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Non – oil Revenue and Economic Growth in Nigeria (1990 – 2021)

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Abstract

The main objective of this study is to examine the impact of non-oil revenue on economic growth in Nigeria from 1990 to 2021. To do this, annual time series data were collected and the study employed Vector Error Correction (VECM) model for the analysis. The result of the VECM method used in this study reveals 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. However, with the exception of company income tax, federal independent revenue and value added tax are statistically significant at 5 percent level of significance. The finding of the study further reveals the error correcting term of -0.2166 which suggests that 22 percent disequilibrium in the previous years would be corrected for in the current year. The study therefore recommends that government should ensure that the law as provided by the Fiscal Responsibility Act of 2007 is strictly enforced on the Government-Owned Enterprises (GOEs). This will help to contribute more to the non-oil revenue through the federal independent revenue.

Keywords: ECM, Economic Growth, Nigeria, Non-oil Revenue
JEL Classification: H71, L32, O4

Contribution to/Originality Knowledge
This study is different from other studies in that, it is the first to use federal independent revenue as variable, owing to its importance in contributing to revenue generation in Nigeria. The study is also more recent in terms of time frame compared to other studies on non-oil revenue and economic growth in Nigeria.

1.0 Introduction

The issue of generating government revenue is a general phenomenon that affects every economy in the world, since the funds are used to provide the infrastructural facilities that would help attain economic growth and development. However, the spate of growth of any economy is largely dependent on resource mobilization. Revenue generation amongst other things is directed towards meeting the basic social and infrastructural needs of its citizenry (World Bank, 2007). As more revenues are generated, the government is equipped with more funds to carry out developmental projects which would bring about output growth. Thus, non-oil revenues are primarily aimed at financing public expenditures. They are also used to promote other objectives such as equity and to address social and economic concerns.

Theoretically and empirically, it has been established that revenue generation is very paramount to enhancing sustainable growth and development in any nation (Budget

Office of the Federation [BOF], 2020). 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 (Klynveld Peat Marwick Goerdeler, [KPMG], 2021). Furthermore, 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 [NBS], 2021).

In 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 has supported 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.

According to World Bank as reported by Organization for Economic Cooperation and Development [OECD] (2010) , a nation cannot grow meaningfully if the tax revenue is less than 15 percent of national income. Available statistics from BudgiT (2019) show that Nigeria's tax to gross domestic product is less than 5 percent, way below average Sub-Saharan African tax to GDP of 15 percent. Gross domestic product declined by 6.10 percent year on year in real terms which was as a result of global disruptions due to Covid-19 that caused the prices of oil to fall from $60 per barrel in 2019 to $29.20 per barrel in second quarter 2020 (Central Bank of Nigeria [CBN], 2020).

This study is therefore motivated due to fluctuations in the prices of oil over the years. These have caused the revenue from oil to fall short of the budget, thereby forcing government to result into borrowing from other countries of the world. Also, despite the substantial contribution of oil revenue to revenue generation over the years, there has not been any perceptible improvement in the economy. This can be seen in terms of high rate of unemployment, dilapidated infrastructures, high rate of poverty, low investment to mention but a few.

In order to ensure that non-oil revenue is increased and contributes to the growth of economy, the Nigeria government has formulated and implemented various policies such as voluntary assets and income declaration scheme, oversight on budget presentations, coordinated

remittances of operating surplus, Nigeria's Economic Recovery and Growth Plan (2018-2020). Despite these, VAT was recorded at 3 billion dollars in 2019, which is lower than the 20 billion dollars realized in South Africa that has almost the same gross domestic product with Nigeria (CBN, 2019). Only a paltry 9 per cent of companies also pay CIT while 12 per cent of registered businesses comply with VAT obligations.

Over the years, federal independent revenue has always fallen short of the projected revenue from the government-owned enterprises. These agencies have been underpaying revenue into government coffers. Between 2015 and 2020, federal government recorded a shortfall of 2.8 trillion Naira. This has made it difficult for government to achieve its revenue target as Nigerian government borrows to finance annual budget (NBS, 2019). The fact that government borrows to finance its budget has placed huge debt burden on the economy and has forced the nation to service debts with trillions of naira. In 2020 and 2022 proposed budget, about 3.61 trillion naira and 6.31 trillion naira respectively would be used to service debt (BOF, 2021). This money could be used to develop the nation if the country is operating fiscal surplus. So, there is urgent need to diversify the economy to the productive sectors of the economy, so that more revenue that would enhance growth could be generated.

The decline in GDP in 2019 by 6.10 percent year on year in real terms which was as a result of global disruptions due to covid-19 that caused the prices of oil to fall has also made it necessary to carry out this research. This is due to the fact that non-oil revenue such as Value-Added Tax (VAT), Company Income Tax (CIT) and Federal Independent Revenue (FIR) can help the economy to generate huge revenue that would ensure budget surplus, thereby taking the economy to the path of growth and development (NBS, 2021). Therefore, the main research objective of this study is to examine the impact of the components of non-oil revenue (Value Added Tax Company Income Tax, Federal Independent Revenue) on economic growth in Nigeria. This study however, contributes to the literature in that it reviewed current conceptual, theoretical and empirical literatures.

The rest of this study is structured as follows; section two discusses the literature review under the subsections of conceptual issues, theoretical review, empirical literature and gap in the literature. Section three presents the methodology used in estimating the parameters of the model. While, section four discusses the result analysis and interpretation, section five presents the conclusion and policy recommendations.

2.0 Literature Review

2.1 Conceptual Issues

2.1.1 Concept of Non-Oil Revenue

According to Central Bank of Nigeria (2017), non-oil revenue refers to revenues that are not oil related. They include revenues from Nigeria Customs Service such as import duty, excise duty and other levies; revenue from Federal Inland Revenue

Service (FIRS) such as corporate tax, value-added tax, education tax etc; FGN Independent Revenue consisting of operating surplus, consolidated revenues etc. Aderoju (2017) refers to non-oil revenue as the total amount of revenue realized from the sale of non-oil products to both domestic consumers and foreign trading partners. The exportable non-oil products in Nigeria include cash crops, food crops, manufacturing, entertainment, tourism, transport, banking and others. The non-oil revenue is thus defined as the source of generating revenue from sources other than oil. The sources include revenue from value added tax, company income tax, personal income tax, manufacturing, education, agriculture sectors as well as federal independent revenue amongst others. This serves as the working definition for this study.

2.1.2 Concept of Economic Growth

Nwogwugwu et al. (2022) defines economic growth as the process whereby the country's real national and per capita income increases over a long period of time. The increase in per capital income is the better measure of economic growth since it reflects increase in the improvement of living standards of masses. Another measure of economic growth is the increase in real national income. This increase should be in terms of increase in output of goods and services, and not due to a mere increase in the market prices of existing goods. It is also accompanied by expansion in its labour force, consumption, capital and volume of trade. Economic growth according to this study is defined as the sustained increase in the value of goods and services produced in a country over a period, usually one year.

2.2 Theoretical Framework

2.2.1 Efficiency-Based Theory of Revenue

The theory of efficiency based was propounded by Anyanwu (1993). The theory is particular about how revenues generated by the government are allocated amongst the tiers of government for optimum uses. Anyanwu (1993) believed that viable allocation of revenue would enhance economic growth of any nation. The efficiency-based principle is broadly seen as the minimization of the costs of operating government functions. In other words, it is meant to minimize the cost of fiscal administration or to obtain maximum revenues from a given cost. However, the non-oil revenue continues to underwhelm in Nigeria because Nigerian government failed to minimize the costs of operating government functions. The theory further argued that each layer of government should be able to raise and keep some revenues for its use. It is believed that if each layer of government is forced to raise revenues from their operations, over-dependence on federal allocation will be reduced, since they are constitutionally permitted to keep part of the revenues for their own use. He asserts that these revenues should as well be allocated to projects or sectors that could cause development in an economy (Anyanwu, 1993).

This theory is chosen as the theoretical underpinning of this study, in that it emphasizes the need to allow all tiers of government to generate revenues, keep part of the revenues for their own use and then allocate the revenues generated to those sectors with optimally

developmental projects that can help to foster economic growth and development. If this theory can be applied in the situation of Nigeria, all our legislators and other tiers of government (judiciary and executives) will know that part of their duties is to generate revenues and the economy would grow at a faster pace.

2.3 Empirical Literature

Some of the empirical works that are related to this study are discussed here.

Ogbonna (2021) conducted a research on the impact of non-oil revenue and economic growth in Nigeria between 1981 and 2019. The study employed ARDL model to examine the impact and the result showed that non-oil revenue has positive and significant impact on economic growth in Nigeria. Yusuf et al. (2021) carried out a research on the dynamic impact of VAT on economic growth in Nigeria between 1994 and 2019. The study utilized dynamic ordinary least square method to examine the impact and the result showed that VAT has positive relationship with economic growth in Nigeria. Ideh et al. (2021) empirically examined the impact of non-oil sector revenue on economic growth in Nigeria from 2000 to 2019. Vector autoregressive method was employed and it revealed that the revenues generated by sectors categorized under non-oil contribute to the growth of Nigeria economy between 2000 and 2019. Fossong et al. (2021) empirically analyzed the effect of oil and non-oil revenue on economic growth in Cameroon from 1980 to 2018. The study employed ARDL method of analysis and the result revealed that non-oil revenue exerts negative but significant impact on economic growth in the long run while in the short run, it has positive and statistically significant.

Nedra and Kavita (2020) also examined the impact of non-oil revenue on the economy of Saudi Arabia for the period of 1994 to 2019, using descriptive statistics and correlation analysis. The findings showed that non-oil revenue (VAT, CIT, PIT) exerts positive and industrial impact on economic growth in Saudi Arabia. Owuru and Olabisi (2020) studied the impact of non-oil revenue on economic growth in Nigeria from 2011 to 2016. The study utilized fully modified ordinary least square method and the result showed that non-oil revenue impacts negatively on economic growth in Nigeria. Adeusi et al. (2020) studied the impact of non-oil revenue on economic growth in Nigeria between 1994 and 2018. The variables used in the study include value added tax (VAT), companies income tax (CIT), personal income tax (PIT) and customs and excise duties (CED). The study utilized ordinary least square method to estimate the parameters of the model. The study found that VAT and CED have positive and significant impact on economic growth while PIT and CIT have negative but significant impact on economic growth in Nigeria.

Also, Adeigbe et al. (2020) investigated the impact of non-oil revenue on economic growth and development in Nigeria between 1994 and 2017, using multiple regression model. The findings showed that value-added tax and company income tax have positive and significant effect on economic growth and development in Nigeria. Uremadu et al. (2020) studied the impact of non-oil revenue on economic growth of

Nigeria, spanning from 1994 to 2017. The study utilizes Autoregressive Distributed Lag model and the findings showed that Value-Added Tax is positive but insignificant on the economy of Nigeria. Olowo et al. (2020) studied the impact of non-oil revenue on economic growth in Nigeria between 1981 and 2018, using ARDL model. The findings revealed that sectoral distribution of non-oil revenue is positive and significant to economic growth in Nigeria. Raja and Assil (2020) studied the impact of non-oil revenue on economic growth in Saudi Arabia from the period of 1990 to 2018, using ordinary least square method. It was revealed from the study that non-oil revenue has negative effects on economic growth in the study area.

Ilori and Akinwumi (2020) examined the effect of oil and non-oil revenue on economic growth in Nigeria. The study covered the period of 1989 to 2018 and utilized error correction mechanism to examine the effect. The findings showed that oil and non-oil revenue harms real gross domestic product in Nigeria. Alexander et al. (2019) also utilized ARDL model to study the impact of taxation on economic growth in Nigeria between 1980 and 2018. The result showed that petroleum profit tax, personal income tax and value-added tax have significant effects on economic growth process in Nigeria.

Yahaya and Yusuf (2019) studied the impact of non-oil revenue on economic growth in Nigeria spanning from 1981 to 2018. The study employed Autoregressive Distributed Lag model and the result showed that Value-Added Tax, Companies Income Tax and Customs and Excise Duties have positive but insignificant impact on economic growth. Zeraibi and Subhadeep (2019) studied the impact VAT on economic growth in China between 1985 and 2016. The study uses ARDL model and it was found out that VAT has positive relationship with economic growth GDP both in the short and long run in China. Osho et al. (2018) examined the impact of company income tax on gross domestic product in Nigeria between 1993 and 2017. The ordinary least square method of analysis was employed and the findings revealed that company income tax has positive as well as significant impact on gross domestic product in Nigeria. Omodero et al. (2018) investigated the impact of internally Generated Revenue on Economic Development in Nigeria from 1981 to 2016, using ex-post facto research design. The findings show that federal government independent revenue has positive and significant impact on economic development in Nigeria.

Asaolu et al. (2018) employed ARDL model to study the impact of non-oil revenue on economic growth in Nigeria from 1994 to 2015. The findings showed that CIT has negative but significant impact on economic growth in Nigeria. Likita et al. (2018) also examined the impact of non-oil revenue on economic growth in Nigeria between 1981 and 2016, using error correction model and the result showed that company income tax has negative relationship with gross domestic product in Nigeria. Salami et al. (2018) used ordinary least square method to analyze the impact of non-oil revenue on economic growth in Nigeria between 1981 and 2016. It was revealed that non-oil revenue has significant impact on economic growth in Nigeria. Aderoju (2017) studied the empirical

analysis of oil revenue, non-oil revenue and economic development in Nigeria between 1980 and 2015, using ordinary least square method. The result showed that non-oil revenue has a positive and significant relationship on economic development in Nigeria.

Nwaeze et al. (2017) also studied the impact of non-oil revenue on economic growth in Nigeria spanning from 1994 to 2015, using ordinary least square method. The result showed that value-added tax, agricultural revenue, manufacturing revenue exerts positive and significant impact on economic growth in Nigeria. Oraka et al. (2017) examined the impact of non-oil revenue on economic growth in Nigeria from 2003 to 2015, using simple regression analysis. The result showed that VAT has no significant effect on economic growth in Nigeria.

3.0 Data and Methodology

3.1 Sources of Data

Time series data were collected on the variables for this study. The data for all the variables such as gross domestic products (GDP), Value-Added Tax, Company Income Tax, and Federal Independent Revenue were sourced from National Bureau of Statistics.

3.2 Model Specification

In line with the objectives and the theoretical underpinning of this study, the study of Adeigbe et al. (2020) was adopted and modified. The study employed vector error correction techniques to analyze the impact of non-oil revenue on economic growth in Nigeria between 1990 and 2021. Data were collected on gross domestic product (GD), value-added tax (VAT), corporate income tax (CIT) and federal independent revenue (FIR). GDP is the proxy for economic growth which is the dependent variable while VAT, CIT and FIR are the explanatory variables. To accomplish the aim of the study, an econometric model was built in line with the theory. The model of Adeigbe et al. (2020) is thus specified as;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon_t \quad (1)$$

Where, Y = RGDP and represents n x 1 vector, β_0, β_1, β_2, = Regression coefficients, X_1 = Value-Added Tax, X_2 = Company Income Tax, ε = Error term.

The model for this study is specified in a functional form as in equation 2, which is the modification of Adeigbe et al, (2020);

$$GDP = f(VAT, CIT, FIR) \quad (2)$$

The stochastic form of the model is expressed in equation 3 as;

$$GDP_t = \beta_0 + \beta_1 VAT_t + \beta_2 CIT_t + \beta_3 FIR_t + \mu_t \quad (3)$$

Where, GDP is gross domestic product, proxy for economic growth, VAT is Value-Added Tax, CIT is Company Income Tax, FIR is Federal Independent Revenue, μ is the stochastic error term which explains other variables that cannot be captured in the model. β_0, β_1, β_2, β_3 are the slopes of the coefficients.

The error correction model is specified as;

$$GDP_t = \beta_0 + \Sigma_{i=1}^{q}\beta_1 \Delta GDP_{t-1} + \Sigma_{i=1}^{q}\beta_2 \Delta CIT_{t-1} + \Sigma_{i=1}^{q}\beta_3 \Delta VAT_{t-1} + \Sigma_{i=1}^{q}\beta_4 \Delta FIR_{t-1} + ECT_{t-1} + \mu_t \quad (4)$$

Where, ECT_{t-1} expresses the error correction term of growth equation.

3.3 Data Analysis Techniques

This study investigates the impact of non-oil revenue on economic growth in Nigeria. To estimate the parameters of the model, vector error correction mechanism (VECM) was employed. This method was used to check the speed of adjustment from the short-run to long-run equilibrium state. It is more appropriate because it gives more efficient estimates. VECM can also be used to estimate both the long term and short term effects of the variables in the model. In addition, the study used Augmented Dickey-Fuller test to test for unit root since the data is time series in nature. Johansen co-integration test was employed to test if a long-run relationship exists among the variables. All these techniques employed help this study to achieve its objectives.

4.0 Data Presentation and Interpretation of Results

4.1 Test of Stationarity

This subsection deals with the test of unit root. Since time series data usually exhibit unit root, ADF unit root test was employed to test for stationarity. This test is necessary so as not to have misleading results. The result is thus presented in Table 1.

Table 1: Summary of the ADF Unit Root Test

Variables	ADF Statistics	Critical Value @5%	Order of Integration	P-Value @5%	Remarks
GDP	-5.261420	-2.963972	I(1)	0.0002	Stationary
CIT	-6.514961	-2.963972	I(1)	0.0000	Stationary
FIR	-4.863289	-2.967767	I(1)	0.0005	Stationary
VAT	-5.103999	-3.568379	I(1)	0.0014	Stationary

Source: Eviews 10.0 Output

The summary of the Augmented Dickey-Fuller (ADF) unit root test presented in Table 2 reveals the same order of integration among the series. The stationarity property is determined where, in absolute terms, the ADF statistics is greater than the critical values at 5 percent level of significance. Moreover, the significant p values at 5 percent level of prove the stationarity status of the series. From the result, all the variables attained stationarity at first difference.

4.2 Lag Length Selection Criteria

This section presents the result of the lag length selection criteria, using VAR lag length selection criteria. The test helped us to know the appropriate criterion and the lag length to apply for this study.

Table 2: Summary of VAR Lag Order Selection Criteria

VAR Lag Order Selection Criteria
Endogenous variables: GDP VAT CIT FIR
Exogenous variables: C
Date: 12/02/22 Time: 13:42
Sample: 1990 2021
Included observations: 31

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1585.092	NA	3.93e+39	102.5220	102.7071	102.5824
1	-1497.975	146.1313*	4.05e+37*	97.93387*	98.85902*	98.23544*

* indicates lag order selected by the criterion

Source: Eviews 10.0 Output

The result presented in Table 2 reveals the appropriate lag length and the criterion to be used for this study. The result shows lag one as the appropriate lag length and the criterion of Akaike due to the fact that the criterion has the lowest value among all the criteria. The decision rule is to choose the criterion with the lowest value. Therefore, the appropriate lag length for this study is one.

4.3 Cointegration Test

Since the stationarity status has been confirmed, the next step is to test for cointegration. In this study, Johansen cointegration test was conducted and the result is presented in Table 3.

Table 3: Summary of Johansen Cointegration Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	5% Critical Value	Prob	Max-Eigen Statistics	5% Critical Value	Prob
None *	0.905132	94.77662	47.85613	0.0000	70.65808	27.58434	0.0000
At most 1	0.397648	24.11854	29.79707	0.1955	15.20742	21.13162	0.2746
At most 2	0.252543	8.911115	15.49471	0.3737	8.732356	14.26460	0.3091
At most 3	0.005941	0.178759	3.841466	0.6724	0.178759	3.841466	0.6724

Source: Eviews 10.0 Output

Table 3 depicts the Johansen cointegration result. This test was conducted because all the variables are integrated of order one to ascertain whether there is long run relationship or not. Both Trace and Maximum-Eigen statistics indicate one cointegrating equation at 5 percent critical value. This long run relationship can also be observed be comparing the likelihood ratio with the critical values at 5 percent level of significance. If at any level of cointegration, the trace and Max-Eigen statistics are found to be greater than the critical value at 5 percent, then the null hypothesis of no cointegration can be rejected. From the result, there is only one cointegrating equation and the Trace and Max-Eigen statistics for the cointegrating equation are greater than the critical values at 5 percent. It is therefore concluded that there is long run relationship among the variables. Thus, the null hypothesis of no cointegration is rejected. Since long run relationship exists among the variable, the study conducted Vector error correction model.

4.4 Vector Error Correction Mechanism

The vector error correction model was conducted to determine the joint dynamic behaviour of a collection of variables without requiring strong restrictions to identify the underlying structural parameters. The result of the vector error correction model is presented in Table 4.

Table 4: Summary of Vector Error Correction Result

	Coefficient	Std. Error	t-Statistic	Prob.
CointEq1	-0.216626	0.030526	-7.096445	0.0000
D(GDP(-1))	0.285021	0.071220	4.001993	0.0001
D(FIR(-1))	-0.005549	0.001117	-4.969961	0.0000
D(CIT(-1))	0.022635	0.016348	1.384607	0.1694
D(VAT(-1))	0.058502	0.002359	24.80279	0.0000
C	571.4521	349.0161	1.637323	0.1048

R-squared = 0.979185 Adj. R-squared = 0.974848 F-statistic = 225.8025

Source: Eviews 10.0 Output

The result in Table 4 shows the short run dynamic behaviour of the model. Findings show that the coefficient of the lagged value of gross domestic product is 0.285021, meaning that 1 percent increase in the lagged value of GDP will increase the current value of GDP by 0.285. The coefficient of the lagged value of company income tax (CIT) in the short run is 0.022635. This implies that 1 percent increase in CIT will increase gross domestic product (GDP) by 0.023 percent in the short run. This finding is in line with the work of Adeigbe et al (2020), Yahaya and Yusuf (2019) and also in conformity with a priori expectation. This is however against the work of Asaolu et al (2018) who found that CIT has negative impact on economic growth in Nigeria. The economic implication of this is that, any additional increase in company income tax will result in additional increase in gross domestic output. This is so because the revenue from CIT will be used to put in place infrastructures that would boost output growth. However, in the real sense of it, CIT has not contributed much to revenue generation in Nigeria. The reason being that, the economic situation of Nigeria is discouraging both the existing companies and the potential investors to invest. This has reduced the number of companies operating in Nigeria, and the resultant effect is the reduction in revenue from non-oil.

The coefficient of the lagged value of Federal Independent revenue (FIR) stands at -0.005549 in the short run. This indicates a negative relationship with GDP and it suggests that 1 percent increase in FIR will decrease the value of GDP by 0.006 percent in the short run. It implies that the revenue from government-owned enterprises has not to increase GDP. This is not in conformity with a priori expectation as it is expected to have positive impact on economic growth in Nigeria. The reason is that, FIR which is the revenue from government-owned enterprises always falls short of the expected revenue. The result also shows that the coefficient of the lagged value of value-added tax (VAT) is 0.058502 in the short run. It indicates that 1 percent increase in VAT will increase GDP by 0.059 percent in the short run. This shows a positive relationship with GDP and it implies that VAT has contributed much to revenue generation which is then used for developmental projects that enhanced output growth in Nigeria. The findings of this study corroborate the findings of Ogbonna (2021); Nedra and Kavita (2020) and Adeigbe et al (2020) who found a positive and significant relationship between VAT and economic growth in Nigeria. It also supports the theoretical propositions that VAT is crucial in enhancing the revenue generation of any nation.

The error correcting term, that is, the speed of adjustment carries the expected sign and it is significant at 5 percent level of significance. The coefficient of error term is -0.216626 and it indicates a feedback of about 22 percent disequilibrium in the previous year is corrected in the current period. Judging from the p values to determine the significance levels of the variables, the result suggests that FIR and VAT are statistically significant owing to the fact that the p values are less than the critical values at 5 percent level. These lead to the rejection of the null hypotheses for the variables (FIR and VAT). However, the p value for CIT which is greater than 0.05 suggests that company income tax has no significant impact on economic growth in Nigeria. Based on these, the null hypothesis is accepted that CIT has no significant impact on economic growth in Nigeria. The R^2 is 0.979185 which implies that about 98 percent variations in GDP are explained by CIT, VAT and FIR. This is quite high and it

shows that the model is a good predictor of economic situation. The F-statistic of 225.8026 also shows that the variables (VAT, CIT, FIR) are jointly statistically significant at 5 percent level of significance as the F-calculated is greater than F-tabulated.

4.5 Post-Estimation Diagnostic Tests

These tests are carried out to check the robustness and the reliability of the results. For this study, heteroscedasticity and Ramsey Reset tests were carried out and the results are presented in Tables 6 and 7 respectively.

4.5.1 Heteroscedasticity Test

This test is carried out to check if the mean and variance are the same or not. The Breusch-Pagan-Godfrey test was used and the result is presented in Table 5.

Table 5: Summary of Heteroskedasticity Test: Breusch-Pagan-Godfrey
Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.164372	Prob. F(5,24)	0.3552
Obs*R-squared	5.856638	Prob. Chi-Square(5)	0.3204
Scaled explained SS	11.99502	Prob. Chi-Square(5)	0.0349

Source: Eviews 10.0 Output

From Table 5, the result of heteroscedasticity test, using Breusch-Pagan-Godfrey shows that the F-statistic and Obs*R-squared of 1.164372 and 5.856638 with their p values of 0.3552 and 0.3204 respectively are greater than the critical value at 5 percent level of significance. This shows that the model is homoscedastic and the null hypothesis of no heteroscedasticity is accepted.

4.5.2 Ramsey Reset Test

This is a test of stability which shows whether the model is correctly specified or not. The result of the Ramsey Reset test is thus presented in Table 6.

Table 6: Summary of Ramsey Reset Test

Ramsey RESET Test
Equation: UNTITLED
Specification: D(GDP) C D(GDP(-1)) D(CIT(-1)) D(VAT(-1)) D(FIR(-1)) ECM(
-1)
Omitted Variables: Squares of fitted values

	Value	Df	Probability
t-statistic	11.19780	23	0.8556
F-statistic	125.3907	(1, 23)	0.0663

Likelihood ratio	55.93064	1	0.0834

Source: Eviews 10.0 Output

From the result in Table 6, the F-statistic of 125.3907 with the p value of 0.8556 indicates that the model is correctly specified since F-statistic is greater than the critical value at 5 percent level of significance. It is therefore concluded that there is no misspecification in the model. Thus, the null hypothesis which states that the model is not correctly specified is rejected.

5.0 Conclusion and Policy Recommendations

5.1 Conclusion

The study investigates the impact of non-oil revenue on economic growth in Nigeria between 1990 and 2021. The vector error correction model was used and the findings revealed that positive relationship exists between company income tax, value-added tax and economic growth in Nigeria. The implication of this finding is that value-added tax and company income tax are contributing greatly to non-oil revenue which has helped to enhance economic growth in Nigeria. This can be attributed to the recent increase in VAT and functioning system of tax administration in collecting this tax. The result however reveals a negative impact between federal independent revenue (FIR) and economic growth in Nigeria. The reason is that government-owned enterprises which generate FIR have not lived up to expectation because the revenue from these government-owned enterprises always falls short of the projected values. The measurement of the goodness of fit (R^2) shows that about 84 percent variations in GDP are explained by CIT, VAT and FIR. This implies that the variables of the model can be used to predict economic situations. The post estimation tests conducted reveal that the results are reliable and that the model is correctly specified. It is therefore concluded that non-oil revenue has significant impact on economic growth in Nigeria.

5.2 Policy Recommendations

Based on the findings from this study, the study makes the following recommendations.

i. Since federal independent revenue has negative impact on economic growth, government should ensure that the law as provided by the Fiscal Responsibility Act of 2007 is strictly enforced on these GOEs. This will help the FIR to contribute more to non-oil revenue which will then be committed to developmental projects that will enhance economic growth in Nigeria.

ii. With the positive and significant impact of VAT on economic growth, government should increase the tax base to incorporate more payers in order to increase the revenue from VAT.

iii. Although, CIT has positive but insignificant impact on economic growth in Nigeria. Government should reduce CIT to about 18 percent and as well provide the enabling environment for more corporate investors to invest. This would help to generate more revenue from the companies' income, which will further strengthen the revenue from non-oil and economic growth as a whole.

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