OIL REVENUE AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL ANALYSIS

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ABSTRACT

This research work was projected to investigate the impact of oil revenue on economic growth of Nigeria between 1981 and 2019. Ex – post facto research design was carried out; annual time series data for analysis were sourced from Central Bank of Nigeria Statistical Bulletin of 2019. Real Gross Domestic Product (RGDP) was used as the dependent variable proxy for economic growth. Oil Revenue, Foreign Direct Investment (FDI) and Exchange Rate (EXR) all represent explanatory variables. The study employed Auto Regressive Distributed Lag (OLS) Model which was used to analyzed and estimate the coefficients of the parameters. Other diagnostic tests employed by this study include; unit root test, descriptive statistics, correlation coefficient matrix, Cointegration test and test of Normality, and they confirmed the validity and reliability of the model used; the inferential results showed that oil revenue impacted positively and significantly on the economic growth of Nigeria within the period under review. The paper recommended strongly that Government should diversify the economy from oil dependent economy to agriculture and manufacturing driven economy, this will provide alternative source of revenue to the government for adequate funding of annual national budget. Adherence to the recommendations will reduce the over reliance on oil revenue and thereby stabilizing the economy

Keywords: oil revenue, economic growth, gross domestic product, Nigeria
JEL Codes: H41, F43, D24,

1. INTRODUCTION

In Nigeria, crude oil is the backbone of the nation's economy. The economic growth and development of Nigeria is a function of crude oil revenue. Oil is a dominant source of energy and foreign exchange earnings in Nigeria for many decades back. Oil, being the mainstay of the economy plays an important role in structuring the economy and political fate of the

country (Ibeh, 2013). Apart from oil, the country is also blessed with several natural resources such as bitumen, limestone, granite, iron-ore, lead, marble, gold and aluminium in commercial quantity (Abimbola and Onazi, 2018). Japhet, *et al*, (2018) argued that Oil is used as a key benchmark in the politics and diplomacy of nations as it serves as a measure for foreign exchange earning to oil exporting countries particularly the developing nations like Nigeria, Libya, Venezuela, etc. Although, Nigerian oil industry began to play a prominent role in the economic life of the country between 1967-1970, few years after the end of Nigerian civil war (Odularu, 2008). The history of petroleum industry in Nigeria reveals that oil was discovered in commercial quantity by Shell-BP in 1958 at Olobiri, the present day Bayelsa state (Onwe, 2012). Nigeria as a country joined OPEC in 1971 and established the Nigerian National Petroleum Company (NNPC) in 1977; the NNPC is the government's owned and controlled Oil Company which is a foremost actor in both the upstream and downstream sectors in Nigeria.

Economically, Nigeria is the giant of Africa in terms of population and the economy, the largest oil producer in Sub-Sahara Africa. The country is placed 10^{th} position in the world in terms of oil reserves estimated at 37.2 billion barrels, the country is endowed with about 87 trillion (ft3) of natural gas, Nigeria is equally positioned 8th in the Organization of Petroleum Exporting Countries (OPEC) in terms of its crude oil reserves and production (Schmidbauer, H., & Rösch, A. 2012). The country produces a daily average of 2.45 million barrels of oil per day, approximately 95 percent of foreign exchange earnings and 80 percent of its fiscal revenues (Paki and Ebienfa, 2011).

In the light of the above analyses as oil rich state Japhet, *et al*, (2018) argued that there has not been any significant improvement in terms of welfare of the citizens and infrastructural development in the country which may likely attributed to many factors as misappropriation of public funds, poor administration, lack of economic foresight of the leaders and key macroeconomic policy makers from the three organs of government and among others. Efanga, et al, (2020.) further stressed that these leaders failed fragrantly to take advantage of oil boom that the country experienced between 1970s, 1983, 2011 and 2014 respectively. In fact, such huge funds realized in those periods as suggested by Paki and Ebienfa (2011) would have been accumulated and used to diversify the economy from oil dependency to an agricultural and manufacturing driven economy as it is seen in other oil rich nations in Asia like Qatar, Saudi Arabia, etc.

Despite this fragility,, the Nigerian economy is still very much dependent on oil revenue to finance its annual budget in the face of crude oil prices volatility in the global oil market, although the present government under the leadership of Muhammodu Buhari is trying to refocus the economy towards agriculture, but the results of the government's effort to this economic strategy is too insignificant to bring a positive impact on the economy of Nigeria). (Japhet, *et al*, 2018).

However, before the discovery of oil in commercial quantity in Nigeria, agricultural sector happened to be the main stay of the economy, contributing largely to her foreign exchange earnings accounted for about 95%, generating over 60% of her employment opportunity and

barely 56% to her gross domestic earnings (World Bank, 2013). The dominant crops grown in commercial quantity were cocoa (from the south west), palm products (from south east), cotton and ground nut (from the North) and timber and rubber (from the south south), with these agricultural products contributing most of Nigeria's export, Agriculture was the leading growth sector of the economy while the proportion of oil export revenue to GDP was very poor and insignificant. During this period, several literatures defined Nigerian economy as an agrarian type of economy as its revenue generation from export was barely based on agricultural products; statistics from the National Bureau of Statistics of Nigeria had it that between 1958 and 1969, the contribution of petroleum to (GDP) at current factor was just 0.007 percent, and agriculture constituted the mainstay of the country's economy accounting for large proportion of Gross Domestic Product (GDP) (Efanga, et al, 2020.).

The oil boom of the 1970s led to Nigeria's neglect of its strong agricultural and light manufacturing base 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 while in 2011, exports of oil and gas accounted for 89% of all merchandised exports (Akinlo, 2012).

In line with this study, there have been numerous studies on the analysis of impact of oil revenue on Nigerian economic growth and development such as (Ogunmakin, A., Adebayo, A., and Dada, R. 2014; Joseph, U., Michael, C. and Stella, O., 2016; Iyohu, 2000; Nweze P., and Greg, E. 2016; Akinlo, 2012; Ujunwa, 2013; Odularu, 2004) but the years under review of those studies did not cover up to 2019. Therefore, this study fills the gap of currency and methodology

In addition, this research work is intended to examine the impact of oil revenue on economic growth of Nigeria between 1981 and 2019. The actual problem this study intends to address is to devise real measures of how the Nigerian economy can be diversified effectively from total oil dependency to agricultural and manufacturing driven economy. It has been argued by Ujunwa (2013) that over dependence on crude oil revenue to finance national budget and other administrative expenses could force the economy into recession and or shortfall of oil revenue due to low demand could result to budget deficit. Importantly, when there is any major shock in the global oil market which cause the variations in oil prices, there will be a direct negative impact on the economy of Nigeria as oil exporting nation. In the same observation, Boheman and Maxen (2015) clarified that when oil price increases, all things being equal is considered positive in oil exporting nations and negative in oil importing nations and vice versa. So in the light of the above identified problem that this study is undertaken to investigate, alternative source of revenue from agriculture and manufacturing driven sector for the government is recommended strongly so as to bring national economy to stability.

Objectives of the Study

For this research work to be guided towards accuracy, the following objectives are itemized below

1. To determine the impact of oil revenue on economic growth of Nigeria.

2. To examine the impact of foreign direct investment on economic growth of Nigeria.
3. To estimate the impact of exchange rate on economic growth of Nigeria.

Interestingly, this paper is prioritized into five main sections. Section one contains the introduction of the study, section two comprises the literature review, section three covers the methodology, section four includes analysis of data and interpretation of result, and section five encompasses conclusion and suggest recommendations

2. *LITERATURE REVIEW*

CONCEPTUAL LITERATURE

Nigerian petroleum industry is the largest and highest contributor of GDP to the economy, and the most populous in African continent. The economy relies massively on the revenue derived from crude oil, crude oil revenue provides 70% of entire government revenue and about 95% of foreign exchange earnings (Adesola & Adek, 2014). In the same observation, Shaffer (2001) pointed out that since the discovery of oil in commercial quantity in Nigeria, oil has dominated the economy of the country at the expense of other sensitive sectors like Agriculture and manufacturing. He further stressed that oil accounts for 90% of its exports, 25% of its Gross Domestic Product (GDP) and 80% of its government total revenue. The author concludes that the direct effect of oil sector on non-oil sectors of the economy in Nigeria is rather insignificant. In the same findings, Akinlo (2012) buttressed that the oil sector being the life wire of the economy has a very poor and insignificant linkage with the other sectors of the economy. The oil sector does not provide employment opportunity in Nigeria as expected because the sector is capital intensive than labor intensive industry.

The relationship between crude oil revenue and incessant impact on economic growth and development on oil exporting countries have received much attention from different independent scholars. Odularu (2008) investigated the impact of oil revenue on the economic growth of Nigerian. His findings showed both positive and negative impact on the economy. On the negative part, he pointed out that the neighboring communities within the oil wells in the southern part of Nigeria (Niger Delta) are demoralized as some of these communities suffer environmental degradation characterized by oil spillage leading to different kinds environmental hazards depriving the means of livelihood and other economic activities since oil spillage kills the fertility of the soil and biodiversity rendering agricultural activities unproductive and discouraging. In addition to the above information, Osuoka (2007) lamented that communities in the Niger Delta area have experienced extreme decline in food production as a result of pollution caused by oil spillage and other activities of Oil Company exploiting and refining oil within the region. The author stresses that with high oil revenues accruing to the government, the government intentionally neglects other sectors of the economy which currently have spillover effect on the entire real economy. Owolabi and Ajayi (2013) analyzed that as population increases, much infrastructural facilities are needed to meet up with the demography but fund needed to address these rapid changes are in short supply due to the fact that other sectors that would contribute alongside with oil sector have been neglected by the government because of oil boom of 1970s.

THEORETICAL LITERATURE

Resource Endowment Theory of Growth:

The role of export in economic growth and development being it developed or developing nations has been a crucial subject of attention among economists since the origin of the classical and neoclassical economists. In line with this reasoning came the resource endowment theory which was advocated by a founding father of economics called Adam Smith who came up with "absolute cost advantage" while David Ricardo a principal proponent of" Comparative cost advantage" among others, argued that countries should specialize to produce and export commodities according to their comparative advantage. The theory of comparative advantage suggests a country gains largely from international trade relative to other countries by producing at lower total cost, commodities which a country has in abundance or can easily be produced cheaply. Similarly, other countries will therefore benefit form trade only if they accept the cost advantage of the trading partner and focus on producing a commodity in which they have an advantage over other (Igbeasere, 2013). The theory guides resource endowment and the principle of free trade, specialization and international division of labour. It is on this premise that some developing countries produce agricultural commodities and mineral resources for export and developed countries produce industrial goods for export (Igbeasere, 2013)

Heckscher-Ohlin (HO) Theory

This theory postulates that countries of the world produce and export the commodities which involve the use of their abundant productive factors (Feenstra, 2004). This Heckscher-Ohlin theory is based on the postulation of two nations, two goods and two factors and assumes that both nations have identical technologies, identical tastes, free trade in goods but different factor endowments (Feenstra, 2004). This theory was based on the proposition that developed nations such as Japan, Germany, United Kingdom, Canada etc. with an abundance of capital resources would export capital intensive goods such as machinery, manufactured goods and import labour intensive goods from developing nations, while developing countries mostly from Africa and Asia with an abundance of labour would export labour intensive goods and import capital intensive goods from developed countries as the case may be (Igbeasere, 2013).

Based on the premise above, Leontief (1953) carried out a research work independently to investigate the HO theory, he studied the American economy in order to ascertain the principle of comparative advantage. He employed American economy data on input - output accounts and American trade data from 1947 to estimate the Heckscher- Ohlin-Samuelson (HOS) model (Igbeasere, 2013). He first measured the labour and capital as input factors used directly and indirectly in each exporting industry in order to determine the amount of labour and capital needed in the production of one million dollars of U.S exports and imports (Feenstra, 2004), later on, Leontief discovered that each person employed to produce the exports works with $13,700 worth of capital and each person employed to produce the imports works with $18,200 worth of capital .Although, he concluded that the America was

a capital abundant country in 1947, Leontief's findings appear to controvert the HO theory and his work later became as the Leontief Paradox (Feenstra 2004; Igbeasere, 2013).

Institutional Economist:

This school of thought was developed as a response to the resource endowment economist, they argued that the resource endowment economists' assumptions of perfect information, free trade, identical technology, identical taste, perfect competition and rationality are unacceptable. The proponents of this school of thought "Institutional Economist" instead of accommodating the theory of resource endowment economist assumed individuals do not have perfect information and due to their inadequate mental capacity tends to create formal and informal institutions to moderate the risk of uncertainty and transaction costs. Individuals freely developed systems of organization to motivate agents. Therefore, the performance of the economy as concluded is generally dependent on the formal and informal institutions (Menard and Shirly, 2008; Igbeasere, 2013).

EMPIRICAL LITERATURE

This section of the paper examined the previous research works of other researchers who ventured into the investigation of the impact of oil revenue on the economic growth and development of Nigeria. However, these related studies by several scholars employed different econometric techniques, using different variables, different sample periods, their findings showed conflicting results on the nature of the relationship between the two variables (oil revenue and economic growth), with some of these studies indicating reverse causality and others resulting in insignificant coefficients of the variables. The outcome of their studies give room or call for further research works on the subject matter.

Ogunmakin, *et al* (2014) investigated the impact of oil revenue on economic development in Nigeria between 1981 and 2012. Their study hunted to examine the economic development and oil revenue in Nigeria. In the process, regression analysis was employed using SPSS. The outcome of their work showed clearly over dependence of Nigerian economy on oil revenue. Thus, their paper recommends diversification of the economy that would lead to improvement in revenue generation through other sources in the economy.

Nweze, *et al* (2016) studied an empirical examination of oil revenue and economic growth in Nigeria between 1981 and 2014. Annualized time series data on gross domestic product (GDP) proxy for economic growth; oil revenue (OREV) and government expenditure (GEXP) were used as independent variables. Their data was sourced from Central Bank of Nigeria statistical bulletin of 2014. In the course of their study, Augmented Dickey Fuller Unit Root Test, Johansen Cointegration Test and Error Correction Mechanism (ECM) were employed as estimation techniques and, the result reveals that all the variables except lagged government expenditure exerted significant impact on economic growth in Nigeria. However, other explanatory variables showed their expected sign in the short run but exhibited negative correlation with economic growth in the long run except for government expenditure that showed positive relationship with economic growth both in the long run and short run. The study recommends that Government should use the revenue realized from

crude oil to invest in Agriculture and manufacturing driven sectors in order to broaden the revenue base of the government.

Odularu (2008) investigated the correlation between the crude oil sector and the Nigerian economic performance. Employing the Ordinary Least Square regression econometric method, the findings displayed domestic crude oil consumption and export contributed immensely to the growth of the Nigerian economy. The paper recommends that government should implement policies that would encourage the private sector participation in the crude oil sector.

Ibeh (2013) also examined the impact of the oil industry on the economic growth performance of Nigeria from 1980 to 2010. Ordinary least square (OLS) regression technique was employed, the paper regresses Gross Domestic Product (GDP) as dependent and oil Revenue (OREV) and time as repressors. A two tailed test of 5% level of significant were conducted demonstrating that the two independent variables showed no significant impact on growth performance of the Nigerian economy within the sample period. The study recommends that government should implement economic policy that would encourage the private firms' participation in the oil sector so as to enhance performance of the oil sector.

Akinlo (2012) equally investigated the importance of oil in the development of the Nigerian economy in a multivariate VAR model between 1960 and 2009. The paper modeled oil sector against other four sectors such as manufacturing, agriculture, trade and service and building & construction. The findings of the study shows that the five sub-sectors are cointegrated and that, the oil sector causes other non-oil sectors to grow.

3. METHODOLOGY

Research Design

The paper adopts the ex-post factoresearch design since it deals with event that had taken place. On this ground, the researchers have no bases whatsoever to influence the variables or the outcome of the study. To investigate the relationship between the variables, this paper relied principally on secondary data that were sourced and gathered over time. Real Gross Domestic Product (RGDP) was adopted as the explained (dependent) variable proxy for economic growth, while Oil Revenue, Foreign Direct Investment (FDI) and Exchange Rate were factored in as explanatory (independent) variables. The variables were estimated using the Ordinary Least Square (OLS) technique. The paper made uses of annualized time-series data that cover an extended sample period(1981-2019), we were certain that the data set were not impaired by unit root; hence we tested for stationarity of the series by employing the famous Augmented Dickey-Fuller (ADF) test.

Sources of Data Collection

Data for this study covered the period from 1981 to 2019 and were sourced from Central Bank of Nigeria Statistical Bulletin of 2019

Method of Data Analysis

This research study used descriptive statistics, unit root test, Cointegration test, test of Normality and Ordinary Least Square (OLS) technique in testing the outcome of the study. E-view 10 econometric statistical software package was employed for the estimation and analysis of variables

Model Specification

This study adopts the model used by Efanga, et al, (2020). The model was used mainly to analyze the impact of oil revenue on economic growth of Nigeria. According to them, economic growth is a function of oil revenue, foreign direct investment and exchange rate. This is written mathematically as follows:

GDP= f (OILR, FDI, EXR).....….. (1) By modifying putting equation (1) into econometric model, it becomes:

$GDP = \beta0 + \beta1OILRt + \beta2FDIt + \beta3EXRt + \mu t$……...…… (2)

Where

$\beta0$ = Regression constant

$\beta1$, $\beta2$, $\beta3$ are the coefficients of the independent variables

GDP = Gross Domestic Product.

OILR = oil revenue

FDI = Foreign direct investment

EXR = exchange rate

μt =Stochastic disturbance or random term

However, as this paper adopted the researchers' work by using the log form of the variables. In that regards, our econometric equation becomes;

$InRGDP= \beta0+ \beta1InOILR + \beta2 InFDI + \beta3InEXR +\varepsilon i$..... (3) Where

RGDP = Real Gross Domestic Product

In = Log

ε = error term

Other acronyms in the model remains as explained above

4. Data Analysis and Interpretation of Results

5. Table 1: **Summary Statistics of Variables of the Study**

	RGDP	OILR	FDI	EXR
Mean	36702.41	2429.837	3.771809	7934.669
Median	25267.54	1230.850	1.599109	110.3900
Maximum	99449.41	8878.970	4.431210	305583.0
Minimum	13779.26	7.250000	71237362	4.536700
Std. Dev.	22625.16	2723.885	7.171209	48916.20
Skewness	0.847377	0.775732	4.817251	6.002168
Kurtosis	2.667756	2.279820	27.77533	37.02612
Jarque-Bera	4.846690	4.754260	1148.291	2115.557
Probability	0.088625	0.092817	0.000000	0.000000
Sum	1431394.	94763.64	1.477511	309452.1
Sum Sq. Dev.	1.953210	2.82E+08	1.955121	9.093210
Observations	39	39	39	39

Source: Author Computation 2021

Table 1: describes the four variables employed for this study. The descriptive statistics results show that the mean of real gross domestic product, oil revenue, foreign direct investment and exchange rate stand at N 36702.41 billion, N2429.837 billion, N3.771809 billion and N7934.669 to a dollar respectively. The minimum of the variables for real gross domestic product, oil revenue, foreign direct investment and exchange rate were N13779.26 billion, N7.250000 billion, N71237362 billion and N4.536700 respectively. But the maximum for real gross domestic product, oil revenue, foreign direct investment and exchange rate were N99449.41 billion, N8878.970 billion, N4.431210 billion and N305583.0 respectively. The standard deviation for real gross domestic product, oil revenue, foreign direct investment and exchange rate were N22625.16, N2723.885, N7.171209 and N48916.20 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

Table 3: Unit root test results.

	ADF		
Variables	Level	First Difference	Integration Order
lnGDP	-7.7546*** (0.000)	-	I(0)
lnOILR	-0.9646 (0.9372)	7.1463*** (0.000)	I(1)
lnFDI	-7.2297*** (0.000)	-	I(0)
lnEXR	-6.5602*** (0.000)	-	I(0)

*Source: variables are significant at *** 0.01 per cent significant level.*

The unit root test from table 3 above shows that the stationarity of the variables were a combination of I (1) and I (0) respectively. In that case, OLS will be adequate estimation technique to be applied for inference in this research work, and it is demonstrated below in table 4

Table 4: OLS Result RGDP=f (OILR, FDI, EXR)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OILR	5.063511	1.005006	5.038289	0.0000
FDI	7.20E-07	3.75E-07	1.920849	0.0629
EXR	0.058648	0.052549	1.116063	0.2720
C	21218.34	3404.336	6.232739	0.0000
R-squared	0.565663	Mean dependent var		36702.41
Adjusted R-squared	0.528435	S.D. dependent var		22625.16
S.E. of regression	15536.84	Akaike info criterion		22.23673
Sum squared resid	8.45E+09	Schwarz criterion		22.40735
Log likelihood	-429.6162	Hannan-Quinn criter.		22.29795
F-statistic	15.19422	Durbin-Watson stat		1.843231
Prob(F-statistic)	0.000002			

Source: Author Computation 2021

The OLS result as shown in the table above suggests that oil revenue, foreign direct investment and exchange rate all had positive impact on real gross domestic product of

Nigeria. The result further revealed that a percentage increase in oil revenue would bring about a 6.3 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 5.8 percent increase in real gross domestic product, and vice versa. The relationship between gross domestic product, oil revenue and foreign direct investment are elastic in nature The R-squared (0.57) as well as the Adjusted R-squared of (0.53) showed that the explanatory variables accounted for about 57% and 53% variations in the explained variable. F-statistic of 15.19422 showed that the model is a good fit as confirmed by its corresponding probability value of 0.000002 which means that the model is significant both at 1% and 5% levels of significance. Durbin-Watson stat. of 1.8 suggests that the variables are free from auto-correlation since it is very close to 2. This research findings corresponded with the work of Efanga, et al, (2020) whoseinferential results showed that oil revenue impacted positively and significantly on economic growth of Nigeria between 1981 and 2018. This goes a long way to cement the reliability of the outcome of this research work

Table 5: .Cointegration Test

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	4.2901	10%	2.592	3.454
K	3	5%	3.1	4.088
		1%	4.31	5.544
		10%	2.592	3.454

Source: Author computation from eview-10

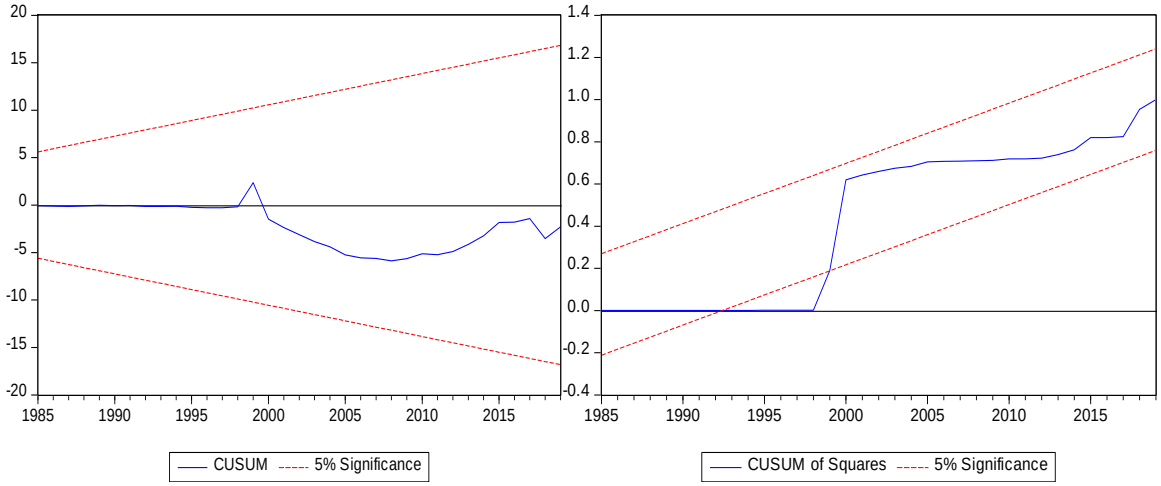
Table 5 above represents the bounds testing to cointegration between the variable of interest. We reject the null hypothesis at 10%, 5%, 2.5% level of significance respectively, and then conclude that there is a long run relationship among the variables under investigation

Table 6: Diagnostic Tests

Tests	F-statistic	P. Value
χ2 NORMALITY	1.2684	0.5303
χ2 SERIAL	0.2789	0.7584
χ2 WHITE	0.728	0.9742
χ2 RAMSEY	1.32840.2823	

Source: Author computation 2021.

Figure 1: *Graphical plots for CUSUM and CUSUM-Square stability test*



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Figures above: Plot of cumulative Sum of Squares of Recursive Residuals which indicates stability.

The second part of Table 6 contains the results of the diagnostic tests of the model showing that the model is normally distributed, well specified and is homoscedastic in nature (absence of heteroskedasticity). Also, the Ramsey reset test, CUSUM and CUSUM of square (CUSUMsq) statistic tests were carried out as present in figure 1 and 2 below, all confirming the stability of the model

5. *Conclusion and Policy Recommendations*

Conclusion

The primary goal of this study was to investigate the impact of oil revenue on economic growth of Nigeria between 1981 and 2019. Real gross domestic product sourced from Central Bank Nigeria was employed as a proxy for economic growth of Nigeria, while oil revenue, foreign direct investment and exchange rate obtained from the same source were used as explanatory variables. The findings of this study suggested that oil revenue had a significant positive impact on economic growth of Nigeria which corresponded with the findings of related study by Efanga, et al, (2020) whoseinferential results showed that oil revenue impacted positively and significantly on economic growth of Nigeria between 1981 and 2018. In order to reach a logical conclusion, some existing works of scholars were reviewed including different theories that serve as a theoretical literature on the subject matter and the paper appropriately employed OLS technique as the stationarity tests of the variables showed a mixed order of I(1) and I(0).

Policy Recommendations

From the empirical findings, oil revenue has shown a significant positive impact on economic growth of Nigeria within the selected period under investigation and it contributed up to 70% of Nigeria's annual budget as analyzed under introduction of this study, it is of paramount importance for the government to improve upon oil exploration through up to date technology and ensure that the activities of militants and oil facilities vandals in the Niger Delta are reduced to the lowest minimum level if not completely eliminated.

However, this study further recommended that government should use receipts or proceeds from oil revenue to diversify the economy into agriculture and manufacturing driven economy so that in event of oil price volatility (decrease in oil prices) in the global oil market, the government would have another dependable source of revenue to finance its annual budget and other administrative expenses.

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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	113.2	13,779.26	8.27	73400000
1985	99.9	14,953.91	10.92	216600000
1986	51.89	15,237.99	8.11	290000000
1987	14.72	15,237.93	19.03	115200000
1988	4.5367	17,215.37	19.83	378667097.7
1989	7.3916	17,294.68	19.13	188424973.9
1990	8.0378	19,305.63	71.89	587882970.6
1991	9.9095	19,199.06	82.67	71237362
1992	17.2984	19,620.19	164.08	1345368587
1993	22.0511	19,927.99	162.1	1345368585
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	416.81	1539445718
1998	21.8861	22,333	324.31	1051326217
1999	92.6934	99,449.41	724.42	1004916719
2000	102.1052	23,688.28	1,591.68	1140137660
2001	11.9433	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	6,531	8196606673
2009	148.8802	49,856.10	3,191.94	8554840969
2010	150.298	54,612.26	5,396.09	6026232041
2011	153.8616	57,511.89	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	193.27	69,023.93	3,830.10	3128591679
2016	253.4923	67,931.24	2,693.90	44346483308

2017	305.2899	68,490.98	4,109.80	4379054678
2018	305583	70,333.00	5,545.80	4379054678
2019	306.423	71,387.83	5,536.66	4379054678