005 to 2009 and 2010 to 2014 respectively. However, from 2015 to 2018 real non-oil exports fell to ₦6.73 billion (Central Bank of Nigeria, 2019).

In the bid to bring the severity of this discourse into a reasonable opinion, numerous studies have been carried out over time. Nevertheless, to achieve huge success in the activities of the governments, revenue generations is a big factor that counts for progress and executions of government plans; although several studies have explored the effect of non-oil revenue on the growth of economy in Nigeria (Akims, Sakanko & Magaji, 2020; Ihegboro, Onah, Nwonye & Ijeoma, 2022; Usoro, Yusuf & Okafor, 2020; Bala, Magdalene, Maijamaa & Haruna, 2023; Adegbite, 2020). Therefore, the study seeks to investigate the effect of non-oil revenue on economic growth in Nigeria.

Objectives of the Study

The main thrust of study is specifically to investigate the effect of non-oil revenue on economic growth in Nigeria. Other specific objectives are to:

- I. Examine the effect of value added tax on gross domestic product of Nigeria economy.
- II. Assess the influence of company income tax on gross domestic product of Nigeria economy.
- III. Evaluate the significant effect of education tax on gross domestic product of Nigeria economy.

II. Review Of Literature

Concept of Non-oil Revenue

Non-oil revenue refers to the profits of goods sold in international markets except crude oil (Manama, 2016). The non-oil sector comprises other activities beyond the oil and gas fields or not directly related to them (Kromtit & Gukat, 2016). The non-oil revenue sector consists of industries such as the manufacturing sector, telecommunications services, tourism, real estate, banking, building, and health. Exports of non-oil goods produced in the farming, mining, quarrying, and industrial sectors of the country are taken out to generate revenues for economic development (Elechi, Kasie & Chijindu, 2016). In the same vein, non-oil revenue according to Ogba, Park and Nakah (2018) is the income or proceeds generated from the commodities that are sold in the international market, excluding crude oil (petroleum product).

Tax Revenue

Tax revenue is the revenue generated by government of a jurisdiction from oil and non-oil activities. Tax revenue is the receipt from tax structures. Revenues accruing to an economy like Nigeria can be categorized into two main parts: oil revenue and non-oil revenue (Adeusi, Uniamikogbo, Erah & Aggreh, 2020). Ihendinihu, Jones and Ibanichuka (2014) confirmed that the federal government revenue is classified into two main sources as oil and non-oil revenue. Oil revenue to the government is revenue derived from royalties, receipts from petroleum profits tax, and local sales and exports of crude oil and gas, while the revenue from non-oil includes revenue from Levies, public debt, grants, Personal Income Tax (PIT), Custom and Excise Duties, (CED), Companies income tax (CIT), Valued Added Tax, Education Tax, aids, amongst others.

Economic Growth

Economic growth refers to an increase in the production of goods and services over a specific period of time (Amadeo, 2019). To accurately reflect growth, the effects of inflation must be removed. Increase in capital stock, advances in technology and improvement in the quality and level of literacy are considered to be the principal causes of economic growth (Augustine, Akawu, Ajidani & Odonye, 2024). According to Dernburg and McDougall (1980), economic growth is the increase in the potential output of an economy as a result of expansion in stock of capital and in labour force as well as improvement in the productivity of both labour and capital. It is related to a sustained increase in a country's per-capital output accompanied by expansion in its labour force, consumption, capital and volume of agricultural trade as well as industrial output.

Empirical Summary

Table 2.1: Snapshot of Empirical Studies

1	Ideh, Okolo and Emeka (2021)	The impact of expansion in non-oil sector on sustainable economic growth of Nigeria economy.	Vector auto-regression (VAR) techniques, Roots of Characteristic Polynomial for VAR model stability, Augmented Dickey-Fuller test for time series stationarity, and granger causality tests.	Findings from the study revealed that the estimated model is stable while the VAR and variance decomposition results showed that real gross domestic product is strongly endogenous in the short run but weakly endogenous in the long run. Further findings suggested that in the long run non-oil sector is strongly endogenous to real gross domestic product (92% contribution).
2	Olarotimi and Alor (2021)	The dynamic impact of value added tax on economic growth in Nigeria.	Dynamic ordinary least square method.	Findings from the study showed that value added tax have positive relationship with economic growth in Nigeria.
3	Ogbonna (2021)	The impact of non-oil revenue and economic growth in Nigeria.	ARDL model.	Findings from the study showed that non-oil revenue has positive and significant impact on economic growth in Nigeria.
4	Ideh, Okolo and Emengini (2021)	Impact of Non-Oil Sector and Economic Growth in Nigeria using the National Accounts as a case study.	VAR model, ADF and Granger causality frameworks.	Findings from the study revealed that economic growth (RGDP) strongly impact growth in the short run but weakly impacts growth in the long run. Further findings in the study suggested that in the long run nonoil sector is strongly endogenous to RGDP with 92 percent contribution.
5	Ihenetu and Wokocha (2022)	The effect of non-oil revenue on economic growth in Nigeria.	Ordinary least square multiple regression analysis.	Findings from the study revealed that company income tax has no positive and significant effect on gross domestic product in Nigeria, custom and excise duty has no positive and significant effect on economic growth in Nigeria, value added tax has a positive and significant effect on gross domestic product in Nigeria and education tax has no positive and significant effect on economic growth in Nigeria.
6	Ndu and Uguru (2022)	The impact of non-oil tax revenue on economic growth in Nigeria.	Descriptive statistics and Ordinary Least Square regression.	The result showed that VAT, CIT, and CED have both positive and statistically significant impacts on economic growth in Nigeria. This result implies that all the variables (VAT, CIT, and CED) adopted as proxies for non-oil tax revenue in this study have jointly contributed to promoting the growth of the Nigerian economy for the period under review.
7	Oladipo, Nkamnebe, Nwokocha and Sani (2023)	The impact of non-oil revenue on economic growth in Nigeria.	Vector Error Correction (VECM) model to estimate the data gathered for the study.	Findings from the study revealed that value added tax and company income tax have positive relationship with economic growth in Nigeria, while federal independent revenue exerts negative impact on economic growth.
8	Augustine, Akawu, Ajidani and Odonye (2024)	The impact of non-oil revenue as a driver of economic growth in Nigeria.	Autoregressive Distributed Lag (ARDL) Model, Unit root test, cointegration test and granger causality test.	Findings from the study indicated that data were all stationary of order one I(1) and were all cointegrated with economic growth of Nigeria in the long run. Findings further disclosed that Manufacturing Sector Revenue exerts a positive effect on economic growth. Findings also revealed that agricultural sector revenue and telecommunication sector revenue shared positive relationship with economic growth.

Author's Compilation (2025)

III. Research Design

Model Specification

The model of Adeusi, Uniamikogbo, Erah and Aggreh (2020) which investigated the nexus between non-oil revenue and economic growth in Nigeria from 1994-2018 was adapted and modified in this study. In the

study, Adeusiet *al.*, (2020) utilized economic growth, proxied by RGDPG as the dependent variable while non-oil revenue, proxied by company income tax, CIT, personal income tax, PIT, custom and excise duties, CED and value added tax, VAT were used as the independent explanatory variables. For simplicity, the functional and linear model of Adeusiet *al.*, (2020) is shown below:

Functional for:

$$RGDPG = f(CIT\ PIT\ CED\ VAT) \text{-----} (1)$$

Where;

RGDPG = Growth rate of Gross Domestic Product (proxy for economic growth)

CIT = Companies Income Tax

PIT = Personal Income Tax

CED = Custom and Excise Duties

VAT = Value Added Tax

Linear form:

$$RGDPG_t = \beta_0 + \beta_1 CIT_t + \beta_2 PIT_t + \beta_3 CED_t + \beta_4 VAT_t + \varepsilon_t \text{-----} (2)$$

β_0 = Constant parameter.

$\beta_1 - \beta_4$ = Coefficient or parameters of the model.

μ_t = Error term.

t = Time Subscript.

Therefore, this study modified the model of Adeusiet *al.*, (2020), using economic growth, proxied by gross domestic product, GDP, as the dependent variables while value added tax (VAT), company income tax (CIT), and education tax, EDT were used as the independent explanatory variables. Meanwhile, population growth rate, PGR was used as control variable. Thus, the models for this study is demonstrated below:

Functional representation:

$$GDP = f(VAT\ CIT\ EDT\ PGR) \text{-----} (3)$$

Linear representation:

$$GDP_t = f(\beta_0 + \beta_1 VAT_t + \beta_2 CIT_t + \beta_3 EDT_t + \beta_4 PGR_t + \mu_t) \text{-----} (4)$$

Where:

GDP = Gross Domestic Product

VAT = Value Added Tax

CIT = Company Income Tax

EDT = Education Tax

PGR = Population Growth Rate

β_0 = Constant parameter

$\beta_1 - \beta_3$ = Coefficient or parameters of the model.

μ_t = Stochastic Error term.

t = Time Subscript.

Sources of Data and Estimation Technique

The scope of the data considered in this study spans from 1990-2023. Major sources of the data are from the Central Bank of Nigeria (CBN) Statistical Bulletin and Nigeria Bureau of Statistics.

The study employed several estimation techniques including *ARDL Co-integration Bound Test*, *Co-integration Analysis and Error Correction Model*. The study also considered some preliminary tests including *descriptive statistics, correlation matrix and Augmented Dickey-Fuller (ADF) unit root test*.

Table 3.1: Description and Measurement of Variables

Variables	Description
Gross Domestic Product (GDP)	Gross Domestic Product refers to the monetary value of goods and services produced within a period of time in an economy regardless of the ethnic nationality of those who produced the goods and services.
Value Added Tax (VAT)	A consumption tax levied at each stage of the consumption chain and borne by the final consumer of the product or service
Company Income Tax (CIT)	Any company or corporation (other than corporation sole) established by or under any law in force in Nigeria or elsewhere
Education Tax	Education tax is an allowable deduction in computing the assessable profits of companies engaged in

(EDT)	petroleum operations (Upstream). Funds derived from the tax are used for rehabilitation, restoration and consolidation of tertiary education in Nigeria by Tertiary Education Trust Fund (TETFUND)
-------	--

IV. Results And Discussion

Preliminary Tests

Table 4.1: Descriptive Statistics

	GDP	VAT	CIT	EDT	PGR
Mean	56741.13	527.4175	745.5635	127.6597	2.625588
Median	32525.56	353.9244	537.7120	96.23300	2.605000
Maximum	202365.0	2924.810	2649.191	328.6744	2.800000
Minimum	494.6437	96.87400	120.1190	41.96800	2.410000
Std. Dev.	61999.62	585.5721	618.7569	77.32524	0.113330
Skewness	0.955165	2.699647	1.353766	0.942650	-0.203383
Kurtosis	2.683543	10.42366	4.366728	2.855190	2.008916
Jarque-Bera	5.311799	119.3728	13.03145	5.065042	1.625919
Probability	0.070236	0.000000	0.001480	0.079458	0.443544
Sum	1929198.	17932.20	25349.16	4340.429	89.27000
Sum Sq. Dev.	1.27E+11	11315525	12634383	197313.4	0.423838
Observations	34	34	34	34	34

Note: GDP = Gross Domestic Product (In Billion Naira); VAT = Value Added Tax (In Billion Naira); CIT = Company Income Tax (In Billion Naira); EDT = Education Tax (In Billion Naira); PGR = Population Growth Rate (%).

Source: Author's Computation, (2025)

Result in Table 4.1 shows that gross domestic product on average stood at 56741.13 billion naira with minimum and maximum value of 494.6437 and 202365.0 billion naira respectively. However, results from the table also revealed the average value for value added tax during the period under investigation stood at 527.4175 billion naira alongside minimum and maximum value of 96.87400 and 2924.810 billion naira respectively. Moreover, the table further revealed that the average value for company income tax during the period indicated an average value of 745.5635 billion naira with a minimum and maximum value of 120.1190 and 2649.191 billion naira respectively. Furthermore, average value for education tax during the period stood at 127.6597 billion naira with a minimum and maximum value of 41.96800 and 328.6744 billion naira respectively. Meanwhile, average value reported in the table for population growth rate stood at 2.625588 percentages alongside a minimum and maximum value of 2.410000 and 2.800000 percentages respectively.

In addition, Skewness statistics reported in table 4.1 revealed that gross domestic product and education tax indicated a normal Skewness with a value of 0.955165 and 0.942650 respectively. However, value added tax and company income tax revealed 2.699647 and 1.353766 respectively. Moreover, population growth rate, as reported in the table indicated negative Skewness with a value of -0.203383.

Similarly, reported kurtosis statistics in the table revealed that all the variables used in the study are mixed kurtosis by the distribution peakedness. However, the results from the analysis showed that the variables employed in the study are leptokurtic and playkurtic. While value added tax and company income tax are leptokurtic with a value of 10.42366 and 4.366728 respectively. Gross domestic product, education tax and population growth rate reported playkurtic value of 2.683543, 2.855190 and 2.008916 respectively.

Jarque-bera statistics reported in table 4.1 stood at 5.311799 ($P=0.070236>0.05$) for gross domestic product, 119.3728 ($P=0.000000<0.05$) for value added tax, 13.03145 ($P=0.001480<0.05$) for company income tax, 5.065042 ($P=0.079458>0.05$) for education tax, and 1.625919 ($P=0.443544>0.05$) for population growth rate respectively, implying that all the variables used in the study are unevenly distributed.

Correlation Analysis

Table 4.2: Correlation Matrix

	GDP	VAT	CIT	EDT	PGR
GDP	1.000000				
VAT	0.795910	1.000000			
CIT	0.972057	0.847950	1.000000		
EDT	0.913743	0.693920	0.916296	1.000000	
PGR	-0.553526	-0.481547	-0.545616	-0.375339	1.000000

Source: Author's Computation, (2025)

Table 4.2 above revealed the results of estimation carried out in the study. Evidently, the outcomes of the analysis demonstrated the existence of mixed correlation between gross domestic product and all the variables employed in the study during the period investigated. The results revealed that gross domestic product and non-oil revenue variables, such as value added tax, company income tax and education tax moved in the

same direction except population growth rate which was inversely correlated during the period investigated. Specifically, correlation estimates stood at 0.795910 for value added tax and gross domestic product, 0.972057 for company income tax and gross domestic product, 0.913743 for education tax and gross domestic product and -0.553526 for population growth rate and gross domestic product. Additionally, correlation estimates indicated 0.847950 for company income tax and value added tax, 0.693920 for education tax and value added tax and -0.481547 for population growth rate and value added tax. Moreover, results of the estimates showed 0.916296 for education tax and company income tax and -0.545616 for population growth rate and company income tax. Also, estimation results displayed coefficient value of -0.375339 for population growth rate and education tax. Evidently, all the explanatory variables employed in the study exert positive influence on gross domestic product of Nigeria except for population growth rate which demonstrated a negative relationship with gross domestic product and other explanatory variables in Nigeria.

Table 4.3: Unit root test
Summary of Unit Root Test Result

Variables	Level			First Difference			Level of Integration I(D)
	ADF statistics	1% critical value	5% critical value	ADF statistics	1%critical value	5% critical value	
LNGDP	-5.008725	-3.646342	-2.954021	-2.092684	-3.661661	-2.960411	I(0)
LNVAT	-3.339887	-3.699871	-2.976263	-1.345766	-3.711457	-2.981038	I(0)
LNCIT	-0.716077	-3.699871	-2.976263	-4.445032	-3.699871	-2.976263	I(1)
LNEDT	-1.064536	-3.646342	-2.954021	-8.074155	-3.653730	-2.957110	I(1)
PGR	-1.375909	-3.653730	-2.617434	-4.114499	-4.284580	-3.562882	I(1)

Source: Author's Computation, (2025)

Unit root test result presented in table 4.3 revealed that gross domestic product and value added tax were stationary at level, meaning that they are integrated of order zero I(0) reflecting that this variables did not retain innovative shock passed on it more the same period. However, company income tax, education tax and population growth rate become stationary after first differencing, i.e these series are integrated of order one I(1). Hence summary of unit test conducted in the study showed that series included in the models for the study are integrated of mixed order i.eI(0) and I(1). Therefore, the ARDL co-integration is employed to achieve relevance objectives of the study.

Analysis of the effect of non-oil revenue on economic growth in Nigeria Autoregressive Distributed Lag (ARDL) co-integration bound test

Table 4.4:ARDL Co-integration Bound Test

F-Statistic	Lower Bound Critical Value	Upper Bound Critical Value
12.39180	2.56	3.49

Note: critical values are values at 5% significant level.

Source: Author's Computation, (2025)

Table 4.4 reported lower and upper bound critical values, as well as the F-statistics for the wald test carried out to test the joint null hypothesis that the coefficients of the lagged level variables are zero i.e no long run relationship exist between the variables. The result showed an f-statistics value of 12.39180 and bound critical values of 2.56 and 349 for lower and upper bounds respectively. Comparing the f-statistic to the critical values, it was observed that the f-statistics is greater than the upper bound critical value (a condition for the rejection of the null hypothesis of no long run relationship). Thus, the study rejects the null hypothesis in favour of the alternative hypothesis of presence of long run relationship between the variables.

ARDL short run and long run estimation

Table 4.5:ARDL Short run and Long run form Estimation Result

Short Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNGDP(-1))	-0.297167	0.098118	-3.028675	0.0143
D(LNGDP(-2))	-0.281255	0.092217	-3.049921	0.0138
D(LNGDP(-3))	-0.197832	0.068489	-2.888533	0.0179
D(LNVAT)	-0.126607	0.031307	-4.044107	0.0029
D(LNVAT(-1))	0.325492	0.045896	7.091985	0.0001
D(LNVAT(-2))	0.457006	0.075266	6.071886	0.0002
D(LNCIT)	0.195673	0.140184	1.395832	0.1962
D(LNCIT(-1))	-2.806818	0.321223	-8.737903	0.0000
D(LNCIT(-2))	-1.376975	0.223359	-6.164867	0.0002
D(LNEDT)	0.094395	0.065620	1.438525	0.1841
D(LNEDT(-1))	1.020422	0.125631	8.122384	0.0000

D(LNEDT(-2))	0.458305	0.085094	5.385887	0.0004
D(LNEDT(-3))	0.384357	0.103442	3.715690	0.0048
D(PGR)	-0.954821	0.182925	-5.219737	0.0005
D(PGR(-1))	-0.643175	0.199906	-3.217388	0.0105
CointEq(-1)	-0.796570	0.074069	-10.754386	0.0000
Cointeq = LNGDP - (-0.6137*LNVAT + 3.0279*LNCIT -0.9461*LNEDT + 1.0755*PGR -3.0055)				
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNVAT	-0.613725	0.626454	-0.979681	0.3528
LNCIT	3.027862	0.516326	5.864242	0.0002
LNEDT	-0.946083	0.313778	-3.015140	0.0146
PGR	1.075549	0.286919	3.748612	0.0046
C	-3.005511	0.294531	-10.204414	0.0000

Source: Author's Computation, (2025)

Result in Table 4.5 presents ARDL short run and long run estimation on the impact of non-oil revenue on economic growth in Nigeria. The short run estimation result indicates coefficients and probability value of -0.126607 and 0.0029 ($P < 0.05$) for D(LNVAT). This suggests that gross domestic product of Nigeria decreases significantly by about -0.12% whenever there is 1% increase in value added tax, thus, it can be concluded that value added tax exerts significant negative effect on gross domestic product in Nigeria on the short run. Moreover, the table revealed the short run estimation for D(LNCIT) with a coefficient value of 0.195673 and probability of 0.1962 ($P > 0.05$). This implies that gross domestic product only rises by 0.19% whenever there is 1% increase in company income tax in Nigeria.

Apparently, it can be deduced that the effect of company income tax on gross domestic product in Nigeria is although positive but absolutely insignificant. In similar vein, the coefficient value for D(LNEDT) as reported in the table stood at 0.094395 with probability value of 0.1841 ($P > 0.05$). This means that gross domestic product in Nigeria rises by 0.09% whenever there is 1% increase in education tax. This, however can be concluded that, there is a positive relationship between gross domestic product and education tax in Nigeria, however, weak and insignificant. Moreover, the table revealed the coefficient and probability values for D(PGR) which stood at -0.954821 and 0.0005 ($P < 0.05$) respectively. This implies that gross domestic product in Nigeria rises by -0.95% whenever there is 1% increase in population growth rate. Notably, population growth rate exerts negative and significant influence on gross domestic product in Nigeria. Furthermore, CointEq (-1) of -0.796570 and 0.0000 ($P < 0.05$) shows that only about 79% of the short run inconsistencies are corrected and incorporated into the long run dynamic annually in Nigeria.

Results from the table also revealed long run estimation result with coefficients and probability of -0.613725 and 0.3528 ($P > 0.05$) for LNVAT, indicating that there exist about -0.61% insignificant decrease in gross domestic product in Nigeria, caused by 1% increase in value added tax. Moreover, LNCIT reported a coefficient and probability value of 3.027862 and 0.0002 ($P < 0.05$), implying that gross domestic product in Nigeria rises significantly whenever there is 1% increase in company income tax in Nigeria. Also, the table revealed a coefficient and probability values of -0.946083 and 0.0146 respectively. This can be inferred that there is invariably about -0.94% decrease in gross domestic product with every 1% increase in education tax in Nigeria. Similarly, the table also revealed coefficient and probability value of 1.075549 and 0.0046 respectively, suggesting that there is about 1.07% increase in gross domestic product with every 1% increase in population growth rate in Nigeria. Therefore, it can be concluded that company income tax and population growth respectively exert positive and significant influence on gross domestic product in Nigeria on the long run while value added tax and education tax both exert negative effect on gross domestic product of Nigeria economy in the long run.

Post Estimation Tests

Table 4.6: Post Estimation Test Results

Normality Test		
Statistics	Values	Probability
Jarque-Bera Stat	1.636063	0.441300
Serial Correlation LM Test		
Statistics	Values	Probability
F-statistic	11.17191	0.0966
Heteroscedasticity Test		
Statistics	Values	Probability
Breusch-Pagan-Godfrey	0.772874	0.7002

Source: Author's Computation, (2025)

Result presented in table 4.6 shows that there is no evidence to reject null hypothesis on normal distribution, homoscedasticity, null hypothesis of no autocorrelation, and linearity. Specifically, result shows normality test statistics of 1.636063 ($p > 0.05$), LM test statistics of 11.17191 ($p > 0.05$), heteroscedsticity test statistics of 0.772874 ($p > 0.05$) indicate that the assumption of normality, homoscedasticity and no serial autocorrelation are satisfied.

Implication of Findings

Following the series of analysis conducted in the study in the quest to examine the effect of non-oil revenue on economic growth in Nigeria, findings from the most acceptable estimation conducted in the study evidenced in table 4.5 revealed that the impact of non-oil revenue on economic growth in Nigeria indicated a mixed influence both in the short run and long-run. While some variables of interest indicated positive but weak and insignificant impact, others exhibited negative and both negative and positive influence both on the long and short runs.

More specifically in the short-run, value added tax, VAT, exerted negative and significant influence on the gross domestic product of Nigeria economy during the period covered, suggesting that, for every 1% increase in the value added tax generated by the Nigeria government during the period, there was invariably about 0.12% decrease in the gross domestic product of Nigeria economy. In the same vein, education tax, EDT, during the period investigated exerted positive, although insignificant effect on Nigeria economy. However, the result indicated that for every 1% increase in the tax collected for education by Nigeria government, there was about 0.09% increase in gross domestic product of Nigeria economy. On the other hand, company income tax, CIT, has evidenced in the output of the analysis conducted in the study showed a positive exertion on the Nigeria economic growth under the period considered in the study. By inferences, it can be deduced that for every 1% increase in on the income generated on corporations by federal government in Nigeria, there is always about 0.19% increase in the growth of Nigeria economy, although insignificant.

Notwithstanding in the long-run, the variables of interest employed in the study exhibited mixed influence on the gross domestic product of Nigeria economy during the period covered in the study. Specifically, value added tax, VAT, shared a negative and insignificant link with the Nigeria economy under the period covered. However, the result by interpretation indicated that for every 1% increase in value added tax generated by the Nigeria government, there is invariably about 0.61% decrease in the Nigeria gross domestic product, GDP, for the years covered in the study. Similarly, education tax, EDT, for the period considered in the study indicated a negative exertion on Nigeria economy, suggesting that, for every 1% increase in the tax gathered for education under the period covered, there is always about 0.94% decrease in gross domestic product of Nigeria economy. Moreover, similar to the short-run result, company income tax, CIT, exhibit a positive exertion on the Nigeria economy during the period delved into in the study. Consequently, estimation result indicated that for every 1% increase in the company income tax generated by the Nigeria government, there is invariably about 3.02% increase in gross domestic product of Nigeria economy.

V. Conclusion And Recommendation

The study focused on the effect on non-oil revenue on economic growth in Nigeria. Consequently, the study delved deeply into the concept of non-oil revenue, explaining the influence of value added tax, company income tax and education tax. Moreover, the study dissected the concept of economic growth, uncovering the significance of gross domestic product vis-à-vis the non-oil revenue variables. Non-oil revenue is vital to the growth of economy in every nations of the world. The level of economic growth of any nation depends largely on the amount of revenue generated and channeled towards the growth of any country, consequently, the vitality of the non-oil revenue to the activities of government of a country to foster growth and development can never be over emphasized. While value added tax is paid by final consumers on consumption of goods and services, company income tax is imposed on profit of a company from all sources and the rate of tax is 30% of total profit of a company. Notwithstanding, some profits are exempted from CIT provided they are not resulting from trade or business activities carried out by the company e.g. Cooperative society. Moreover, education tax is levied on all companies registered in Nigeria. The rate of the tax is 2% of assessable profit and the date for filing returns is the same as that of CIT and PPT. The tax is an allowable deduction in computing the assessable profits of companies involved in petroleum operations (Upstream).

Thus, based on the findings and conclusion in this study, the following recommendations are made:

- i. The federal government of Nigeria should ensure that the revenue collecting authorities of the government be made more effective in their operations of collecting revenue for the government, particularly revenue generated from the non-oil revenue sector.
- ii. Federal government of Nigeria should consider enacting simple and transparent tax laws to regulate the tax regimes in Nigeria in order to avoid any form of illicit strategic tax behaviour by management.

- iii. Moreover, revenue generated from value added tax, company income tax and education tax should be utilized judiciously to develop other sectors of the non-oil revenue such as mining and agriculture to enable her to have a variety of viable sources of income.

References

- [1] Adegbite, T. A. (2020). An Assessment Of Non-Oil Taxation Inflow On Economic Growth: Verdict From West African Countries. *Annals Of Spiru Haret University. Economic Series*, 20(2), 87-103.
- [2] Adeusi, A. S., Uniamikogbo, E., Erah, O. D., & Aggreh, M. (2020). Non-Oil Revenue And Economic Growth In Nigeria. *Research Journal Of Finance And Accounting*, 11(8), 95-106.
- [3] Akims, K. A., Sakanko, M. M. A., & Magaji, A. I. (2020). An Examination Of The Effects Of Monetary Policy On Non-Oil Exports In Nigeria, 1970–2019. *Journal Of The Social Sciences*. 48(2), 21-34.
- [4] Algoni, U.S., & Agravwal, P.K (2017). An Assessment Of The Contribution Of Tax On Nigeria's economic Development And Its Effects On Companies' Performance In Nigeria. *International Journal Of Scientific And Research Publications*, 7(7), 476-484.
- [5] Amadeo, K. (2019). Economic Growth, Its Measurements, Causes, And Effects, Available At: <https://www.investopedia.com/terms>
- [6] Augustine, D., Akawu, F.A., Ajidani, M.S. And Odoney, O.J. (2024). Analysis Of Non-Oil Revenue As A Driver Of Economic Growth In Nigeria. *Polac International Journal Of Econ& Mgt Science (Pijems) Department Of Economics & Management Sciencenigeria Police Academy, Wudil-Kano*. 10(1), 34-43.
- [7] Bala, U., Magdalene, H. D., Maijamaa, R., & Haruna, H. A. (2023). The Impact Of Value Added Tax, Petroleum Profit Tax And Government Spending On Non-Oil Exports. *Jurnal Aplikasi Manajemen, Ekonomi Dan Bisnis*, 7(2), 7-18.
- [8] Dernburg, T.F. And D.M. McDougall (1980). *Macro-Economic: 6th Edition*. Japan: Mcgraw-Hill.
- [9] Elechi, J. S., Kasie, E. G. & Chinjindu, A. A. (2016). The Contribution Of The Nigerian Banks To The Promotion Of Non-Oil Exports (1990-2013). *Asian Journal Of Economics Business And Accounting*. 1(1), 1-13.
- [10] Ideh, A. O., Okolo, N. M., & Emengini, E. S. (2021). Non-Oil Sector And Economic Growth In Nigeria: The National Accounts Perspective. *European Journal Of Sustainable Development*, 10(1), 185-185.
- [11] Ideh, A. O., Okolo, N. M., & Emengini, E. S. (2021). Non-Oil Sector And Economic Growth In Nigeria: The National Accounts Perspective. *European Journal Of Sustainable Development*, 10(1), 185-185.
- [12] Ihegboro, I. M., Onah, V. C., Nwonye, N. G., & Ijeoma, O. (2022). Impact Of Non-Oil Revenue On The Growth Of The Nigerian Economy. *Iosr Journal Of Economics And Finance*, 13(1), 18-27.
- [13] Ihendinihu, J. U., Jones, E., & Ibanichuka, E. A. (2014). Assessment Of The Long-Run Equilibrium Relationship Between Tax Revenue And Economic Growth In Nigeria: 1986 To 2012. *The Sij Transactions On Industrial, Financial & Business Management (Ibfm)*, 2(2), 39-47.
- [14] Ihenetu, H.I. & Wokocha, P.C. (2022). Non-Oil Revenues And Economic Growth In Nigeria. *Global Journal Of Research In Business Management*. 2(2), 42-48.
- [15] Ilori, F.O., & Efuntade, A. O. (2020). Comprehensive Analysis Of The Effect Of Oil And Non-Oil Revenues On Economic Growth In Nigeria. *Kiu Interdisciplinary Journal Of Humanities And Social Sciences*, 1(3), 161-186.
- [16] Kpmg, (2021): China: Vat Essentials Guide 2021 - <https://assets.kpmg.com/content/dam/kpmg/cn/pdf/en/2021/02/china-vat-essentials-guide-2021.pdf>. Accessed On 04/28/2025.
- [17] Kromtit, S. O., & Gukat J.U. (2016). Evaluation Of The Contribution Of Non-Oil Revenue To Government Revenue And Economic Growth: Evidence From Nigeria. *Journal Of Accounting And Financial Management*, 2(5), 41-51.
- [18] Likita, J. O., Idisi, P., & Mavenske, B. N. (2018). The Impact Of Non-Oil Revenue On Economic Growth In Nigeria. *International Journal Of Advanced Research In Accounting, Economics And Business Perspectives*, 2(1), 1-14.
- [19] Manama, B. (2016). Economic Diversification In Oil-Exporting Arab Countries. In *Annual Meeting Of Arab Ministers Of Finance*. International Monetary Fund Washington, Dc, Usa.
- [20] Ndu, C., & Uguru, L. C. (2022). Non-Oil Tax Revenue And Economic Growth In Nigeria. *Journal Of Taxation And Economic Development*, 21(2), 12-25.
- [21] Nimenibo, A., Samuel, W. A., & Eyo, M. J. Mni & Friday, Hc (2018). An Empirical Analysis Of Tax Revenue And Economic Growth In Nigeria From 1980 To 2015. *Global Journal Of Human-Social Science: Political Science*, 18(3), 1-19.
- [22] Nwagbara, C. (2020). Fg To Reduce N1.5 Trillion From 2020 Budget Due To Coronavirus. Retrieved From: <https://nairametrics.com/2020/03/19/fg-to-reduce-n1-5-trillion-from-2020-budget-due-to-coronavirus>
- [23] Odhiambo, O., & Olushola, O. (2018). Taxation And Economic Growth In A Resource-Rich Country: The Case Of Nigeria. In *Taxes And Taxation Trends*. Intechopen.
- [24] Odhiambo, O., & Olushola, O. (2018). Taxation And Economic Growth In A Resource-Rich Country: The Case Of Nigeria. In *Taxes And Taxation Trends*. Intechopen.
- [25] Ogba, L.J., Park, I. & Nakah, M.B. (2018) The Impact Of Non-Oil Revenue On Economic Growth In Nigeria. *International Journal Of Advanced Research In Accounting, Economics And Business Perspectives*, 2, 1-14.
- [26] Ogbonna, U.G. (2021). Non-Oil Revenue And Economic Growth In Nigeria. *Journal Of Economics, Finance And Management Studies*. 4(09), 1955-1668.
- [27] Oladipo A. O., Nkamnebe O. E., Nwokocha A. F., & Sani, F. K. (2023). Non – Oil Revenue And economic Growth In Nigeria (1990 – 2021). *International Of Economics And Development Policy*. (6)1 2651-5644.
- [28] Oladipo, A. O., & Sani, F. K. (2023). Non–Oil Revenue And Economic Growth In Nigeria (1990–2021): Non–Oil Revenue And Economic Growth In Nigeria (1990–2021). *International Journal Of Economics And Development Policy*, 6(1), 149-164.
- [29] Olarotimi, Y. L., & Alor, U. S. (2021). Dynamic Impact Of Value Added Tax On Economic Growth In Nigeria. *Journal Of Research In Humanities And Social Science*, 9(5), 24-28.
- [30] Usoro A. E., Yusuf, W. A. Okafor, B. O. N. (2020). Nexus Between Non-Oil Sectoral Contribution And Economic Growth In Nigeria 1981-2018, *The Economic Letters*. 7(1), 13 – 22.