

# Impact of Non-Oil Foreign Trade on Economic Growth in Nigeria

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## Abstract

This study focuses on the empirical examination of the impact of non-oil foreign trade on economic growth in Nigeria from 1986 to 2018. The study employed secondary data in analysing the impact of non-oil foreign trade on economic growth in Nigeria. The Autoregressive Distributed Lagged (ARDL) and Error Correction Model (ECM) were used to estimate the impact of non-oil foreign trade on economic growth in Nigeria and this was because of the specific objectives. The R-square of 0.98 percent suggests that there is a strong relationship between Economic Growth in Nigeria and non-oil foreign trade indicators in Nigeria, that is Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR). Also based on the probability value, Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically significant in explaining the variation in Economic Growth in Nigeria. While Non-Oil Export in Nigeria (NOILEX) was statistically insignificant in explaining the variation in Economic Growth in Nigeria. The probability values of the ECM results revealed that Non-Oil Export in Nigeria (NOILEX) was statistically significant in explaining the variation in Economic Growth in Nigeria while Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically insignificant in explaining the variation in Economic Growth in Nigeria. Therefore, the study recommends that government should improve the efficiency of Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) since there were statistically significant in the long run in determining the improvement of Economic Growth in Nigeria.

**Keywords:** *Accountability, Democracy, Development, Governance, Participation.*

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## Background to the Study

Income of the country also increases the level of employment in the economy as higher demand for exports will require more production which will, in turn, lead to the employment of more people (Adenugba and Dipo, 2013). Exportation by a country also helps attain a favorable balance of trade and balance of payment position for the exporting country provided its exports reasonably exceed its imports. Exportation is required by any economy to enhance revenue and usher in economic growth and development. It is therefore crucial for economic progress and this has informed the idea of export-led growth.

Export is a catalyst necessary for the overall development of an economy (Abou-Strait, 2005). It was also noted that foreign trade creates an avenue for foreign capital to flow into a country (Akinwunmi and Adekoya, 2016). This increases the earnings of the country thereby creating an avenue for growth by raising the national. Successive Nigerian governments on their part have shown efforts over the years to grow the non-oil export trade by establishing supportive policies. Some of these policies with varying degrees of successes include but not restricted to: protectionism policy in the mode of import substitution policy of industrialization in the 1960s; trade liberalization policy (this took the form of Structural Adjustment Programme) of the mid-1980s and export promotion policy of 1990s which was executed through intensified policy support to Small and Medium Scale Enterprises (SMEs) to enhance productivity and subsequently, export of local products.

In a country like Nigeria where the level of investment is low, foreign capital is very much needed to accelerate the creeping rate of economic growth. The Nigerian economy depends largely on foreign trade for growth and is also one that depends majorly on one export commodity at a time. For instance, at independence, the major export commodity was cocoa and the leading sector in the economy was the agricultural sector but today, the major export commodity is crude oil and the leading sector is now the petroleum sector. This has not allowed for balanced growth in the economy as some sectors have been allowed to grow while growth has been impeded in others and this has made the country remain a developing country. In Nigeria, crude oil is the major export because of the large revenue it generates. This has led the economy to focus on the petroleum sector while ignoring the other sectors as well as the potential revenue they can generate. This research aims to determine if non-oil exports contribute significantly to the Gross Domestic Product (GDP) of the economy and to what extent they contribute. It also aims to determine the factors responsible for the current performance of the non-oil sector.

Nigeria is yet to attain the ranks of a developed economy due to a lack of structural change, among other factors. Also, it was observed that a factor crucial to this lack of economic progress is the lack of economic diversification which has caused the economy to rely heavily on the crude oil sector for revenues and as the major export commodity in the economy (Osuntogun, 2007). Before the 1970s, Nigeria's exports were predominantly non-oil commodities with agricultural commodities accounting for the high contribution. However, in the 1970s, when the price of crude oil in the international market sky rocketed, the contribution of non-oil exports began falling and has remained low ever since. This is majorly due to the money-spinning nature of oil exports which makes it more profitable to export oil and less profitable to export non-oil commodities.

This has caused a rather heavy dependence on the oil sector and the proceeds from the exportation of crude oil. This heavy reliance subjects the country to difficulties when the price of crude oil, the major export commodity, is low in the international market. In light of this, the government adopted various strategies to boost non-oil exports and stabilize the economy. Despite these efforts, the performance and contribution of the non-oil exports sector have remained very low. The sector has continued to perform below its full potential. Therefore, the main objective of the study is to examine the impact of non-oil foreign trade on economic growth in Nigeria. while the specific objectives are to:

- i. Examine the impact of non-oil export on economic growth in Nigeria
- ii. Assess the impact of non-oil import on economic growth in Nigeria
- iii. Investigate the impact of the exchange rate on economic growth in Nigeria.

### **Conceptual Review**

Non-oil exports are all those commodities excluding crude oil (petroleum products), which are sold in the international market for revenue generation. Nigeria's non-oil exports sector is structured into four broad constituents which are agricultural exports, manufactured exports, solid mineral exports, and services exports (Akeem, 2013). Thus, non-oil export products are unlimited as they include crops, manufacturing goods, solid minerals, entertainment and tourism services, etc. (Abogan, Akinola, and Baruwa, 2014). This explains non-oil exports in the context of this study. Akeem (2011) defined the non-oil sector of the Nigerian economy as the whole of the economy less oil and gas sub-sector. It covers agriculture, industry, solid minerals and the services sub-sector, including transport, communication and distributive trade, financial services, insurance, government, etc. This definition is sufficient for the purpose of this study.

Ajakaiye and Ojowu (2014), also categorized Nigeria's non-oil trade into four broad constituents, namely: agricultural exports; manufactured exports; solid mineral exports; and services exports. These activities have great potentials. Thus, non-oil exports/imports comprise crops and products such as cotton, cassava, cocoa, cashew nuts; solid minerals and chemicals; manufactured goods such as textile, tyre, machineries; and manpower, entertainment, and tourism, to mention but a few. It is made up of every other thing exported or imported, except petroleum products. In other words, non-oil trade in Nigeria comprises of all such products that do not have any affiliation with crude oil or petroleum products. This also defines non-oil trade in the context of this study. Abogan, Akinola and Baruwa (2014), defined the Non-Oil trade of the Nigerian economy as the whole of the economy less the Oil and Gas sub-sector. It covers agriculture, industry, solid minerals and the services sub-sector, including transport, communication, distributive trade, financial services, insurance, government and others. This definition is also sufficient for the purpose of this study.

On the other hand, the concept of economic growth like other economic concepts has different definitions by different authors. However, according to Jhingan (2003), economic growth is the process whereby the real per capita income of a country increases over a long period of time, and it is measured by the increase in the amount of goods and services produced in a country. A growing economy produces more goods and services in each successive period. Thus in a wider perspective, it implies raising the standard of living of the people and reducing

inequality of income distribution. In the words of Zhattu (2013), economic growth is the basis of increased prosperity and it comes from the accumulation of more capital and innovations which lead to technical progress.

Economic growth can be defined as a periodic increase in a nation's output, which is most commonly measured by the gross domestic product (GDP) of the nation. The benefits stemming from economic growth are wide-ranging (Harper, 2012). Nwosu (2013), sees economic growth as the process of augmenting the productive forces or expanding productive capacity which is accomplished through effective mobilization, assemblage, and management of human, material, and financial resources. According to Dewett (2015), economic growth implies an increase in the net national product in a given period. It is defined as a steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income. This study adopts the concept of economic growth by Nwosu (2013) which is justified based on key elements in the definition which suit the Nigerian economic situation, namely: through effective mobilization, assemblage, and management of human, material, and financial resources to expand her productive capacity. The study also adopts the concept of economic growth as defined by Dewett (2015).

### **Empirical Review**

Onodogu, Ikpe and Anuwor (2013), empirically investigated the impact of non-oil trade on the Nigerian economic growth for 31 years, from 1981 to 2012. The study used secondary data sourced from CBN Statistical Bulletin (2012). It adopted the endogenous growth model, augmented production function, co-integration, and conventional tests for mean reversion to test for significance between non-oil trade and the economic growth of Nigeria. The result revealed that a weak impact of non-oil trade exists and it influenced the change in the level of growth in the Nigerian economy. The study failed to give support to recent claims that non-oil trade led to growth in Nigeria. It also set a data benchmark for appraisal of likely advancement in the future performance of non-oil exports owing to GDP growth rate.

Abogan, Akinola and Baruwa (2014) studied the impact of non-oil trade on the economic growth of Nigeria for 31 years from 1980 to 2011. The study adopted the ordinary least square (OLS) estimation technique which included error correction, parsimonious, and over-parametrization to analyze the data generated from the CBN Statistical Bulletin (2011). In testing for the time series properties, the evidence from estimated economic models suggested that all the variables examined were stationary at  $I(1)$ , using the Augmented Dickey-Fuller (ADF) and Phillips-Perron tests. The variables were found to be co-integrated by the Johansen co-integration test which showed that a long-run relationship exists among the variables. The study concluded that the impact of non-oil trade on Nigeria's economic growth was not enormous as a unit rise in non-oil trade impacted positively by 26% on the productive capacity of goods and services in Nigeria during the review period. It was recommended that Nigeria's government should reinforce the Legislative and Monitoring Committees of the non-oil sectors and spread the economy to have optimal support from all sectors in the Nigerian economy.

Ijirshar (2015) studied the effects of non-oil trade on the Nigerian economy for 41 years from 1970 to 2011. The study proxy non-oil trade by the rate of oil export, index of trade openness, real exchange rate, inflation rate and rate of non-oil export, as the independent variables while the Nigerian economic growth was proxy by GDP, as the dependent variable. The study adopted the Unit root test, Augmented Dickey-Fuller (ADF) test, error correction model (ECM), and Johansen co-integration to test for significance among the variables. The result of the unit root test suggested that all the variables in the model are stationary at first difference. The result from the co-integration test revealed a long-run equilibrium relationship among the variables from 1970 to 2011. There was a positive contribution of non-oil trade to the economic growth of Nigeria from the result of the error correction model. The study recommended that measures should be taken to diversify, reduce and eliminate the supply constraints that determine the performance of the export sectors to maximally exploit the advantages of other sectors via export promotions of non-oil products. Syed, Muhammad & Muhammed (2015), estimated the relationship between gross domestic product (GDP) and agricultural and non-agricultural export trade for Pakistan, employing Johansen co-integration technique by using secondary data for the period 1972 - 2012. It was found that agricultural exports have a negative relationship with the economic growth of Pakistan while non-agricultural exports have a positive relationship with economic growth.

Adeleye, Adeteye and Adewuyi (2015), examined the impact of balance of trade on economic growth in Nigeria, using net export (that is, total export less total import) and Balance of Payment as proxies for international trade while Gross Domestic Product represented economic growth. The study employed regression analysis, using co-integration and error correction modeling techniques to find out the long-run relationship between economic performance and international trade. Findings from their study revealed that only total export (TEX) remained positive and significant while others were insignificant, which means that Nigeria is running a mono-cultural economy where only oil acts as the sole support of the economy without tangible support from other sectors such as industrial, manufacturing and agriculture. Their study recommends that government should, therefore, pursue aggressive diversification of the economy by putting in place policies and incentives that will boost non-oil export, the manufacturing sector and, overall, promote the industrial growth of Nigeria.

Agbo, Agu, and Eze (2018) evaluated the impact of balance of trade on Nigeria's economic growth. The objectives of their study were to ascertain the impact of export trade on the Nigerian economy and to determine the impact of import trade on the Nigerian economy. Multiple regression analysis techniques were employed in estimating the various components of foreign trade. The data used for the study was extracted from the 2012 edition of the CBN Statistical Bulletin, covering the period from 1980 to 2012. The results of their study showed that there is a significant impact of export trade on Nigerian economic growth. Their study also revealed that there is no significant impact of import trade on Nigeria's economic growth. The researchers, among other things, recommended that conscious efforts should be made by the government to fine-tune the various macroeconomic variables to provide an enabling environment to stimulate foreign trade by engaging in more export trade and, in effect, curtail import trade which has a negative effect or strain on the economy. The underground economic

activities of bunkering, smuggling, child and drug trafficking, and other related illegal activities should be properly checked. It was also recommended that the Government should encourage export diversification. In other words, non-oil sector exports should be encouraged while concentration on oil sector export should be minimized.

### **Theoretical Framework**

The theory of trade expounded by Heckscher and Ohlin is most popularly known as the Heckscher-Ohlin (H-O) theory of trade. It is equally called the 'Factor Endowment Theory' of trade (Dvewedi, 2018). This theory postulates that comparative advantage in the production cost is explained specifically by the varying factor endowments of nations. Factor endowment is the total availability of usable natural resources, including man-made means of production like machinery. Nonetheless, in the explanation of the theory of trade, only capital and labour are considered because they are the two most important factors (Sun and Heshmati, 2012).

Factor endowments vary among countries. While some nations are endowed with labour, capital is in abundance in others. The country with a higher abundance of labour has an advantage in the production of commodities that need labour-intensive technology. Capital-abundant countries, on the other hand, have the advantage of manufacturing commodities that need capital-intensive technology. For instance, China and India are countries with abundant labour and they manufacture and export large quantities of garments and shoes because these commodities need abundant labour whereas countries such as the United States of America and Japan are countries with abundant capital and they manufacture and export capital intensive commodities such as cars, machineries and several other households and industrial equipment. This study shall be hinged on Heckscher-Ohlin theory which recognizes the important role that international trade plays in economic growth as it encourages specialization which offers considerable economic benefits. Also, foreign exchange earnings from exports enable a country to finance the import of goods and services that are not available in the domestic economy (Ohlin, 1933).

Debaere (2003) and Romalis (2004) confirmed the relevance of the H-O theory in determining trade patterns. H-O theory that focused on analyzing different dimensions (countries, products, and production factors) did not find confirmation in its original form (Maskus 1985; Bowen, Leamer and Sveikauskas, 1987; and Staiger, 1988). Its intuitivism and lack of alternative theories that would explain trade of factor service created the need for additional research. First empirical testing of the multidimensional H-O theory was done in 1985 (Maskus, 1985) and then in 1987 (Bowen, Leamer and Sveiskaus, 1987). Research results showed that the relation between the left and the right side of the equation of factor content trade was confirmed in 61% of analyzed countries, while the random probability of that kind of relationship is 50%. The research also confirmed the suspicions of theorists regarding the credibility of the theory in measuring the direction of trade that was based on the Leontief paradox. Therefore, the H-O theory will be used as the foundation of empirical analysis of the relationship between international trade and economic growth in Nigeria.

## Methodology

This study adopted the *ex post facto* research design and secondary data in analyzing the impact of non-oil foreign trade on economic growth in Nigeria. The time-series data covered the period of 1986 to 2018. The data was sourced from the Central Bank of Nigeria's Annual Statistical Bulletin (2018). The stationarity test (unit root test) was carried out using the Augmented Dickey-Fuller test on each variable to test for stationarity and avoid spurious regression as suggested by Grange and Newbold (1972).

The analytical and interpretational tools employed comprise simple statistical as well as econometrics tools where necessary. According to Pesaran and Shin (1999), which was later expanded by Pesaran, Shin, and Smith (2001) the best techniques that allow the estimation of variables that are integrated into  $I(1)$  and  $I(0)$  is Autoregressive Distributed Lagged (ARDL). Therefore, the study adopted the Autoregressive Distributed Lagged (ARDL) and Error Correction Model (ECM) to estimate and analyze the long and short-run impact of non-oil foreign trade on economic growth in Nigeria. In addition, Autoregressive Distributed Lagged (ARDL) -Bounds test procedure was used to examine the co-integration between non-oil foreign trade on economic growth in Nigeria. The analytical software for model estimation is econometric views (E-Views 9.0) software.

## Model Specification

This study focuses on the impact of non-oil foreign trade on economic growth in Nigeria. The production function and Heckscher-Ohlin trade theory are the theoretical foundation of this study. Thus, to establish the relationship between international trade variables and economic growth, we have the implicit function specified as:

$$GDPGR = f(NOILEX, NOILIM, EXCHR) \quad (1)$$

The explicit function is captured as:

$$GDPGR = \alpha_0 + \beta_1 NOILEX + \beta_2 NOILIM + \beta_3 EXCHR + \mu_t \quad (2)$$

The Autoregressive Distributed Lagged (ARDL) model used in this study is specified as follows:

$$\begin{aligned} \Delta GDPGR_t = & \beta_0 + \sum_{i=1}^k \beta_{1i} GDPGR_{t-i} + \sum_{i=1}^l \beta_{2i} \Delta NOILEX_{t-i} + \sum_{i=1}^m \beta_{3i} \Delta NOILIM_{t-i} \\ & + \sum_{j=0}^n \beta_{4j} \Delta EXCHR_{t-j} + \beta_{5i} GDPGR_{t-1} + \beta_{5i} NOILEX_{t-1} + \beta_{5i} NOILIM_{t-1} \\ & + \beta_{5i} GDPGR_{t-1} + \varepsilon_t \end{aligned} \quad (3)$$

Suffice it to reiterate that co-integration provides the theoretical underpinning for the error-correction model. Specifying equation (2) in the spirit of the error-correction model, we have:

$$\Delta GDPGR_t = \beta_0 + \sum_{g=1}^k \beta_{1g} GDPGR_{t-g} + \sum_{h=1}^l \beta_{2h} \Delta NOILEX_{t-h} + \sum_{i=1}^m \beta_{3i} \Delta NOILIM_{t-i} + \sum_{j=0}^n \beta_{4j} \Delta EXCHR_{t-j} + \beta ECM_{t-1} + \varepsilon_t \quad (3.3)$$

The model above is used to adjust the estimation until the ECM turned negative. The negative sign of the coefficient of the error correction term ECM (-1) shows the statistical significance of the equation in terms of its associated t-value and probability value. Where;  $\beta_0$  = The intercept or autonomous parameter estimate,  $\beta_1$  to  $\beta_7$  = are the slope of the coefficients of the independent variables to be determined  $\Delta$  = First difference operator, GDPGR = GDP Growth Rate, NOILEX = Non-Oil Export, NOILIM = Non-Oil Import, EXCH = Exchange Rate ECT = Error correction term and  $\mu_t$  = Error term or residual. The a priori expectation is that  $\beta_1, \beta_2$  and  $\beta_3 > 0$  indicating a positive or negative relationship between Economic Growth and Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) that is, increase/decrease in Economic Growth and Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR).

### Descriptive Analysis of Variables

Table 1: Descriptive Analysis of Variables

	GDPGR	NOILEX	NOILIM	EXCHR
Mean	4.381765	315.0212	2938.052	105.1818
Median	4.430000	94.70000	1151.000	118.5000
Maximum	15.33000	1434.200	9758.900	362.3000
Minimum	-2.040000	0.600000	5.100000	1.800000
Std. Dev.	3.878531	423.4212	3311.659	93.74655
Skewness	0.492801	1.132111	0.823459	0.950570
Kurtosis	3.383252	2.946322	2.099312	3.612877
Jarque-Bera	1.584250	7.053171	4.844920	5.486182
Probability	0.452881	0.029405	0.088703	0.064371
Sum	148.9800	10395.70	96955.70	3471.000
Sum Sq. Dev.	496.4191	5737136.	3.510008	281229.3
Observations	33	33	33	33

Source: Output from E-views 9.0 (2020)

Table 1 shows the descriptive analysis of the variables used in this study. From the table, the highest value for GDP Growth Rate during the period of study is 15 percent as shown in Table 1. Also, peak values for Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) are 1434 billion, 9758.9 billion, and 362.3 dollars respectively. However, the lowest value for GDP Growth Rate during the period of study is -2.04 percent. While, the lowest value for Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) are 0.6 billion, 5.10 billion, and 1.8 dollars respectively. On average the value of GDP Growth Rate is 4.38 percent. While mean values of Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in



Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) are 94.7 billion, 1151 billion, and 105.2 dollars respectively.

### Stationarity Test of Variables

**Table 2: Augmented Dickey-Fuller Test**

Variables	ADF Statistics	Critical Value	Stationary Status
GDPGR	-3.878996	-2.954021(5%)	I(0)
NOILEX	-5.169885	-3.632896(5%)	I(1)
NOILIM	-6.555346	-3.588379(5%)	I(1)
EXCHR	-6.436161	-3.862882(5%)	I(1)

*Source: Output from E-views 9.0 (2020)*

Table 2 shows the stationarity test of the variables used in the study. From Table 2, the Augmented Dickey-Fuller Test results revealed that GDP Growth Rate is stationary at second difference 1(2) of 5 percent level of significance. While Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) are stationary at first difference 1(1) of 5 percent level of significance. This implies the study has to carry out Johans on co-integration test to show whether the data are co-integrated.

### ARDL Co-integration Bound Test

**Table 3: ARDL Bounds Test of Co-integration**

Null Hypothesis: No long-run relationship exist		
Test Statistic	Value	K
F-stat	6.096526	5
Critical Value Bound		
Significance	I0 Bound	I1 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

*Source: Output from E-views 9.0 (2021)*

Since it was observed that the variables are stationary in a different order the study adopted the ARDL bound test. The above table, therefore, depicts the F-statistics which is obtained from the bound test and is 6.096526. When compared with the value of the f-statistics it can be observed that it is higher than both the 2.62 and 3.79 for 1(0) and 1(1) respectively. With this, it can be concluded that the variables adopted in the study are cointegrated. Using the ARDL Bound test with the critical value (Pesaran and Shin, 1999), the variables were co-integrated at a 1per cent level of significance since the Wald F- statistics is greater than the critical lower and upper bound.

## Discussion of Regression Results

**Table 4:** Long run regression results

Variable	Coefficient	Std. Error	t-Statistics	Prob.
NOILEX	-2.810182	4.431701	-0.634109	0.5310
NOILIM	5.041337	0.651112	7.742662	0.0000
EXCHR	44.24930	10.96101	4.036974	0.0004
C	18047.59	835.2409	21.60764	0.0000
R-squared	0.976792			
Adjusted R-squared	0.974391			
F-statistic	406.8609			
Durbin-Watson stat	1.913176			
Prob(F-statistic)	0.000000			

**Source:** Author's E-views 9.0 Computation (2020)

Table 4 shows the long-run results of the study. The R-square of 0.98 percent suggests that there is a strong relationship between Economic Growth and non-oil foreign trade indicators in Nigeria, that is Non-Oil Export in Nigeria (NOILEX), Non-Oil imports in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR). This also implies that non-oil foreign trade indicators in Nigeria, that is Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) have a good fit in determining variations in Economic Growth in Nigeria. Also, the F-statistic value of 406.86 shows that the model employed is statistically significant in determining variations in Economic Growth in Nigeria.

From the long-run regression results obtained in Table 4, the values of the coefficients revealed that Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) have a positive impact on Economic Growth in Nigeria. While the value of the coefficient shows that Non-Oil Export in Nigeria (NOILEX) has a negative impact on Economic Growth in Nigeria. Finally, based on the probability value, Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically significant in explaining the variation in Economic Growth in Nigeria. While Non-Oil Export in Nigeria (NOILEX) was statistically insignificant in explaining the variation in Economic Growth in Nigeria.

**Table 5:** Short run Regression Results

Selected Model: ECM				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(NOILEX(-3))	4.751590	1.600348	2.969097	0.0090
D(NOILIM)	0.554140	0.318226	1.741342	0.1008
D(EXCHR)	1.159879	6.637974	0.174734	0.8635
ECM(-1)	-0.177355	0.047574	-3.727914	0.0033

**Source:** Output from E-views 9.0 (2019)

From the short-run regression results obtained in Table 5, it was revealed that the ECM parameter is negative (-) and significant which is -0.18, this shows that 35 percent

disequilibrium in the previous period is being corrected to restore equilibrium in the current period. It has been established that the variables are cointegrated and also have a short-run relationship that is there is a short-run relationship between Economic Growth and non-oil foreign trade indicators in Nigeria, that is Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR).

Based on the ECM coefficients all the non-oil foreign trade indicators in Nigeria, that is Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were positively related to Economic Growth. Finally, the probability values of the ECM results revealed that Non-Oil Export in Nigeria (NOILEX) was statistically significant in explaining the variation in Economic Growth while Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically insignificant in explaining the variation in Economic Growth in Nigeria.

### **Implication of Findings**

In the discussion of the implication of findings, the long-run results revealed that a unit increase in Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) on the average holding other independent variables constant will lead to 5.04 and 44.2-unit increase in Economic Growth in Nigeria respectively. While a unit increase Non-Oil Export in Nigeria (NOILEX) on average holding other independent variables constant will lead to a 2.8-unit decrease in Economic Growth in Nigeria. Also based on the probability value, Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically significant in explaining the variation in Economic Growth in Nigeria. While Non-Oil Export in Nigeria (NOILEX) was statistically insignificant in explaining the variation in Economic Growth in Nigeria. This implies that in the long run any changes in Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) will have a strong and positive impact on Economic Growth in Nigeria. However, the long run results agreed with the work of Adeleye, Adeteye and Adewuyi (2015) who examined the impact of balance of trade on economic growth in Nigeria, using net export (that is, total export less total import) and Balance of Payment as proxies for international trade while Gross Domestic Product represented economic growth. The study employed regression analysis, using co-integration and error correction modeling techniques to find out the long-run relationship between economic performance and international trade. Findings from their study revealed that only total export (TEX) remained positive and significant.

On the other hand, the results of ECM implies that a unit increase in Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) on the average holding other independent variables constant will lead to 4.8, 0.6 and 1.2-unit decrease in Economic Growth in Nigeria respectively. Also, the probability values of the ECM results revealed that Non-Oil Export in Nigeria (NOILEX) was statistically significant in explaining the variation in Economic Growth in Nigeria while Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically insignificant in explaining the variation in Economic Growth in Nigeria. This implies that in the short-run changes in the Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR)

have no or little influence on the variation in Economic Growth in Nigeria. Also, these findings and results agreed with the work of Ijirshar (2015) studied the effects of non-oil trade on the Nigerian economy for 41 years from 1970 to 2011. The study proxy non-oil trade by the rate of oil export, index of trade openness, real exchange rate, inflation rate and rate of non-oil export, as the independent variables while the Nigerian economic growth was proxy by GDP, as the dependent variable. The study adopted the Unit root test, Augmented Dickey-Fuller (ADF) test, error correction model (ECM), and Johansen co-integration to test for significance among the variables. The result of the unit root test suggested that all the variables in the model are stationary at first difference. The result revealed that there is a positive contribution of non-oil trade to the economic growth of Nigeria from the result of the error correction model.

### **Conclusion and Recommendations**

In conclusion, the ADRL values of the coefficients revealed that Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) have a positive impact on Economic Growth in Nigeria. While the value of the coefficient shows that Non-Oil Export in Nigeria (NOILEX) has a negative impact on Economic Growth in Nigeria. However, probability value revealed that the Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically significant in explaining the variation in Economic Growth in Nigeria. While Non-Oil Export in Nigeria (NOILEX) was statistically insignificant in explaining the variation in Economic Growth in Nigeria. This implies that in the long run any changes in Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) will have a strong and positive impact on Economic Growth in Nigeria.

On the other hand, based on the ECM coefficients all the non-oil foreign trade indicators in Nigeria, that are Non-Oil Export in Nigeria (NOILEX), Non-Oil Import in Nigeria (NOILIM), and Exchange Rate in Nigeria (EXCHR) were positively related to Economic Growth in Nigeria. However, the probability values of the ECM results revealed that Non-Oil Export in Nigeria (NOILEX) was statistically significant in explaining the variation in Economic Growth in Nigeria while Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) were statistically insignificant in explaining the variation in Economic Growth in Nigeria. This implies that in the short-run changes in the Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) have no or little influence on the variation in Economic Growth in Nigeria.

Based on the findings the study recommends the following policies.

- i. Government should improve the efficiency of Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) since there were statistically significant in a long run in determining the improvement of Economic Growth in Nigeria.
- ii. Government should manage the activities Non-Oil Import in Nigeria (NOILIM) and Exchange Rate in Nigeria (EXCHR) in the short run since there were statistically insignificant in determining the progress of Economic Growth in Nigeria.
- iii. Based on the findings Non-Oil Export in Nigeria (NOILEX) in Nigeria remain the best indicator of foreign trade in Nigeria in the short run. Therefore, the government should adopt short-run and deliberate policies on Non-Oil exports in Nigeria to improve the performance of Economic Growth in Nigeria.

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**APPENDIX I: Data for Regression**

**Table 6: Data for Regression**

YEAR	RGDP	NOILIM	NOILEX	EXCHR
1986	0.06	5.1	0.6	1.8
1987	3.2	14.7	2.2	4
1988	7.33	17.6	2.8	4.5
1989	1.92	26.2	3.0	7.4
1990	11.78	39.6	3.3	8
1991	0.36	81.7	4.7	9.9
1992	4.63	123.6	4.2	17.3
1993	-2.04	124.5	5.0	22.1
1994	-1.81	120.4	5.3	22.0
1995	-0.07	599.3	23.1	21.9
1996	4.2	400.4	23.3	21.9
1997	2.94	678.8	29.2	21.9
1998	2.58	661.6	34.1	21.9
1999	0.58	650.9	19.5	92.3
2000	5.02	764.2	24.8	101.7
2001	5.92	1,121.1	28.0	111.2
2002	15.33	1,151.0	94.7	120.6
2003	7.35	1,681.3	94.8	129.2
2004	9.25	1,668.9	113.3	132.9
2005	6.44	2,003.6	106.0	131.3
2006	6.06	2,397.8	133.6	128.7
2007	6.59	3,143.7	199.3	125.8
2008	6.76	4,277.6	525.9	118.5
2009	8.04	4,411.9	500.9	148.9
2010	8.01	6,406.8	711.0	150.3
2011	5.31	7,952.3	913.5	154.7
2012	4.23	6,702.3	879.3	157.5
2013	6.67	7,010.0	1,130.2	157.3
2014	6.31	8,323.7	953.5	158.6
2015	2.65	9,350.8	660.7	192.4
2016	-1.62	7,096.0	656.8	362.3
2017	0.81	8,189.4	1,074.9	305.7
2018	1.92	9,758.9	1,434.2	306.5

Source: Central Bank of Nigeria Statistical Bulletin December 2018.