

# Oil and Non-Oil Revenues on Economic Growth In Nigeria (1981-2021)

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## Abstract

Over the years Oil and Non-oil revenue have been adjudged to be the main source of Nigeria income. However, the extent to which Oil and Non-oil revenue have impacted on economic growth in Nigeria is with mixed outcome and inconclusiveness given the decline and instability in oil revenue and consequently, with the sluggish rate of Nigeria economic growth. Therefore, this study examined the impact of oil and non-oil revenues on economic growth in Nigeria. The study employed time series data sourced from Central Bank of Nigeria Statistical Bulletin 2020, spanning from the period of 1981 to 2021 using econometric technique of Autoregressive Distributed Lag and Ordinary Least Square to analyze the impact these aforementioned variables have on economic growth. Finding of this study revealed that Oil and Non-oil revenue have significant and positive impact on economic growth under the period studied. Based on the findings of the study, it was recommended among others that the government should continue to widen oil exploration and expand non-oil revenue through technological innovation, technical-know-how and economic diversification in order to continue to sustain economic growth.

**Keywords:** Autoregressive Distributed Lag, Crude-Oil, Non-Oil Revenue, Gross Domestic Product, Economic Growth,

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Date of Submission: 17-07-2022

Date of Acceptance: 01-08-2022

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## I. Introduction

Over the years, the bulk of Nigeria government revenues come from both non-oil and oil sector. According to World Bank (2013), however, before the discovery of oil in Nigeria, the non-oil sector contributed about 95% of the national foreign exchange earnings, generated over 65% of employment capacity and approximately 56% to Gross Domestic Product (GDP). However, following the discovery of oil in marketable quantity, the oil sector became the largest contributor to the nation's revenue base and as well as contributing greater percent to GDP. Nevertheless, the dynamics of the Nigerian economy and its revenue base is at the whims and caprices of oil and non-oil learning (Enoma & Isedu, 2011).

Given the foregoing, one cannot measure economic growth in Nigeria without examining the contribution of both oil and non-oil. However, with oil boom experiences in Nigeria in early 1972 much attention has been paid to revenue from oil sector with less attention to non-oil sector. The non-oil sector is being left at the mercy of individual private sector who has less capacity to grow the economy. Sectors like agriculture and manufacturing are becoming less attractive and is witnessing low income generation. Furthermore, agriculture continues to witness decline in output with increase in cost of factor input thereby resulting to economic imbalance, shortage in raw material to industry, food, unemployment as well as inflation with negative attendant effect on balance of payment. In the same vein, manufacturing sector witnesses' capital flight, liquidation, transfer of manpower, technical-know-how, high rate of labour turnover as well as closure of many industries.

Conspicuously, reliance on revenue from crude oil now poses a great challenge to Nigeria government due to oil price instability in the international market as well as low oil production due to activities of economic sabotage ranging from pipe-line vandalisation, oil theft, and corruption that is entrenched in the sector. More so,

regardless of the considerable proceeds obtained from both internal and external sale of crude oil, its effect on total revenue and economic growth with regards to promoting efficiency in other sectors remains doubtful.

Olusoji, Olubunmi and Ojoye (2018) emphasized that the Nigerian government has received its revenue from the oil sector up to about 85% while the non-oil sector contributes only 15%. Nevertheless, it has also become more and more cumbersome to guarantee the adequacy and stability of future flows in oil revenue, given the dynamics at work in oil markets, which are intricate and ever changing.

In the same vein, efforts to revive agricultural sector which has been neglected comes with high cost of factors input and technological improvement. Consequently, in no doubt these situations have multiplier effects on the rate of economic growth. Whilst we acknowledge that there are avalanche of empirical evidences on the nexus between oil, non-oil revenue and economic growth in Nigeria. There is dearth of empirical evidences on the impact of oil and non-oil revenue has on economic growth in Nigeria. This study however seeks to further advance on evaluation of the impact of oil and non-oil revenue has on economic growth. In addition, prior studies have employed diverse statistical techniques such as ordinary least square and error correction mechanism in its investigation; this study tends to employ a different approach of Autoregressive Distributed Lag and Ordinary Least Square statistical technique to ascertain the impact oil and non-oil revenue has on economic growth in Nigeria. It is against this backdrop that this study examines the impact of oil and non-oil revenues on economic growth in Nigeria between the period of 1981 and 2020.

## **II. Literature Review**

Revenue is income earned by an individual or a business from the sale of any products or services offered. Expenses are deducted from a company's revenue to calculate its profit on an income statement. Government revenue in federal, state and local government refers to the money an entity receives from fines/penalties, property and sales taxes, income taxes, corporate payroll contributions, rental fees, intergovernmental transfers and securities sales (Hersh, 2022). According to Hayes (2021) revenue is the money generated from normal business operations, calculated as the average sales price times the number of units sold. It is the top line (or gross income) figure from which costs are subtracted to determine net income. Revenue is also known as sales on the income statement. According to Ihendinihu, Ebieri and Amaos (2014), two main sources of federal government of Nigeria revenue are oil and non-oil revenue. Non-oil revenue accruing from non-oil sector comprises of economic activities outside the petroleum and gas industry or those not directly linked to them which include manufacturing, solid minerals, agriculture, telecommunication, financial assets, services and the likes while Oil revenue accrues from Crude oil export, petroleum and gas industry or those directly linked to them. Oil and gas has continued to account for over 80% of the total government revenue, while the remaining 20% is contributed by non-oil sector (Okwara&Amori, 2017). However, both source of revenue contribute to economic growth.

The term economic growth is described as the positive and sustained increase in aggregate goods and services produced in an economy within a given time period (Adeneye, Otto &Cookey, 2014; Adeneye& Isa, (2016). It is conventionally measured as the percent rate of increase in Real Gross Domestic Product (RGDP) (Ude&Agodi, 2014; and Ogbonna, Uwajumogu, Chijoke&Agu, 2013).

Theoretically, this study is anchored on the resource curse theory. The resource curse theory or paradox of plenty takes its root in the work of Przeworski Adam in (1991). A paradox is said to exist when countries and regions with abundance of natural resources specifically non-renewable resources like minerals and fuels, tend to have less economic growth and worse development outcomes than countries with fewer natural resources (Akujuru, 2015). Przeworski (1991) argues that this happens as a result of neglect of other economic sector thereby causing a decline in the competitiveness of these sectors. This decline in competitiveness of other sector he attributes to an appreciation of the real exchange rate of the revenue from this sole resource often leading to volatility of revenues caused by market swings, mismanagement by government's corrupt and unstable institutions and agencies.

Arguably and rightly so is the idea that Nigeria's rich natural resource of oil has been more of a curse than a blessing. This is evident in the fact that despite the huge revenues that have accrued over the years from this resource, it has not been feasible to develop the other non-oil productive sector; consequently, the nation has been unable to transfer the accrued rich oil revenue into real term sustained development and growth. A larger proportion of its populace still grapple with poverty with attendant high level of unemployment, corruption and gross management of government funds.

Empirically, Olusoji, Olubunmi and Ojoye (2018) evaluate the impact of non-oil revenue on government revenue and economic growth in Nigeria using simple regression technique to analyze the study data. The study found a significant relationship between non-oil revenue and economic growth. More so, Ogba, Park and Nakah (2018) examined the relationship between oil, non-oil revenue and economic growth in Nigeria. The study employed regression model to analyze the time series data. Finding of the study revealed that a long run relationship exist between the non-oil revenue and economic growth. Fiiwe and Turakpe (2017) analyzed

the role of crude-oil export and non-oil export in relations to economic growth in Nigeria from 1980 to 2015. The study employed ordinary least square and error correction model to analyze the time series data for the study. Findings of the study revealed that both oil export sector and non-oil export sector have positive impact on economic growth. In the same vein, Nweze and Edame (2016) examined oil revenue and economic growth in Nigeria between 1981 and 2014. The study employed Johansen Co-integration test and Error Correction Mechanism (ECM) technique to analyze the study data. Finding of the study indicated that there is long run relationship among the variables understudy. Okezie Azubuike (2016) assessed the contribution of non-oil revenue to government revenue and economic growth in Nigeria from 1980 to 2014. The data was analyzed using Ordinary Least Squares Regression and result revealed a positive and significant contribution of non-oil revenue to economic growth and positive but slightly insignificant contribution to government revenue.

Furthermore, Ude and Agodi (2014) examined the time series role of non-oil revenue variables on economic growth in Nigeria. The study employed annual observations from 1980-2013. Results show that agricultural revenue, manufacturing revenue and interest rate have significant impact on economic growth in Nigeria. Olurankinse and Fatukasi (2012) examined the impact of non-oil sector on economic growth and found out that non-oil export had a positive impact on the growth of the Nigerian economy for the period they reviewed. Odularu (2008) examined the relationship between the crude oil sector and the Nigerian economic performance using the Ordinary Least Square regression method, the study revealed that crude oil consumption and export contributed to the improvement of the Nigerian economy.

However, due to the dynamic in oil and non-oil sector with their multiplier effect on economic growth in Nigeria, literature is yet to fully explore exhaustively the impact both oil and non-oil revenue have on economic growth. In particular no empirical study has employed time series data between 1981 and 2020 to ascertain the significant impact of the dependent variable (economic growth) on the independent variables (oil and non-oil revenue) in Nigeria. This has created gap in contextual literature. Thus, in order to fill this gap the study employed time series data between 1981 and 2020 to ascertain the significant impact of the independent variables (oil and non-oil revenue) on dependent variable (economic growth) in Nigeria.

### **III. Research Methodology**

This study examines the impact of oil revenue and non-oil revenue on economic growth in Nigeria. This study adopts the ex-post facto research design. Ex post facto design is a quasi-experimental study or after-the-fact research, in which the investigation starts after the fact has occurred without interference from the researcher. This study sourced secondary data (time series data) from Central Bank of Nigeria Statistical Bulletin 2020 on variables which includes; aggregate oil revenue, aggregate non-oil revenue and gross domestic product (GDP) in Nigeria, between 1981 and 2020. Thereafter, econometric techniques analysis of ordinary least square (OLS) and autoregressive distributed lag (ARDL) were adopted to analyze the data sourced.

#### **Model Specification 1: Ordinary Least Square (OLS)**

Functional relationship between the dependent and explanatory variables is as follows;

$$GDP = f(OILR, NOILR) \dots\dots\dots (1)$$

In explicit econometric form;

$$GDP_t = \beta_0 + \beta_1 OILR_t + \beta_2 NOILR_t + \mu_t \dots\dots\dots (2)$$

Where; GDP = gross domestic product; OILR = oil revenue and NOILR = nonoil revenue

#### **Model Specification 2: Autoregressive Distributed Lag (ARDL)**

ARDL model is linear time series model in which both the dependent and independent variables are related not only contemporaneously, but across historical (lagged) values as well.

In particular, if  $y_t$  is the dependent variable and  $x_1, \dots, x_k$  are  $k$  explanatory variables, a general ARDL( $p, q_1, \dots, q_k$ ) model is given by:

$$y_t = a_0 + a_{1t} + \sum_{i=1}^p \psi_i y_{t-i} + \sum_{j=1}^k \sum_{l=0}^{q_j} \beta_{jl} X_{j,t-l} + \varepsilon_t \dots\dots\dots (3)$$

where  $\varepsilon_t$  are the usual innovations,  $a_0$  is a constant term, and  $a_1, \psi_i$ , and  $\beta_{j,l}$  are respectively the coefficients associated with a linear trend, lags of  $y_t$ , and lags of the  $k$  regressors ( $x_{jt}$ ) for  $j=1, \dots, k$ . Alternatively, let  $L$  denote the usual lag operator and define  $\psi(L)$  and  $\beta_j(L)$  as the lag polynomials:

$$\psi(L) = 1 - \sum_{i=1}^p \psi_i L^i \text{ and } \beta_j(L) = \sum_{l=0}^{q_j} \beta_{jl} L^l \dots\dots\dots (4)$$

Then, equation (1) above can also be written as:

$$\psi(L)y_t = a_0 + a_{1t} + \sum_{j=1}^k \beta_j(L) x_{jt} + \varepsilon_t \dots\dots\dots (5)$$

Although ARDL models have been used in econometrics for decades. They have gained popularity in recent years as a method of examining cointegrating relationships. ARDL models are especially advantageous in their ability to handle cointegration with inherent robustness to misspecification of integration orders of relevant

variables. This study adopts the unrestricted autoregressive distributed lag model developed by Pesaran, and Smith (2001).

Relationship among oil revenue, non-oil revenue and economic growth

$$GDP_t = \beta_0 \sum_{i=1}^p + \beta_1 \Delta OILR_{t-1} + \beta_2 \Delta NOILR_{t-1} + \delta_1 OILR + \delta_2 NOILR + \mu_t \dots\dots (6)$$

Where GDP is gross domestic product, OILR is oil revenue, NOILR is nonoil revenue,  $\Delta$  is a difference operator, t is time,  $\beta_0$  is an intercept term,  $\beta_1$  and  $\beta_2$   $\delta_1$  to  $\delta_2$  are the coefficients of their respective variables and ps are the lag lengths while  $\mu_t$  is random error. To examine the existence of long-run relationship following Pesaran et al (2001), the study first test, based on Wald test (F-statistics), for the joint significance of the coefficients of the lagged levels of the variables, i.e. Ho:  $\delta_1 = \delta_2 = 0$  and H1:  $\delta_1 \neq \delta_2 \neq 0$

The asymptotic critical values bounds, which are tabulated in Pesaran et al (2001), provide a test for cointegration with the lower values assuming the regressors are I(0), and upper values assuming purely I(1) regressors. If the calculated F-statistics exceeds the upper critical value, the null hypothesis is rejected, implying that there is cointegration. However, if it is below the lower critical value, the null hypothesis cannot be rejected, indicating lack of cointegration. If the calculated F-statistics falls between the lower and upper critical values, the result is inconclusive. Once cointegration is established, the conditional ARDL long-run model can be estimated as:

$$GDP_t = \beta_0 \sum_{i=1}^p + \beta_1 \Delta OILR_{t-1} + \beta_2 \Delta NOILR_{t-1} + \mu_t \dots\dots\dots\dots\dots\dots (7)$$

In the next step, we obtain the short-run dynamic parameters by estimating an error correction model associated with the long-run estimates. This is specified as follows:

$$GDP_t = \beta_0 \sum_{i=1}^p + \beta_1 \Delta OILR_{t-1} + \beta_2 \Delta NOILR_{t-1} + \delta_1 OILR + \delta_2 NOILR + \vartheta ecm + \mu_t \dots (8)$$

Where *ecm* is the error correction representation of equation (8) and  $\vartheta$  is the speed of adjustment. Where  $\vartheta$  is the speed of adjustment parameter and ECM is the residuals that are obtained from the estimated co-integration model of equation. Pesaran et al., (2001) suggested applying the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares of recursive residuals (CUSUMSQ) tests whose equation is detailed in Brow, Durbin and Evans (1975) to assess the parameter constancy of the model. The justification for co-integration and error correction model is to add richness, flexibility and versatility to the econometric modeling and to integrate short-run dynamics with long-run equilibrium. Hence, accurate predictions can be more confidently made on the economic relationship between the variables.

**The Apriori Expectation:**  $b_1, b_2 > 0$ .

Eview 10 was used to generate and analyze descriptive as well as inferential statistics for the study. However, the analysis includes both residual and coefficient diagnostics tests in order to satisfy certain econometric assumptions.

#### IV. Data Analysis and Results Presentation

**Table 1:** Descriptive Statistics

	GDP	OILR	NOILR
Mean	34087.79	2487.904	1118.497
Median	7648.622	1411.264	407.6496
Maximum	154252.3	8878.970	4725.600
Minimum	139.3105	7.253000	2.984100
Std. Dev.	45875.59	2712.810	1449.174
Skewness	1.265728	0.716173	1.137608
Kurtosis	3.351861	2.204572	2.962014
Jarque-Bera	10.88680	4.473871	8.630086
Probability	0.004325	0.106785	0.013366
Sum	1363512.	99516.15	44739.89
Sum Sq. Dev.	8.21E+10	2.87E+08	81904093
Observations	40	40	40

Source: Researcher Computation 2022 using (Eview 10)

The study observation is 40. The result shows that GDP, OILR and NOILR skewness have positive sign which implies that the distribution exhibits long-right tail as well as normal skewness and platykurtosis because its kurtosis the values are less than or equal 3. If the kurtosis exceeds 3, the distribution is peaked (leptokurtic) relative to the normal; if the kurtosis is less than 3, the distribution is flat (platykurtic) relative to the normal.

The Jarque-Bera test statistic exceeds the probability value. Therefore the study can conclude that the residuals are not normally distributed. The descriptive statistics result indicates that the study data exhibited long tail to right shape if plotting in histogram graph.

**Table 2:** Series of Augmented Dickey-Fuller Test (ADF) Output Results

Coefficients	Critical Values at 5%	ADF Values	Probability	Order of Integration
D(GDP)	-2.967767	-0.341560	0.9066	I(1)
D(OILR)	-2.941145	-6.395981	0.0000	I(0)
D(NOILR)	-2.941145	-4.335401	0.0014	I(0)

Source: Researcher Computation (2022) using (Eview 10)

Table 2 present the series of unit root tests of (ADF). The results show that all the variables are not stationary of order I(0) in first differencing, as shown in table there is evidence of mixed unit root test result. GDP is not stationary while, the remaining variables are stationary. Therefore, autoregressive distributed Lag regression is appropriate econometric technique that can handle mixed data stationary test.

**Table 3:** Autoregressive Distributed Lag Estimate Result

Dependent Variable: GDP  
 Sample (adjusted): 1983 2020  
 Included observations: 38 after adjustments  
 Maximum dependent lags: 2 (Automatic selection)  
 Model selection method: Akaike info criterion (AIC)  
 Dynamic regressors (2 lags, automatic): OILR NOILR  
 Fixed regressors: C  
 Number of models evaluated: 18  
 Selected Model: ARDL(2, 1, 1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	0.625847	0.154870	4.041111	0.0003
GDP(-2)	0.449941	0.166530	2.701863	0.0111
OILR	1.205763	0.210395	5.730952	0.0000
OILR(-1)	-0.652499	0.217714	-2.997051	0.0053
NOILR	5.284146	1.552321	3.404028	0.0019
NOILR(-1)	-4.375434	1.634659	-2.676665	0.0118
C	241.2696	294.9050	0.818127	0.4195
R-squared	0.999347	Mean dependent var		35874.30
Adjusted R-squared	0.999221	S.D. dependent var		46397.99
S.E. of regression	1295.398	Akaike info criterion		17.33585
Sum squared resid	52019713	Schwarz criterion		17.63751
Log likelihood	-322.3811	Hannan-Quinn criter.		17.44317
F-statistic	7906.036	Durbin-Watson stat		2.108162
Prob(F-statistic)	0.000000			

\*Note: p-values and any subsequent tests do not account for model selection

Source: Researcher Computation (2022) using (Eview 10)

Table 3 presents, ARDL regression estimation, the first part of the output gives a summary of the settings used during estimation. The maximum dependent variable lag is 2 while the regressor is fixed at C including observation 38 after adjustment.

However, the coefficient of Gross Domestic Product GDP(-1) and GDP(-2) at period of lag 1 and 2 are approximately 0.62 and 0.44 respectively relatively high at lag 1 and low at lag 2 both lags are statistically significant with the probability value of 0.00 and 0.01 which are less than 0.05 level of significance. This implies that holding other independent variables constant, a one percentage increase in Gross Domestic Product (GDP), at period of lagged 1 and 2 translate to approximately 62% and 44% increase in its present value.

More so, the coefficients of the oil revenue (OILR) at current level period and period of lag 1 are 1.20 and -0.65 respectively with probability values of 0.00 respectively which are less than 0.05 level of significance suggest that OILR at current level and period of lag 1 have positive and negative sign and have statistically significant impact on economic growth. That is, one percent increase in OILR at current level lead to 120%

increase in economic growth. However, at period of lag 1 one percent increase in OILR effect an approximately, -65% change in economic growth (GDP). This result indicates that OILR have both positive and negative impact on economic growth depending on the sign.

Similarly, the coefficients of the nonoil revenue (NOILR) at current level period and period of lag 1 are 5.28 and -4.38 respectively with probability values of 0.00 respectively which are less than 0.05 level of significance suggest that NOILR at current level and period of lag 1 have positive and negative sign and have statistically significant impact on economic growth. That is, one percent increase in NOILR at current level lead to 528% increase in economic growth. While, at period of lag 1 one percent increase in NOILR causes a -4.38% negative changes in economic growth (GDP). This result indicates that NOILR have both positive and negative impact on economic growth depending on the sign.

The Coefficient of fixed variable, that is, constant (C) also known as the intercept is the value of economic growth when other independent variables have a value of zero is 241.2696 is statistically insignificant with probability value of 0.42 which is, greater than 0.05 level of significance. This result simply suggests that increase in economic growth in Nigeria is associated with other factors which are not explained by any of the explanatory variables stated in the model.

More so, the R-Square which is the coefficient of determination and also known as a measures of the goodness-of-fit, is 0.99, approximately 99%. This means that 99% of the changes in economic growth (GDP) at time t, are explained by the changes in the explanatory variables while, the remaining 1% could be explained by factors outside this model represented by error term. Adjusted R-squared, value is the same as R-Square that is 99% variation in the dependent variable is explained by only those independent variables that, in reality, affect the dependent variable. The overall model measured by F-statistics is 7906.036 with probability value 0.00 indicating that the model is good fit. More so, Durbin-Watson statistic (DW) is 2 shows there is no serial autocorrelation.

However, autoregressive distributed lag (ARDL) long-run model estimation procedure starts by conducting the bounds test for the null hypothesis of no co-integration. The asymptotic critical values bounds, which were tabulated in Pesaran, Shin, and Smith, (2001), provide a test for cointegration with the lower values assuming the regressors are I(0), and upper values assuming I(1) regressors. If the calculated F-statistics exceeds the upper critical value, the null hypothesis of no cointegration is rejected, implying that there is cointegration. However, if it is below the lower critical value, the null hypothesis cannot be rejected, indicating lack of cointegration. If the calculated F-statistics falls between the lower and upper critical values, the result is inconclusive. Once cointegration is established, the conditional ARDL long-run model can be estimated. Table 4 below presents ARDL Long Run Form and Bounds Test on which decision to conduct ARDL Error Correction Regression is based

**Table 4: Bounds Test Result**

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	16.58222	10%	2.63	3.35
k	2	5%	3.1	3.87
		2.5%	3.55	4.38
		1%	4.13	5

Source: Researcher Computation (2022) using (Eview 10)

Table 4 present the F-bound test of null hypothesis of no cointegration regression estimation in order to confirm the no long-run cointegration status. The calculated F-statistics of 16.58222 exceeds both the lower and upper critical values of 3.1 and 3.87 respectively at 5% significant level. Therefore, the null hypothesis of no cointegration is rejected, implying that there is cointegration thus the long run relationship estimate is justified.

**Table 5: Error Correction Regression Result**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-0.449941	0.152227	-2.955723	0.0059
D(OILR)	1.205763	0.183662	6.565134	0.0000
D(NOILR)	5.284146	1.120789	4.714667	0.0000
CointEq(-1)*	0.075789	0.008886	8.529232	0.0000
R-squared	0.933439	Mean dependent var		4055.349
Adjusted R-squared	0.927566	S.D. dependent var		4595.919
S.E. of regression	1236.928	Akaike info criterion		17.17795
Sum squared resid	52019713	Schwarz criterion		17.35033
Log likelihood	-322.3811	Hannan-Quinn criter.		17.23928
Durbin-Watson stat	2.108162			

\* p-value incompatible with t-Bounds distribution.

**Source:** Researcher Computation (2022) using Eview10

Table 5 present, autoregressive distributed lag error correction mechanism regression estimation, in this context, the estimated parameters were subjected to test based on economic theory so as to ascertain whether they agree with expected sign. In other words, the model sought to relate the Gross Domestic Product (GDP) which is proxy for economic growth to its explanatory variables which includes; oil and nonoil revenue to ascertain the conformation with ‘a priori’ expectation underlying each variable.

More so, the result shows that, the CointEq(-1) coefficient of the error correction term which measures the speed of adjustment towards long-run equilibrium is positive and significant at 5% level. The ECM CointEq(-1) coefficient does not has the expected negative sign of 0.07 but significant with p-value of 0.00 less than 0.05% level of significant. This implies that the rate at which variation of economic growth (GDP) at time t, adjusts to the single long-run co-integrating relationship is different from zero. In other words, the equation of growth of Gross Domestic Product (GDP) contains information about the long run relationship the reason why co-integrating equation enter the model automatically. The coefficient of the ECM revealed that the speed with which changes in GDP adjusts respond to regressors is about 7% in the short-run.

The policy implication of this result is that oil and nonoil revenue in Nigeria is very significant to economic growth this finding is in line with Fiiwe and Turakpe (2017); Olurankinse and Fatukasi(2012) whose studied revealed that both oil export sector and non-oil export sector have positive and significant impact on economic growth.

In addition, ordinary least square result is presents in table 6 with consideration for lag period

**Table 6: Ordinary Least Square Result**

Dependent Variable: GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	123.1463	1029.201	0.119652	0.9054
OILR	-1.384276	0.439591	-3.149007	0.0032
NOILR	33.44533	0.822902	40.64315	0.0000
R-squared	0.989806	Mean dependent var		34087.79
Adjusted R-squared	0.989255	S.D. dependent var		45875.59
S.E. of regression	4755.455	Akaike info criterion		19.84401
Sum squared resid	8.37E+08	Schwarz criterion		19.97068
Log likelihood	-393.8802	Hannan-Quinn criter.		19.88981
F-statistic	1796.237	Durbin-Watson stat		1.422563
Prob(F-statistic)	0.000000			

**Source:** Researcher Computation (2022) using Eview10

The OLS result in table 6 indicates that both oil revenue and nonoil revenue are significant with the probability value of 0.00 which is less than 0.05 level of significant. More so, the coefficient of oil revenue (OILR) is -1.38 indicating that one percent increase in OILR result to -138 percent changes in economic growth.

On the contrary, the coefficient of nonoil revenue (NOILR) is 33.4 indicating that one percent increase in NOILR result to 334 percent changes in economic growth.

## V. Conclusion and Recommendations

This study examines the impact of oil and nonoil revenue on economic growth in Nigeria between the periods of 1981 and 2020. This study employed secondary data which were sourced from Central Bank of Nigeria Statistical bulletin 2020 on gross domestic product (GDP) proxy for economic growth which serves as dependent variable; oil and nonoil revenue which serve as independent variables. Thereafter, Autoregressive Distributed Lag Model was employed to analyze data sourced in order to ascertain the short run and long-run relationship between the dependent and independent variables. Findings of this study show that at 0.05 levels of significance oil and nonoil revenue have both positive and negative statistically significant impact on economic growth at current levels and lag 1 respectively. The negative impact suggests that oil and nonoil revenue does not boost economic growth while, the positive impact implies that oil and nonoil revenue need to be sustain in order to continue affect economic growth positively. Therefore, it can be concluded that oil and nonoil revenue have significant impact on economic growth. Based on the findings of this study, the following recommendations are suggested: That, Nigeria governments at all level should formulate and implements policies that will continuing widen oil exploration and expanding non-oil revenue through technological innovation, technical-no-how and economic diversification in order to continuing sustaining economic growth.

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