Impact of Foreign Trade on Economic Growth in Nigeria

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Abstract

This study investigated the impact of foreign trade on the economic growth of Nigeria for the period 1981–2018. Economists hold two contrasting opinions on the effect of foreign trade on a nation's economy. While the positive-sum game school of thought holds the view that, when nations engage in foreign trade, there are bound to be mutual gains as each country's utility is expanded, the negative-sum game school of thought holds the view that trade relations amongst nations of the world benefit one economy at the expense of the other. This study was embarked upon to ascertain which of these two conflicting opinions applies to Nigeria. Accordingly, the objective of the study was to determine the impact of foreign trade proxy by oil revenue, non-oil revenue, and foreign exchange rate on Nigeria's economic growth proxy by gross domestic product growth rate. The study adopted the ex post facto research design and secondary data were obtained from the Central Bank of Nigeria Statistical Bulletin. The study employed the Autoregressive Distributed Lag Model to evaluate the effect of foreign trade on economic growth in Nigeria. Findings suggest that oil revenue, non-oil revenue, and foreign exchange rate have a significant impact on economic growth in Nigeria. The study recommended that Nigeria's oil revenue be heavily invested in non-oil revenue-earning productive sectors such as agriculture and mining to create the desired multiplier effect on the economy.

Keywords*: Foreign Trade, Oil Revenue, Non-oil Revenue, Exchange Rate, Gross Domestic Product Growth Rate*

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Background to the Study

Economists around the world have long been interested in factors that cause different economies to grow at different rates and achieve different levels of wealth. One of such factors is trade. Nigeria is basically an open economy with international transactions constituting a significant proportion of her aggregate output (Afolabi, Danladi and Azeez, 2017). The Nigerian economy like many other developing countries considers trade as the main engine of its development strategies because of the implicit belief that trade can create and guarantee job opportunities, expand markets, raise incomes, facilitate competition and disseminate knowledge (Fapetu and Oloyede, 2014). Nevertheless, while trade between countries may generate growth globally, there are no guarantees that its aggregate benefits are distributed equitably among trading partners. There are winners and losers in any trading relationship including domestic and international trades. However, trading partners may all gain at differing degrees. Many factors determine the extent to which a country may benefit from a trading relationship. These include the terms of trade that a country faces against its trading partners, the international exchange rate applied to the traded goods, and the market characteristics of the country's exportable goods (Sylvester and Aiyelabola, 2012).

This has been the experience of Nigeria since the 1960s, though the composition of trade has changed over the years. Foreign trade has been an area of interest to decision-makers, policymakers as well as economists. It enables nations to sell their locally produced goods to other countries of the world and enables foreigners to consume goods produced in other countries. Trade has been defined as the activity in which people are buying and selling or exchanging goods and services between countries. International trade is the exchange of capital, goods, and services across international borders. Ishola, Olaleye, Olajide, and Adedoyin (2015), described it as a system where the goods and services are advertised, sold, and switched between two or more countries as imports and exports.

Abiodun (2017) avers that economists hold two contrasting opinions on the effects of foreign trade on nations. The positive-sum game school of thought holds that when nations engage in trade, there are bound to gain as each country's utility is expanded, availing more baskets of goods for consumption for citizens of both nations. Perceived gains here include technological diffusion, transfer of human capital, development of education and infrastructures, improved employment, and higher output and income for both nations. On the other hand, the negative-sum school of thought does not view foreign trade in such liberal terms. It holds that trade relations amongst nations of the world benefit one economy at the expense of the other. As such, while one developed nation enjoys numerous advantages associated with such bilateral trade, the less developed one bears the real cost in terms of opening its borders to unfair business competition from international business conglomerates at the expense of its infant industries resulting in the premature death of infant industries, dumping of substandard goods in its country as well as neo-colonization.

It has been argued that foreign trade has not helped in promoting economic growth in Nigeria as the economy still experiences trade shocks and has become an import-dependent economy (Umaru, 2011). This argument tends towards the dependency theory which hypothesizes that resources flow from a "periphery" of poor and underdeveloped states to a "core" of wealthy

states thereby enriching the latter at the expense of the former. The phenomenon associated with the dependency theory is that poor states are impoverished while rich ones are enriched by the way poor states are integrated into the world system (Todaro, 2003). Underdeveloped nations become dependent on developed nations for virtually everything, ranging from technology, aid, technical assistance, to a culture that makes them vulnerable to the products of the Western metropolitan countries (Ajayi, 2000).

Research findings on foreign trade have indicated contrasting results, with some positing that developing countries benefit, although at varying degrees, from international trade. Empirical evidence such as that of Arodoye and Iyoha (2014) showed that there is a long-run positive relationship between foreign trade and Nigeria's economic growth. This contradicts an earlier study by Adeoye (2010) who found that foreign trade has a negative effect on the Nigerian economy as a result of trade distortions (instability of exchange rates). Afolabi, Danladi, and Azeez (2017) in their study came out with mixed results: macroeconomic aggregates such as government expenditure, interest rates, imports, and exports had positive effects on the economic growth of Nigeria while foreign direct investments and exchange rates had negative effects. An earlier study by Umaru (2011) posits that foreign trade has not helped Nigeria's economic growth.

These conflicting claims lend credence to the objective of this study which is to evaluate the impact of foreign trade on Nigeria's economic growth, with emphasis on oil and non-oil trade as well as the effect of foreign exchange rate on its economic growth. Thus, the specific objectives of this research are to:
  i.   Investigate the impact of oil revenue on economic growth in Nigeria.
  ii. Evaluate the impact of non-oil revenue on economic growth in Nigeria.
  iii. Determine the impact of the foreign exchange rate on economic growth in Nigeria.

Accordingly, the research hypotheses are stated as follows:
  H_{01}: Oil revenue has no significant impact on economic growth in Nigeria
  H_{02}: Non-oil revenue has no significant impact on economic growth in Nigeria
  H_{03}: Foreign exchange rate has no significant impact on economic growth in Nigeria.

Literature Review
Conceptual Review
Foreign trade has been defined by Danjuma, Habakuk, and Amos (2014), as the transfer of goods and services, including capital goods, from one country to another, and the definition was corroborated by Economic Concepts (2012) which defined it as trade across international boundaries. The authors also observed that Economic Concepts (2012) distinguished foreign trade from domestic trade by indicating that foreign trade is costlier than domestic trade because trade across international borders requires other charges or costs such as tariffs, added to other costs associated with differences in legal regimes and culture. According to Danjuma, Habakuk, and Amos (2014), foreign trade has two components which are oil and non-oil trade.

Further, Danjuma, Habakuk, and Amos (2014) defined oil revenue as the income earned from the sale of crude oil and this includes income from the sale of crude oil and gas, petroleum profits tax and royalties, and licensing fees while Adenikinju and Falobi (2006) opined that oil revenue is the dominant source of government revenue, accounting for about 90 percent of total exports, which approximates to 80 percent of total government revenue in Nigeria. Danjuma, Habakuk, and Amos (2014) also defined non-oil revenue as revenue earned from other sectors of the Nigerian economy including agriculture, tourism, transport, services, manufacturing and construction, brewery, fishing, consultancy, tanning, and weaving. Revenue from the sale of these products has contributed greatly to the economic growth of Nigeria. Revenue from the sale of cocoa from the South-West, groundnuts from the north, and palm-oil from the south-east and middle belt regions was used to finance government expenditure and to develop the oil sector. According to Kromtit, Kanadi, Ndangra, and Lado (2017), Nigeria is blessed with various non-oil export goods in which she has both absolute and comparative advantages over other countries. These goods include vast land resources, coal, iron, bitumen, tin, columbite, gold, graphite, and uranium.

Nzotta (2004) defined foreign exchange rate as the rate of transformation of one country's currency to another or the rate at which one currency is exchanged for another. Nzotta added that the foreign exchange rate is maintained by arbitrage. Arbitrage is a mechanism whereby speculators buy in one market where the rate is low and sell in another where the price is high. The difference constitutes arbitrage income. Exchange rates may be fixed by the fiat of the government as was the case in Nigeria before the introduction of the Structural Adjustment Program (SAP) in 1986 or be allowed to float in response to market forces of demand and supply. However, presently, exchange rates are largely determined by the operations of demand and supply and are partly managed by the Central Bank of Nigeria.

Empirical Review
Oyeyemi (2013) investigated the growth implications of crude oil price shock in Nigeria. The empirical analysis was conducted by applying the multiple regression of the ordinary least squares technique to the annual data on the Nigerian economy for the period 1970 -2010. The model was found to be significant and most of its estimates came out as expected. Findings revealed that a little shock in the price of crude oil in the global market in the review period produced a long-term effect on economic growth. Also, Ishola, Olaleye, Oladije, and Abikoye (2015), examined oil revenue and economic growth in Nigeria. The research was in time series and analysis was done by the use of regression. Findings showed that changes in crude oil price had a significant effect on inflation which has also been influenced by changes in the exchange rate and changes in broad money supply as well as maximum lending rate.

Adenugba and Dipo (2013), studied the non-oil exports and the economic growth of Nigeria: A study of agricultural and mineral resources. The study evaluated the performance of Nigeria's export promotion strategies as to whether they have been effective in diversifying the productive base of the Nigerian economy. The study revealed that the Nigerian economy is still far from diversifying from crude oil export and as such, the crude oil sub-sector continues to be the single most important sector of the economy. Similarly, Kromtit, Kanadi, Ndangra, and Lado (2017) examined the contribution of non-oil exports to economic growth in Nigeria

between the period 1985 and 2015. The study stated that the economy is experiencing a fall in the exchange rate and high cost of goods resulting from a sudden fall in international oil prices. Research design is ex post facto. The autoregressive distributive lag model was employed to ascertain the relationship between non-oil and gross domestic product. The study found that non-oil had a significant effect on economic growth. The study also found that the exchange rate had an insignificant effect on economic growth.

On the other hand, Usman and Adejare (2014) examined the effects of foreign exchange on Nigeria's economy. Secondary data were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin covering the period of 1988 to 2010. Multiple regression was employed to analyze data on the exogenous variables of Narrow Money (NARM), Broad money, exchange rate, and interest rate which were all found to have significant effects on the GDP. Following the outcome of this study, it was, therefore, concluded that the growth in money supply was attributed to credits extended by the deposit money banks to the private sector. Similarly, Fapetu and Oloyede (2014) studied foreign exchange management and Nigeria's economic growth from 1970 to 2012. The data used for this study were majorly sourced from the CBN Statistical Bulletin. The Ordinary Least Squares estimation technique within the ECM framework was employed in the study. The choice of the ECM was to enable it to account for the explanatory potent of the regressions in both the short-run and long-run as well as ascertaining the dynamics of attaining long-run equilibrium, an issue which is key to studies related to macroeconomics variables, one of which is the exchange rate. The Johansen-Joselius Co-integration test was employed in this study, to test for the presence of a long-run relationship between the dependent variable (exchange rate) and the independent variables. The result of the co-integration as revealed shows that Trace Statistics and Maxim-Eigen values are greater than the critical values at a 5% level of significance.

Theoretical Framework
Dependency Theory
The theory adopted for this work is the Dependency Theory which was developed in the late 1950s under the guidance of the Director of the United Nations Economic Commission for Latin America, Paul Prebisch, and his colleagues. Prebisch was troubled by the fact that economic growth in the advanced industrialized countries did not necessarily lead to growth in the poorer countries. Their studies suggested that economic activity in the richer countries often led to serious economic problems in the poorer countries. Prebisch's initial explanation for the phenomenon was very straightforward. Poor countries exported primary commodities to the rich countries which then manufactured products out of those primary commodities and sold them back to the poorer countries at high prices. The 'value added' by manufacturing a usable product always costs more than the primary products used to create these goods. Therefore, poorer countries would never be able to earn enough from their export to pay for their imports.

The dependency theory seeks to outline the factors that have contributed to the underdevelopment of undeveloped countries. This theory is based on the assumption that resources flow from a "periphery" of poor and underdeveloped states to a "core" of wealthy states thereby enriching the latter at the expense of the former. The phenomenon associated

with the dependency theory is that poor states are impoverished while rich ones are enriched by the way poor states are integrated into the world system (Todaro, 2003). Oil resources flow from Nigeria to developed countries for refinement and are imported back into the country at higher prices.

Due to the underdevelopment of most less developed countries (LDCs), they are dependent on the developed nations for virtually everything ranging from technology, aid, technical assistance, to culture and others. This dependent position of most underdeveloped countries makes them vulnerable to the products of the Western metropolitan countries and the Brenton Woods institutions (Ajayi, 2000) and subjects them to continuous reliance on their external sectors for their economic growth and development.

Methodology

This study adopted the *ex post facto* research design, in which all the data presented and analyzed in this research have been published before by the original collector, the Central Bank of Nigeria in its Statistical Bulletin. The population of the study consists of the statistical or stochastic variables and the data-generating process (DGP) of these macroeconomic variables for Nigeria. Each value of the variables depends on the economic and political climate prevailing in one timeperiod, as explained by Gujarati (2003). The independent variables are oil revenue, non-oil revenue, and foreign exchange rate while the dependent variable is gross domestic product growth rate as a proxy for economic growth.

This study utilized the Autoregressive Distributed Lag (ARDL) regression to analyze the data and to assess the effect of foreign trade on economic growth in Nigeria. The Autoregressive Distributed Lag regression technique is used to analyze this study because the ARDL approach has the advantage that it does not require all the variables to be 1(1) like the Johansen framework and it is still applicable if there are 1(0) and 1(1) variables in the data set. Its bounds test method of co-integration has certain econometric advantages in comparison to other methods of co-integration which are that: all the variables of the model are assumed to be endogenous, and the bounds test method of co-integration is applied irrespective of the order of integration of the variables. They may be either integrated of the first order 1(1) or 1(0). The short-run and long-run coefficients of the model are estimated simultaneously. The ARDL model of this study is specified as:

$$\Delta ln \Delta GDPGR_{t-i}$$

$$= \alpha_0 + \sum_{g=1}^{k-1} \square\, a_{1i} + \Delta lnGDPGR_{t-i} + \sum_{h=1}^{k-1} \square\, a_{2i} \Delta lnOIL_{t-i} + \sum_{i=1}^{k-1} \square\, a_{3i} \Delta lnNONOIL_{t-i}$$

$$+ \sum_{j=1}^{k-1} \square\, a_{4i} \Delta lnFOREX_{t-i} + a_5 lnGDPGR_{t-i} + a_6 lnOIL_{t-i} + a_7 lnNONOIL_{t-i}$$

$$+ a_8 lnFOREX_{t-i} + \mu_t$$

$\alpha_1, \alpha_2, \alpha_3,$ and α_4 examine the short-run dynamic relationship while $\alpha_5, \alpha_6, \alpha_7,$ and α_8 investigate the long-run relationship between a dependent variable and independent variables. The lag length or order of the variables was selected by using Akaike Information Criteria (AIC). The

AIC is often preferred as it gives the heaviest penalties for loss of a degree of freedom (Ogwumike and Ofoegbu, 2012). AIC also imposes a larger penalty for additional coefficients.

Since co-integration was established among the variables, the study proceeded to examine the long-run effect and the short-run dynamics using the Error Correction Term (ECT) equation as follows;

$$\Delta ln\Delta GDPGR_{t-i} = \alpha_0 + \sum_{g=1}^{k-1} \square\, a_{1i} + \Delta lnGDPGR_{t-i} + \sum_{h=1}^{k-1} \square\, a_{2i}\Delta lnOIL_{t-i} + \sum_{i=1}^{k-1} \square\, a_{3i}\Delta lnNONOIL_{t-i} + \sum_{j=1}^{k-1} \square\, a_{4i}\Delta lnFOREX_{t-i} + ECT_{t-1} + \varepsilon_t$$

Where;

GDPGR = Gross Domestic Product Growth Rate,
OIL = Oil Revenue,
NONOIL = Non-Oil Revenue
FOREX = Foreign Exchange Rate,
ECT_{t-1} = lagged Error Correction Term and
ε_i = Error Term

Results and Discussion

Table 1: Descriptive Statistics

	GDPGR	OIL	NONOIL	FOREX
Mean	3.175000	2348.605	918.7484	104.4518
Median	4.215000	977.6350	269.6250	111.1650
Maximum	15.33000	8878.970	3275.030	306.1000
Minimum	-13.13000	7.250000	2.980000	4.530000
Std. Dev.	5.538718	2711.057	1170.164	78.39996
Jarque-Bera	8.537299	5.170184	7.026459	3.564680
Probability	0.014001	0.075389	0.029801	0.168244
Observations	38	38	38	38

Source: E-view 10 Output, 2020.

Table 1 above shows the mean GDP growth rate, oil revenue, non-oil revenue, and foreign exchange rate. The mean of oil revenue is 2348.605; non-oil is 918.748; the foreign exchange rate is 104.45 while that of GDP growth rate is 3.175. The Jarque-Bera probability value of oil revenue and foreign exchange rate are 0.07 and 0.16, respectively. These values are higher than 0.05, showing that they are normally distributed. However, GDP growth rate and non-oil revenue had Jarque-Bera probability values of 0.01 and 0.02, respectively, which are less than 0.05. It indicates that GDP growth rate and non-oil revenue are not normally distributed, though, this has nothing to do with the results of the regression.

Table 2: Augmented Dickey-Fuller Unit Root Test

LEVEL			FIRST DIFFERENCE			
Variables	ADF Test Statistic	Critical Value @ 5%	ADF Test Statistic	Critical Value @ 5%	Max Lag	Order of Integration
GDPGR	-3.942397	-3.536601			3	1(0)
OIL	-2.664700	-3.536601	-5.053109	-3.544284	3	1(1)
NONOIL	-1.388037	-3.536601	-6.563712	-3.540328	3	1(1)
FOREX	-2.031211	-3.540328	-4.137221	-3.540328	3	1(1)

Source: E-view 10 Output, 2020.

At level, GDP growth rate is stationary because the absolute value of the ADF test statistic of -3.942397 is greater than the critical values of -3.536601 at a 5% level of significance. It is also observed that oil revenue, non-oil revenue, and foreign exchange have a unit root at the level because their respective ADF test statistic values of -2.664700, -1.388037, and -2.031211 are less than their respective critical values of -3.536601, -3.536601, and 3.540328 but became stationary after first difference because their respective ADF test statistics are greater than their respective critical values at 5%.

Table 3: Lag Order Selection Criteria

Endogenous variables: GDPGR OIL NONOIL FOREX
Exogenous variables: C
Date: 02/15/21   Time: 20:30
Sample: 1981 2018
Included observations: 35

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-879.3752	NA	9.83e+16	50.47858	50.65634	50.53994
1	-764.5048	196.9206	3.49e+14	44.82885	45.71762*	45.13565
2	-742.5821	32.57095*	2.59e+14*	44.49040	46.09019	45.04265*
3	-725.1677	21.89243	2.64e+14	44.40958*	46.72038	45.20727

Source: E-view 10 Output, 2020.
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Table 3 above shows that Akaike Information Criterion (AIC) has the lowest value of 44.40958 at lag 3. This empirical finding is in line with the built-in property of this criterion, which is designed in such a way that a larger lag length is preferable.

Table 4: ARDL-Cointegration Test Results
Wald Test (ARDL Long Run Equilibrium Condition)

Test Statistic	Value	Signif.	I(0)	I(1)
F-Statistics	5.374943	10%	2.37	3.2
K	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66

Source: E-view 10 Output, 2020.

The Tables above presents the result of the ARDL bound test approach to Co-integration. The result revealed that there is a presence of co-integration among the variables. The f-statistics value of 5.374943 is greater than the lower bound value of 2.79 and upper bound values of 3.67 at a 5% level of significance. Hence, there is sufficient proof of the presence of a long-run equilibrium relationship between foreign trade and economic growth in Nigeria between 1981 and 2018. The result thus shows that foreign trade has a long-run relationship with economic growth in Nigeria within the period under study.

Model Evaluation and Statistical Test of Hypothesis
Table 5: ARDL Error Correction Regression

Dependent Variable: D(GDPGR)
Selected Model: ARDL(3, 3, 3, 3)
Included observations: 35

ECM Regression
Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDPGR(-1))	-0.516816	0.152010	-3.399874	0.0030
D(GDPGR(-2))	-0.095445	0.142221	-0.671101	0.5102
D(OIL)	-0.000814	0.000553	-1.472810	0.1572
D(OIL(-1))	0.000480	0.000508	0.945399	0.3563
D(OIL(-2))	5.10E-06	0.000537	0.009498	0.9925
D(NONOIL)	0.007375	0.003375	2.184932	0.0416
D(NONOIL(-1))	0.018435	0.003505	5.259647	0.0000
D(NONOIL(-2))	0.009684	0.004179	2.317415	0.0318
D(FOREX)	0.004983	0.035572	0.140076	0.8901
D(FOREX(-1))	0.002142	0.034965	0.061268	0.9518
D(FOREX(-2))	-0.073458	0.037037	-1.983373	0.0620
Ecm(-1)*	-0.356251	0.062459	-5.703731	0.0000

R-squared	0.713976	Mean dependent var		0.366857
Adjusted R-squared	0.577183	S.D. dependent var		4.814814
S.E. of regression	3.130804	Akaike info criterion		5.386317
Sum squared resid	225.4445	Schwarz criterion		5.919580
Log-likelihood	-82.26056	Hannan-Quinn criteria.		5.570399
F-statistic	15.61487	Durbin-Watson stat		2.294811
Prob(F-statistic)	0.000046			

As expected, the lagged error correction term is negative, less than unity, and statistically significant at 5 percent. The coefficient revealed that once there is disequilibrium in the system, it takes an average speed of 35% to adjust itself back towards the long-run equilibrium level. This finding was collaborated by Bannerjee, Dolado, and Mestre (1998) who asserted that a highly significant lagged error correction term proves the existence of a long-run relationship between the variables and its ability to adjust from disequilibrium state towards equilibrium level.

The coefficient of determination (R-square), which was used to measure the goodness of fit of the estimated model, indicates that the model is reasonably fit in prediction. It showed that 71 percent changes in economic growth (GDPGR) were collectively due to oil revenue, non-oil revenue, and foreign exchange rate while 29 percent unaccounted variations were captured by the white noise error term. It showed that oil revenue, non-oil revenue, and the foreign exchange rate had a strong significant impact on economic growth within the period under review. The F-statistics which is used to examine the overall significance of the regression model equally showed that the result is significant, as indicated by a high value of the F-statistic, 15.6, which is also significant at the 5.0 percent level.

Post Estimation Diagnostics Tests
The study conducted various post estimation diagnostic tests to ascertain the appropriateness and stability of the model as well as the robustness of the results. Thus, for the reliability of the estimates, the study obtained series of residual and stability tests such as the Breusch-Godfrey serial correlation LM test, the heteroskedasticity test, normality test, and cusum stability test. The decision rule for accepting the null hypothesis for any of these diagnostics tests is that the probability-value (*p-value*) of each of the tests has to be greater than 0.05 level of significance.

Table 6: Post Estimation Diagnostics Tests

Test	P-Value
Heteroskedasticity Test	0.9197
Serial Correlation LM Test	0.2293
JB Normality Test	0.1745

Source: Author's Computation from E-view 10 Results, 2020.

The result as presented in Table 6 above table revealed that there was no evidence of heteroscedasticity and serial correlation. The data are also normally distributed in the estimated ARDL-ECM model with *p-values* of 0.9197, 0.2293, and 0.1745 respectively. They were found to be greater than 0.05 level of significance.

Cusum Stability Tests
Figure 1: Cusum Stability Tests
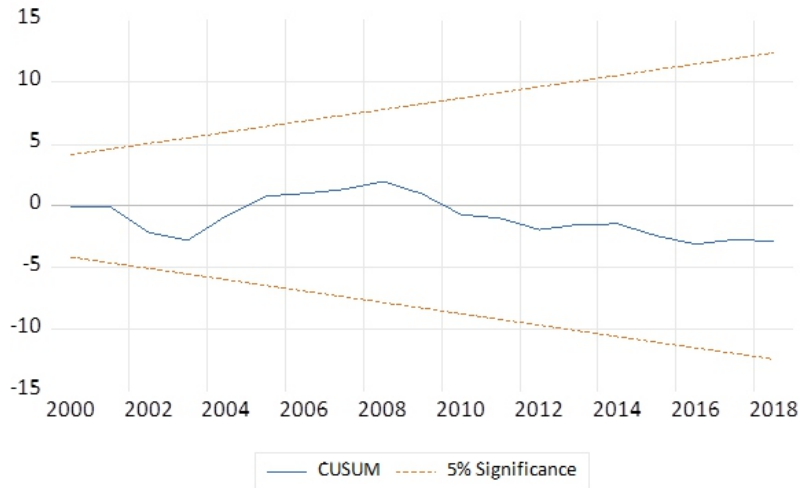
The CUSUM stability tests in Figure 1 above revealed that the model is stable and the regression equation is correctly specified as the plots of the charts lie within the critical bounds of a 5% significant level.

Statistical Test of Hypothesis
The hypotheses formulated in this study were tested using the Wald test (f-statistic) and *p*-value. The level of significance for the study is 5%, for a two-tailed test. The Wald test computes a test statistic based on the unrestricted regression and tests for the joint significance of the coefficients. The Wald statistic measures how close the unrestricted estimates come to satisfying the restrictions under the null hypothesis. If the restrictions are true, then the unrestricted estimates should come close to satisfying the restrictions.

Thus;
   H$_0$: $\beta_0 = 0$ (Null hypothesis)
   H$_1$: $\beta_1 \neq 0$ (Alternative hypothesis)
   H$_{01}$:   Oil Revenue has no significant impact on economic growth in Nigeria.

Table 7: Wald Test Results on Impact of Oil Revenue on Economic Growth in Nigeria

Wald Test Statistics	Null Hypothesis	F-Statistic	P-Value
OIL	C(3)=C(4)=C(5)=0	8.184445	0.0131

Source: Author's Computation, 2020

From the Wald-test in table 7, the calculated f-value for OIL is 8.184445 and its probability value is 0.0131. Since the probability value is less than 0.05 at a 5% level of significance, it thus falls in the rejection region. Hence, we will reject the first null hypothesis (H$_{01}$). The result thus shows that oil revenue has a significant impact on economic growth in Nigeria.

H$_{02}$: Non-oil revenue has no significant impact on economic growth in Nigeria.

Table 8: Wald Test Results on Impact of Non-Oil Revenue on Economic Growth in Nigeria

Wald Test Statistics	Null Hypothesis	F-Statistics	P-Value
NONOIL	C(6)=C(7)=C(8)=0	12.11970	0.0049

Source: Author's Computation, 2020

From the Wald-test in table 8, the calculated f-value for NONOIL is 12.11970 and its probability value is 0.0049. Since the probability value is less than 0.05 at a 5% level of significance, it thus falls in the rejection region. Hence, we will reject the second null hypothesis (H$_{02}$). The result thus shows that non-oil revenue has a positive significant impact on economic growth in Nigeria.

H$_{03}$: Foreign Exchange rate has no significant impact on economic growth in Nigeria.

Table 9: Wald Test Results on Impact of Foreign Exchange Rate on Economic Growth in Nigeria

Wald Test Statistics	Null Hypothesis	F-Statistics	P-Value
FDITC	C(9)=C(10)=C(11)=0	10.426396	0.0072

Source: Author's Computation, 2020.

From the Wald-test in table 9 above, the calculated f-value for FOREX is 10.42639 and its probability value is 0.0072. Since the probability value is less than 0.05 at a 5% level of significance, it thus falls in the rejection region. Hence, we will reject the third null hypothesis (H$_{03}$). The result thus shows that foreign exchange has a positive significant impact on economic growth in Nigeria.

Discussion of Findings

The parameter estimate of oil revenue was found to have a significant effect on economic growth within the period under study. It shows that oil revenue has contributed significantly to the improvement in economic growth in Nigeria apparently because the oil sector is the mainstay of the Nigerian economy. This finding is in line with that of Oyeyemi (2013); and Ishola et al., (2015) who found that oil revenue has a significant impact on economic growth. Non-oil revenue was found to have a positive significant effect on economic growth in Nigeria. It shows that the higher the non-oil revenue, the higher the rate at which the economy grows. This finding is in line with the previous studies of Adenugba and Dipo (2013); and Kromtit et al., (2017) who found that non-oil revenue has a significant impact on economic growth. Lastly, the foreign exchange rate was found to have a significant impact on economic growth. This finding is in line with the empirical works of Usman and Adejare (2014) but contrary to the study conducted by Kromtit et al., (2017).

Conclusion and Recommendations

This study examines the impact of foreign trade on economic growth in Nigeria in the period 1981 to 2018. The exogenous variables of this study are oil revenue, non-oil revenue, and foreign exchange rate while the gross domestic product growth rate is the endogenous variable. From the findings, this study concludes that oil revenue, non-oil revenue, and foreign exchange rate have a significant impact on Nigeria's economic growth for the period under study and corroborates the findings of an earlier study by Abiodun (2017) which established a nexus between Nigeria's international trade and economic growth. Consequently, this study recommends the following:

i. Nigeria's oil revenue should be heavily invested in non-oil-earning productive sectors such as agriculture and mining. This will create a multiplier effect and increase the productive non-oil base of Nigeria.

ii. The non-oil sector of Nigeria's economy should be deepened by making policies that will encourage its growth as, in the long-run, it will have positive effects on the creation of value locally.

iii. The foreign exchange rate should continue to be determined by the forces of demand and supply. This will indicate the overall health of the economy, provide economic indices that will enable Government agencies in charge of economic planning to plan and forecast Nigeria's productive sectors more accurately.

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Appendix A: Data Presentation

Year	GDPGR	OIL	NONOIL	FOREX
1981	-13.13	8.56	4.73	110.39
1982	-6.8	7.81	3.62	109.86
1983	-10.92	7.25	3.26	109.84
1984	-1.12	8.27	2.98	113.2
1985	5.91	10.92	4.13	99.9
1986	0.06	8.11	4.49	51.89
1987	3.2	19.03	6.35	14.72
1988	7.33	19.83	7.77	4.53
1989	1.92	39.13	14.74	7.39
1990	11.78	71.89	26.22	8.03
1991	0.36	82.67	18.33	9.91
1992	4.63	164.08	26.38	17.29
1993	-2.04	162.10	30.67	22.05
1994	-1.81	160.19	41.72	21.88
1995	-0.07	324.55	135.44	21.88
1996	4.2	408.78	114.81	21.88
1997	2.94	416.81	166.00	21.88
1998	2.58	324.31	139.30	21.88
1999	0.58	724.42	224.77	92.69
2000	5.02	1,591.68	314.48	102.1
2001	5.92	1,707.56	903.46	111.94
2002	15.33	1,230.85	500.99	120.97
2003	7.35	2,074.28	500.82	129.35
2004	9.25	3,354.80	565.70	133.5
2005	6.44	4,762.40	785.10	132.14
2006	6.06	5,287.57	677.54	128.65
2007	6.59	4,462.91	1,264.60	125.83
2008	6.76	6,530.60	1,336.00	118.56
2009	8.04	3,191.94	1,652.65	148.88
2010	8.01	5,396.09	1,907.58	150.29
2011	5.31	8,878.97	2,237.88	153.86
2012	4.23	8,025.97	2,628.78	157.49
2013	6.67	6,809.23	2,950.56	157.31
2014	6.31	6,793.82	3,275.03	158.55
2015	2.65	3,830.10	3,082.41	193.27
2016	-1.62	2,693.91	2,985.13	253.49
2017	0.81	4,109.80	3,200.12	305.8
2018	1.92	5,545.80	3167.9	306.1