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Analysis of the Impact of Oil Revenue on Economic Growth of Nigeria between 1981 And 2018

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Abstrac*t: this research was carried out to analyze the impact of oil revenue on economic growth of Nigeria between 1981 and 2018. Ex – post facto research design was employed; data used for analysis were elicited from Central Bank Statistical Bulletin of 2018. Gross Domestic Product (GDP) was employed as the dependent or effect variable, while oil revenue data was used as a measure of amount of oil revenue accrued to the federal government of Nigeria (independent or causal variable). Foreign Direct Investment (FDI) and Exchange Rate (EXR) were employed as controlled variables. This study employed Auto Regressive Distributed Lag (ARDL) Model to analyze data, other diagnostic tests such as; unit root test, test of Normality, Auto correlation test, Heteroskedasticity test and Breusch-Godfrey Serial Correlation LM test were also carried out and they confirmed the validity and reliability of the model employed; the inferential results pointed that oil revenue impacted positively and significantly on economic growth of Nigeria between 1981 and 2018. The study therefore recommended that since oil revenue had a significant positive impact on economic growth of Nigeria within the period under review and also makes up about 70% of Nigeria's annual budget, it was imperative for government to enhance oil exploration and ensure that the activities of militants and oil facilities vandals are reduced to the barest minimum if not completely eradicated so as too boost oil production in Nigeria and in turn facilitate the enhancement of economic growth. Government should also diversify the economy from and oil dependent economy to agriculture, this will provide another source of revenue to the government and curb the over reliance on oil revenue.*

Keywords: *oil revenue, economic growth, gross domestic product, exchange rate, foreign direct investment and Auto Regressive Distributed Lag (ARDL) Model.*

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I. Introduction

1.1 Background to the study:

The Nigerian economy is mainly dependent on oil and gas revenue to finance its budget, so it suffices to say that the Nigerian economy is oil and gas dependent. The lack of foresight of the leaders and key macroeconomic policy makers led to their failure to take advantage of oil boom that was experienced in Nigeria between 2011 and 2014. Such funds would have been used to diversity the economy from oil dependency to an agricultural driven economy. As of today, the Nigerian economy is still very much dependent on oil revenue to finance its annual budget, although the present administration is trying to move the economy towards agriculture, but the results of their effort is too infinitesimal to have a major impact on the economy of Nigeria.

Prior to the discovery of oil in Nigeria, agricultural sector was the main stay of Nigeria economy, contributing about 95% to her foreign exchange earnings, generating over 60% of her employment capacity and approximately 56% to her gross domestic earnings (World Bank, 2013). The major exportable crops were cocoa, palm products, cotton, ground nut, timber and rubber, with these products contributing most of Nigeria's export, Agriculture was the leading growth sector of the Nigerian economy while oil export was very poor. As a matter of fact, several literatures on the Nigerian economy have it that Nigeria was primarily an agriculture dependent economy, whose revenue generation was based on agriculture; statistics from the federal Bureau of statistic indicates that between 1958 and 1969, the contribution of petroleum (GDP) at current factor was just 0.007 percent. While agriculture formed the mainstay of the country's economy accounting for higher percentage of Gross Domestic Product (GDP).

Meanwhile, with the discovery of oil at Oloibiri area of Bayelsa State in 1956 by Shell BP, oil has remained a major source of energy and income in Nigeria. Although Nigeria's oil industry was founded at the beginning of the century, it was not until the end of the Nigeria civil war (1967-1970) that the oil industry began to play a prominent role in the economic life of the country.

Oil- exporting countries of the developing world depend heavily on oil revenue for foreign exchange earnings and for the government budget in most cases reaching 90 percent or above. The petroleum industry covers the exploration and production of crude oil as well as petroleum refining, marketing and servicing. The oil boom of the 1970s led to Nigeria's neglect of its strong agricultural and light manufacturing bases in favour of an unhealthy dependence on crude oil. In 2002 oil and gas exports accounted for more than 98% of export earnings and about 83% of federal government revenue. In 2011, fuel exports were 89 per cent of all merchandise exports. New oil wealth, the concurrent decline of other economic sectors, and a lurch toward a statist economic model fueled massive migration to the cities and led to increasingly widespread poverty, especially in rural areas. A collapse of basic infrastructure and social services since the early 1980s accompanied this trend.

There have been several studies on oil revenue and Nigerian economic growth such as (Joseph, U., Michael, C. and Stella, O., 2016; Ogunmakin, A., Adebayo, A., and Dada, R. 2014; Nweze P., and Greg, E. 2016; Akinlo, 2012; Ujunwa, 2013; Odularu, 2004; Iyohu, 2000) but the years under review of those studies did not cover up to 2018. Therefore, this study fills the gap of currency.

1.2 Statement of Problem

This study is undertaken to investigate the impact of oil revenue on economic growth of Nigeria between 1981 and 2018. The problem this study aims to resolve is to devise measures of how to diversify the Nigerian economy from total oil dependency. Over reliance on oil revenue to finance national budget could lead to economic recession and or shortage of revenue (chronic budget deficit) in financing budget. When there is any major shock in the global oil market which will cause the fluctuations in oil prices across the globe, there will be a direct negative effect on the economy of Nigeria as oil revenue will plummet. So in the light of the above identified problem that this study is undertaken to find another veritable source of revenue for the government that would help in diversifying the sources of funding to the government and help maintain economic stability in the Nigerian economy.

This study is classified into five main sections. Section one contains the introduction of the study, section two contains the literature review, section three contains the methodology, section four covers analysis of data and interpretation of result, and section five covers conclusion and suggest recommendations.

1.3 Objectives of the Study:

1. To ascertain the impact of oil revenue on economic growth of Nigeria.
2. To investigate the impact of foreign direct investment on economic growth of Nigeria.
3. To evaluate the impact of exchange rate on economic growth of Nigeria.

1.4 Research Hypotheses

HO_1. Oil revenue has no impact on economic growth of Nigeria.
HO_2. Foreign direct investment has no impact on economic growth of Nigeria.
HO_3. There is no impact of exchange rate on economic growth of Nigeria.

II. Review of Related Literature

2.1 Theoretical Literature Review

2.1.1 Resource endowment theory of growth:

The major advocates of this theory was Adam Smith "absolute cost advantage", David Ricardo " Comparative cost advantage" among others, they argues that countries should specialize to produce and export according to their comparative advantage. The theory of comparative advantage suggests a country gains the greatest economic benefit relative to other countries by producing at lower overall cost, commodities which a country has in abundance or can be easily produced. Other countries will therefore benefit form trade only if they accept the cost advantage of the trading country and focus on producing a commodity in which they have an advantage (Igbesere, 2013). It is this theory that guides resource endowment economist's belief in free trade, specialization and the international division of labour. This was their reasoning behind why some countries produce agricultural and mineral commodities while others produce industrial goods (O'Toole, 2007; Igbeasere, 2013).

The doctrine of comparative advantage according to the Heckscher-Ohlin (HO) theory states that countries produce and export the commodities which require the use of its abundant productive factors intensely (Feenstra, 2004). This model is based on the assumption of two countries, two goods and two factors and assumes that both countries have identical technologies, identical tastes, free trade in goods and different factor endowments (Feenstra, 2004). This theory was based on the proposition that countries (developed nations: Japan, Germany, United Kingdom, etc.) with an abundance of capital would export capital intensive goods and import labour intensive goods, while countries (most third world countries: African and part of Asian countries)

with an abundance of labour would export labour intensive goods and import capital intensive goods (Igbeasere, 2013). A number of empirical works have evolved to test the HO theory including Leontief (1953), he studied the U.S economy in order to prove the doctrine of comparative advantage. He utilized U.S. economy data on input - output accounts and U.S trade data from 1947 to evaluate the Heckscher- Ohlin-Samuelson (HOS) model (Igbeasere, 2013). He first measures the labour and capital used directly and indirectly in each exporting industry in order to determine the amount of labour and capital required in the production of one million dollars of U.S exports and imports (Feenstra, 2004). Leontief finds that each person employed works with $13,700 worth of capital in producing the exports and each person employed works with $18,200 worth of capital in producing the imports. Although the U.S was capital abundant in 1947, Leontief's findings appear to contradict the HO theory and his study would come to be known as the Leontief Paradox (Feenstra 2004; Igbeasere, 2013).

2.1.2 Institutional Economist:

This school developed as a reaction to the resource endowment economist, they argued that the resource endowment economists' assumptions of perfect information, no transaction costs, perfect competition and unbounded rationality are not always valid. These groups instead of accepting the postulation of resource endowment economist assume individuals do not have perfect information and due to their limited mental capacity create formal and informal institutions to reduce the risk of uncertainty and transaction costs. Individuals develop systems of organization to motivate agents. Therefore, the performance of the economy is dependent on the formal and informal institutions (Menard and Shirly, 2008; Igbeasere, 2013). According to NIE, transaction costs are dependent on the institutional setting; therefore, the political institutions are influential in rules, laws and contracts (Menard et al. 2008). However, both NIE and resource endowment economist accept the assumptions of competition and scarcity (Menard et al, 2008; Igbeasere, 2013).

NIE attempts to answer the question surrounding the inability of countries to foster sustainable growth and looks to the role of institutions for the answer. NIE ultimately believes that the quality of institutions will fundamentally determine the countries which experience good economic growth and the countries which do and not (Frankel 2010; Igbeasere, 2013). According to NIE, countries with high transaction costs have less trade, specialization, investment and productivity (Shirley, 2008). As Sachs and Warner (1995) points out, per capita income of resource poor countries grew three times faster between 1960 and 1990 than resource abundant countries.

2.2 Empirical Literature Review

This section analysis the literature of past studies embodying oil revenue and its impact on economic growth of an economy, several literatures abound on the said impact of oil revenue on the economic performance of the oil producing countries. However, there are conflicting results on the nature of the relationship between the two concepts, with some indicating reverse causality and others resulting in insignificant parameters, leading to the need for more in-depth research on the subject matter.

Ogunmakin, *et al* (2014) investigated the impact of oil revenue on economic development in Nigeria (1981-2012) their study sought to examine the economic development and oil revenue in Nigeria. In doing this, regression analysis was carried out using SPSS. The result revealed the overdependence of Nigeria economy on oil revenue. Thus, this paper recommends policies and functional institutions to checkmate the poor transparency in the management of oil revenue that robbed the people of their potential benefits and economy diversification that will lead to improvement in revenue generation via other sources in the economy.

Nweze, *et al* (2016) undertook a study captioned An Empirical Investigation of oil revenue and economic growth in Nigeria. This empirical study examined oil revenue and economic growth in Nigeria between 1981 and 2014. Secondary data on gross domestic product (GDP), used as a proxy for economic growth; oil revenue (OREV), and government expenditure (GEXP) which represented the explanatory variables were sourced mainly from CBN publications. In the course of empirical investigation, various advanced econometric techniques like Augmented Dickey Fuller Unit Root Test, Johansen Cointegration Test and Error Correction Mechanism (ECM) were employed and the result reveals among others: That all the variables ware all stationary at first difference, meaning that the variables were not integrated of the same order justifying cointegration and error correction mechanism test. The cointegration result indicated that there is long run relationship among the variables with three cointegrating equation(s). The result of the error correction mechanism (ECM) test indicates that all the variables except lag of government expenditure exerted significant impact on economic growth in Nigeria. However, all the variables exhibited their expected sign in the short run but exhibited negative relationship with economic growth in the long run except for government expenditure, which has positive relationship with economic growth both in the long run and shor trun. The study concluded that Government should use the revenue generated from petroleum to invest in other domestic sectors such as Agriculture and manufacturing sector in order to expand the revenue source of the economy and further increase the revenue base of the economy.

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. The study recommends that government should implement policies that would encourage the private sector to participate actively in the crude oil sector.

Ibeh (2013) investigated the impact of the oil industry on the economic growth performance of Nigeria. Using ordinary least square (OLS) regression technique, she regressed Gross Domestic Product (GDP), against oil Revenue (OREV) and time appeared as repressor. A two tailed test of 5% significant levels were conducted indicating that the two explanatory variables did not have any significant impact on growth performance of the Nigerian economy within the same period. The researcher therefore recommends that government should formulate appropriate policy mix that would motivate the firm in the oil sector to enhance improved performance and contribution of the sector. Her findings contradict the findings of Odularu (2008), who found a positive relationship between oil sector and Nigeria economic performance.

Akinlo (2012) assessed the importance of oil in the development of the Nigerian economy in a multivariate VAR model over the period 1960-2009. He model oil sector against other four sectors i.e. manufacturing, agriculture, trade and service and building & construction. Empirical evidence shows that the five subsectors are cointegrated and that the oil can cause other non-oil sectors to grow. However, oil had adverse effect on the manufacturing sector.

Granger causality test finds bidirectional causality between oil and manufacturing, oil and building and construction, manufacturing and building and construction, manufacturing and trade and services, and agriculture and building and construction. It also confirms unidirectional causality from manufacturing to agriculture and trade and services to oil. No causality was found between agriculture and oil, likewise between trade and services and building and construction. The paper recommended appropriate regulatory and pricing reforms in the oil sector to integrate it into the economy and reverse the negative impact of oil on the manufacturing sub sector.

III. Methodology

3.1 Research Design

This study adopts the *ex-post facto* research design as it deals with event that had taken place and secondary data were readily available for collection. Real GDP was adopted as the explained (dependent) variable, while oil revenue and Nigeria's corruption perception index were employed as the explanatory (independent) variables, while exchange rate was used as the control variable. The model was estimated using the Ordinary Least Square (OLS) method. Since we are making use of annualized time-series data and the study cover a long sample period, we made sure our data set were not impaired by unit root; hence we tested for stationarity of the series by employing the Augmented Dickey-Fuller (ADF).

3.2 Source of Data Collection

Data for this study are elicited from Central Bank of Nigeria Statistical Bulletin of 2018. The study period covers 1981 through 2018.

3.3 Method of Data Analysis

This study used descriptive statistics, unit root test, correlation and Auto Regressive Distributed Lag (ARDL) Model in testing the hypotheses of the study. E-view 9.0 econometric statistical software package was used for the analysis.

3.4 Model Specification

This study adapts the model used by Baghebo and Atima (2003). The model was used to analyse the impact of petroleum on economic growth of Nigeria. According to them, economic growth is a function of oil revenue, foreign direct investment and external debt and corruption index. This is written as:

GDP= f(OILR, FDI, EXDEBT, CI).....……..(1)

By modifying the functional model in equation (1) into econometric model:

$GDP = \beta 0 + \beta 1OILRt + \beta 2FDIt + EXDEBTt + CIt + \mu t$……...…… (2)

Where β0, β1, β2 are the parameters

GDP = Gross Domestic Product

OILR = oil revenue

FDI = Foreign direct investment

EXDEBT = external debt

CI = Corruption Index

μt =Stochastic disturbance

In = Log

ε = error term

However, this study adapted the scholars' work by using the log form of the variables and excluding external debt as controlled variables since exchange rate is already included as a controlled variable. This was done in order not to over bloat the model with controlled variables. In that regard, our regression model is specified thus:

$InRGDP= \beta_0+ \beta_1 InOILR + \beta_2\ InFDI + \beta_3 InEXR + \varepsilon_i$..... (3)

Where RGDP is real GDP, EXR is exchange rate and other acronym in the model remains as explained above.

3.5 Decision Rule for Acceptance or Rejection of Hypotheses

The decision rule is to reject the null hypothesis if the computed p-value is less than 5% significant level. On the contrary, accept the null hypothesis if the computed p-value is higher than 5% significant level.

IV. Data Analysis and Interpretation of Results

4.1 Diagnostic Test (Unit Root Test)

Table 4.1 Unit Root Test

Variables	Augmented Dickey-Fuller test statistic	Probability Value	ADF Critical at 5%	Inference
EXR	-3.537770	0.0125	-2.945842	I(1)
FDI	-7.267147	0.0000	-2.945842	I(1)
RGDP	-6.266366	0.0000	-2.948404	I(1)
OILR	-4.158553	0.0031	-2.967767	I(0)

Source: Author's analysis using e-view 9 output with data in Appendix

The unit root test from table 4.1 above shows that the stationarity of the variables were a combination of I(1) and I(0). As such, the appropriate estimation technique to employ for inference is the Auto Regressive Distributed Lag (ARDL) Model.

4.2 Descriptive Statistics

Table 4.2 descriptive Statistics

	RGDP	OILR	FDI	EXR
Mean	33737.67	2348.605	2.75E+09	104.4552
Median	23068.85	977.6369	1.73E+09	111.1675
Maximum	70333.00	8878.970	8.84E+09	306.1000
Minimum	13779.26	7.253000	73400000	4.536700
Std. Dev.	19604.06	2711.057	2.63E+09	78.39935
Observations	38	38	38	38

Source: Author's analysis using e-view 9 output with data in Appendix

Table 4.2 describes the variables employed for this study. The descriptive statistics results shows that the mean of real gross domestic product, oil revenue, foreign direct investment and exchange rate were N 33737.67 billion, N2348.605 billion, N2.75E+09 billion and N104.4552 to a dollar respectively. The minimum of the variables for rgdp, oilr, fdi and exr were N13779.26 billion, N7.253000 billion, N73400000 billion and N4.536700 respectively. While the maximum were N70333.00 billion, N8878.970 billion, N8.84E+09 billion and N306.1000 for rgdp, oilr, fdi and exr respectively. The standard deviation of N19604.06, N2711.057, N2.63E+09 and N78.39935 for rgdp, oilr, fdi and exr respectively, shows that deviations from the averages of these variables signify that the variables are not fix or static, but varies year in year out.

4.3 Correlation Analysis

Table 4.3 Correlation matrix

	RGDP	OILR	FDI	EXR
RGDP	1.000000			
OILR	0.856413	1.000000		
FDI	0.791628	0.892303	1.000000	
EXR	0.821999	0.648597	0.550316	1.000000

Source: Author's analysis using e-view 9 output with data in Appendix

From the result of correlation analysis I table 4.3 above, all the variables were correlated such that, rgdp had about 85.6% correlation with oilr, 79% correlation with fdi and 82% with exr. While, oilr had about 89% correlations with fdi and approximately 65% correlation with exr. Then exr had about 55% correlation with fdi.

4.4 Inferential Result
Results of ARDL Model

Table 4.4 Results of ARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(RGDP(-1))	1.154790	0.137143	8.420333	0.0000
LOG(OILR)	0.015329	0.006711	2.284154	0.0308
LOG(FDI)	0.008252	0.011027	0.748339	0.4610
LOG(EXR(-2))	-0.044183	0.018966	-2.329616	0.0279
C	0.644263	0.218432	2.949493	0.0067
R-squared	0.998305	Mean dependent var		10.32692
Adjusted R-squared	0.997784	S.D. dependent var		0.547132
S.E. of regression	0.025759	Akaike info criterion		-4.263048
Sum squared resid	0.017251	Schwarz criterion		-3.863101
Log likelihood	83.60334	Hannan-Quinn criter.		-4.124986
F-statistic	1914.190	Durbin-Watson stat		1.905376
Prob(F-statistic)	0.000000			

Source: Author's analysis using e-view 9 output with data in Appendix

The ARDL result as shown in the table above suggests that oil revenue and foreign direct investment both had positive impact on real gross domestic product of Nigeria, while exchange rate recorded a negative impact. The result further revealed that a percentage increase in oil revenue would bring about a 1.5 percent increase in real gross domestic product. Also, a percentage increase in foreign direct investment would bring about a 0.8 percent increase in real gross domestic product. While a percentage increase in exchange rate would bring about a 4.4 percent decrease in real gross domestic product, and vice versa.

The R-squared as well as the Adjusted R-squared of 0.99 showed that the explanatory variables accounted for about 99% variations in the explained variable.

F-statistic of 1914.190 showed that the model is a good fit as confirmed by its corresponding probability value of 0.000000 which means that the model is significant both at 1% and 5% levels of significance.

Durbin-Watson stat. of 1.9 suggests that the variables are free from auto-correlation since it is very close to 2.

4.5 Test for Auto Correlation
Table 4.5 Correlogram Q-Statistic

Q-statistic probabilities adjusted for 2 dynamic regressors

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
.|. |	.|. |	1	0.042	0.042	0.0676	0.795
.*|. |	.*|. |	2	-0.163	-0.165	1.1067	0.575
.*|. |	.*|. |	3	-0.172	-0.161	2.2975	0.513
**|. |	**|. |	4	-0.231	-0.260	4.5225	0.340
.|. |	.*|. |	5	-0.010	-0.071	4.5268	0.476
.*|. |	**|. |	6	-0.113	-0.262	5.0948	0.532
.|. |	.*|. |	7	-0.025	-0.171	5.1233	0.645
.|*. |	.*|. |	8	0.108	-0.088	5.6869	0.682
.|. |	.*|. |	9	-0.000	-0.181	5.6869	0.771
.|. |	**|. |	10	-0.055	-0.269	5.8412	0.828
.|*. |	.|. |	11	0.118	-0.044	6.5971	0.831
.|** |	.|*. |	12	0.216	0.108	9.2288	0.683
.|*. |	.|*. |	13	0.124	0.107	10.131	0.683
.*|. |	.|. |	14	-0.143	-0.048	11.389	0.655
***|. |	**|. |	15	-0.415	-0.342	22.537	0.094
.|. |	.|. |	16	0.039	0.065	22.641	0.124

Source: Author's analysis using e-view 9 output with data in Appendix

This test is carried out to further test for auto correlation and to consolidate the result of Durbin Watson Stat. The result of Correlogram Q-Statistic in table 4.5 above, suggest that the variables are free from auto correlation.
The correlogram Q- Stat. table indicates that all p-values were >5% hence the conclusion that the model was free from auto correlation.

4.6 Test for Serial Correlation

Table 4.6 Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.444079	Prob. F(2,24)	0.6466
Obs*R-squared	1.249009	Prob. Chi-Square(2)	0.5355

Source: Author's analysis using e-view 9 output with data in Appendix

In line with the rules, the Breusch-Godfrey Serial Correlation LM Test table above shows that the probability values of 0.6466 and 0.5355 are statistically insignificant at 5% level of significance. Thus, the model is said to be free from serial correlation.

4.7 Test for Heteroskedasticity

Table 4.6 Test for Heteroskedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey

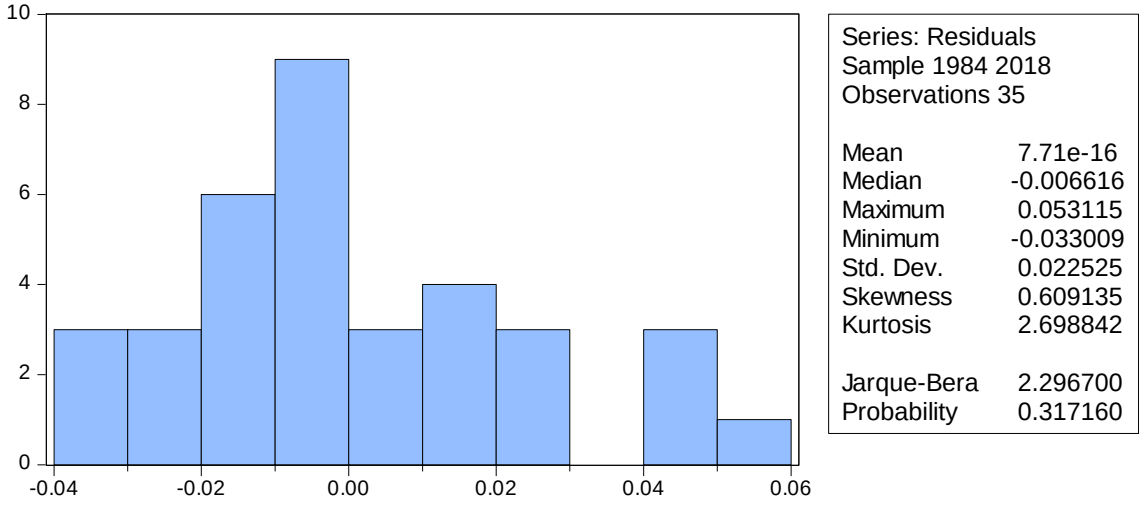
F-statistic	1.156869	Prob. F(8,26)	0.3611
Obs*R-squared	9.188021	Prob. Chi-Square(8)	0.3267
Scaled explained SS	4.306809	Prob. Chi-Square(8)	0.8284

Source: Author's analysis using e-view 9 output with data in Appendix

The Heteroskedasticity test above suggests that the variables are free from the problem of Heteroskedasticity since the p-values of F-stat. and Obs*R-squared of 0.3611 and 0.3267 respectively are > 5% significance level. This outcome is further strengthened by the p-value of the Scaled explained SS which also suggest the absence of Heteroskedasticity.

4.8 Test for Normality

Figure 4.8 Normality Chart



Source: Author's analysis using e-view 9 output with data in Appendix

This test is conducted to ensure that the data employed in this study are normally distributed. Observing from the normality diagram in figure 4.8 above, as well as the Jaque Bera value of approximately 2.3 which is >5% significant level, confirms that the data are normally distributed.

The skewness value of 0.6 is said to be moderately skewed, since it value falls between 0.5 and 1. The kurtosis value of approximately 2.7 supports that the variables are normally distributed since the kurtosis value falls in between -3 and 3.

4.9 Test of Hypotheses

4.9.1 Test of Hypothesis One

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(RGDP(-1))	1.154790	0.137143	8.420333	0.0000
LOG(OILR)	0.015329	0.006711	2.284154	0.0308
C	0.644263	0.218432	2.949493	0.0067

Source: Extracted from table 4.4

HO_1: Oil revenue has no impact on economic growth of Nigeria.
Since the p-value for oil revenue (OILR) of 0.0308 (3%) is within the acceptable significance level of 5%, that is, < 5%, we reject the null hypothesis that Oil revenue has no impact on economic growth of Nigeria.

4.9.2 Test of Hypothesis Two

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(RGDP(-1))	1.154790	0.137143	8.420333	0.0000
LOG(FDI)	0.008252	0.011027	0.748339	0.4610
C	0.644263	0.218432	2.949493	0.0067

Source: Extracted from table 4.4

HO_2. Foreign direct investment has no impact on economic growth of Nigeria.
Since the p-value for foreign direct investment (FDI) of 0.4610 (46%) is >5% level of significance, the null hypothesis that Foreign direct investment has no impact on economic growth of Nigeria is accepted.

4.9.3 Test of Hypothesis Three

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(RGDP(-1))	1.154790	0.137143	8.420333	0.0000
LOG(EXR(-2))	-0.044183	0.018966	-2.329616	0.0279
C	0.644263	0.218432	2.949493	0.0067

Source: Extracted from table 4.4

HO_3. There is no impact of exchange rate on economic growth of Nigeria.
Since the p-value for exchange rate (EXR) of 0.0279 (2.79%) is within the acceptable significance level of 5%, that is, < 5%, we reject the null hypothesis that exchange rate has no impact on economic growth of Nigeria.

V. Conclusion and Policy Recommendations

5.1 Conclusion

The purpose of this paper was to ascertain the impact of oil revenue on economic growth of Nigeria between 1996 and 2018. Real gross domestic product was employed as a measure of economic growth of Nigeria, while oil revenue, foreign direct investment and exchange rate were employed as independent variables. The results of the inferential analysis suggested that oil revenue had a significant positive impact on economic growth of Nigeria.

5.2 Policy Recommendations

1. Since oil revenue has a significant positive impact on economic growth of Nigeria within the period under review and also makes up about 70% of Nigeria's annual budget, it is imperative for government to enhance oil exploration and ensure that the activities of militants and oil facilities vandals are reduced to the barest minimum if not completely eradicated.
2. This study further recommends that government should use receipts from oil revenue and diversify the economy into agriculture and development of science and technology so that in event of fluctuations in oils

prices (negative price shocks) in the international oil market, the government would have another veritable source of revenue to finance its annual budget.

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APPENDIX

YEAR	EXR	RGDP	OILR	FDI
1981	110.39	15,258	8.56	141900000
1982	109.86	14,985.08	7.81	192800000
1983	109.84	13,849.73	7.25	334700000
1984	113.20	13,779.26	8.27	73400000
1985	99.90	14,953.91	10.92	216600000
1986	51.89	15,237.99	8.11	290000000
1987	14.72	15,263.93	19.03	115200000
1988	4.5367	16,215.37	19.83	378667097.7
1989	7.3916	17,294.68	39.13	1884249739
1990	8.0378	19,305.63	71.89	587882970.6
1991	9.9095	19,199.06	82.67	712373362.5
1992	17.2984	19,620.19	164.08	896641282.5
1993	22.0511	19,927.99	162.10	1345368587
1994	21.8861	19,979.12	160.19	1959219858
1995	21.8861	20,353.20	324.55	1079271551
1996	21.8861	21,177.92	408.78	1593459222
1997	21.8861	21,789.10	416.81	1539445718
1998	21.8861	22,332.87	324.31	1051326217
1999	92.6934	22,449.41	724.42	1004916719
2000	102.1052	23,688.28	1,591.68	1140137660
2001	111.9433	25,267.54	1,707.56	1190632024
2002	120.9702	28,957.71	1,230.85	1874042130

2003	129.3565	31,709.43	2,074.28	2005390033
2004	133.5004	35,020.55	3,354.80	1874033035
2005	132.147	37,424.95	4,762.40	4982533943
2006	128.6516	39,995.50	5,287.57	4854416867
2007	125.8331	42,922.41	4,462.91	6034971231
2008	118.5669	46,012.52	6,530.60	8196606673
2009	148.8802	49,856.10	3,191.94	8554840769
2010	150.298	54,612.26	5,396.09	6026232041
2011	153.8616	57,511.04	8,878.97	8841113287
2012	157.4994	59,929.89	8,025.97	7069934205
2013	157.3112	63,218.72	6,809.23	5562873606
2014	158.5526	67,152.79	6,793.82	4655849170
2015	193.2792	69,023.93	3,830.10	3128591679
2016	253.4923	67,931.24	2,693.90	4434648308
2017	305.8000	68,490.98	4,109.80	4379054678
2018	306.1000	70,333.00	5,545.80	4379054678

Source: CBN Statistical Bulletin of 2018

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