

Short-Run and Long-Run Effects of Non-Oil Trade Export on Economic Growth in Nigeria

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Abstract: This study examined the short and long run effects of non-oil trade export on economic growth in Nigeria. Descriptive statistics and inferential statistics (unit root test, Johansen cointegration and error correction mechanism) were employed as the estimation techniques. The time series data on non-oil export (proxied by non-oil total trade, balance of trade, exchange rate and inflation rate); and economic growth (proxied by growth rate of Real Gross Domestic Product) were sourced and obtained from the Central Bank of Nigeria Statistical Bulletin and Nigerian Bureau of Statistics over a period of thirty (33) years (1986–2018). The study showed that non-oil total trade, balance of trade and exchange rate have positive and significant effects on economic growth in Nigeria while inflation rate has no significant effect on economic growth in Nigeria. Based on the finding of the study, it was concluded that non-oil trade export has positive and significant effects in the short run and long run on economic growth in Nigeria. It is recommended that full attention should be directed to the non-oil sector in order to make our produce competitive in international market.

Keyword: Trade Export; Non-oil Total Trade; Economic Growth; Nigeria

JEL Classification: P45; F43; F18

1. Introduction

International trade is very important for all the countries in the world. In Nigeria, trade became popular with the advent of the colonial rule that brought in their wares and made Nigerians their middlemen (Nicks, 2008). By this, Nigerians understood the need for trade both domestically and internationally. Before 1972, most of Nigerian exports were agricultural commodities like cocoa, palm produces, cotton and groundnut. Thereafter, minerals, especially petroleum became significant export

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commodities. However, from the mid-1970s, crude oil became the main export product of the Nigerian economy.

The Nigerian crude oil is highly sought after in the international oil market and its export constitutes about 96% of total exports. Thus, the performance of the non-oil exports in the past few decades has not been encouraging (Öztürk & Acaravcı, 2010). The government in the last few years has been implementing policies to expand non-oil export in a bid to diversify the nation's export base. The diversification of the Nigerian economy is necessary for important reasons; first, the volatility of the international oil market with the attendant volatility of government revenue gives credence to any argument for diversification of exports. Second, the importance of export to a nation's economic growth and development cannot be over-emphasised (Christopher, Omoniyi & Olufunke, 2014).

The economic growth of any nation is a crucial issue because it ultimately forms the crux of economic development which is the desire of every economy (Todaro & Smith, 2010). The dividend of growth is what digests into the numerous strands of development indices that are enjoyed by the affected economy. It has, therefore, become the focus of nations to harness every available resource towards enhancing sustainable economic growth and development (Stephen & Obah, 2017). International trade is a catalyst necessary for the overall development of an economy. This is because of the economic interaction with other economies of the world, through trading which enhances the productivity of the economy. The primary objective of trade policies in any economy is to increase the level of economic activities. It follows, therefore, that export policies should be directed to the sector in which the impact of an increase in export demand will be both desirable and large. The study sought to investigate the short and long run effects of non-oil trade on economic growth in Nigeria from 1986 to 2018 using Johansen co-integration and error correction model estimation techniques.

2. Literature Review

2.1. Conceptual Clarifications

2.1.1. Non-Oil Exports

Non-oil exports are those commodities excluding crude oil (petroleum products), which are sold in the international market for the purpose of revenue generation. The Nigeria's non exports sector is structured into four broad constituents which are the agricultural exports, manufactured exports, and solid mineral exports and services exports (Akeem, 2011). The non-oil export products are unlimited as they include agricultural crops, manufacturing goods, solid minerals, entertainment and tourism services etc (Abogan, Akinola, & Baruwa, 2014). This explains non export 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, distributive trade, financial services, insurance, government, etc.

Onayemi and Ishola (2009) revealed that non-oil exports have performed below expectation under export promotion policy. This outcome supports the argument by Subasat (2002) that export promotion does not have any significant impact on economic growth of low income countries. This same result, however, contradicts Usman (2011) who discovered that an insignificant non-oil export and exchange rate would slow down economic growth given that non-oil export for previous year positively affects growth.

2.1.2. Economic Growth

Economic growth can be described as the country's ability to strengthen the production of goods and services of a present year or period in comparison with previous time period (Finance Map of World, 2013). In a simple way, Dwivedi (2006) opined that economic growth is a sustainable increase in per capita national output or net national product over a long period of time. He further stated that the rate of increase in total output of production must be much greater than the rate of population growth. Economic growth, being the growth in output per capital is an important objective of government since it is associated with rising average real incomes and living standard, thus, it is the single most important factor in the success of a nation in the long run (Samuelson & Nordhaus, 2005). In the opinion of Imimole and Imougehele (2012), they contend that a country cannot attain development state without considering economic growth. This is a practical example in Nigeria whereby growth continuously dominates the main policy thrust of government's development objectives.

2.1.3. Contribution of International Trade

In Nigeria, international trade helps in no small measure to accelerate economic growth. It has helped in the importation of machineries such as tractors, industrial plants, and equipment. With all these equipment, Nigeria's economy is able to increase her productivity and thus quicken economic growth. International trade has been a major determinant of foreigner's investment in Nigeria. This trade has helped in upgrading socio-economic value of citizens because through foreigner's investment, employment opportunities were created (Adesuyi & Odeloye, 2013). According to Samuelson (1973), foreign trade offers a consumption possibility frontier that can give us more or all goods than own domestic production possibility frontier. The extension of foreign trade, according to Usman (2011), will very powerfully contribute to increase the mass of commodities, and therefore, the sum of enjoyments.

2.2. Theoretical Underpinning

The study is underpinned by export-led growth (ELG) hypothesis. The so-called Export-Led Growth (ELG) hypothesis is at least as old as the classical school, as both Adam Smith and David Ricardo supported it (Richards, 2001). Among modern economists, Beckerman (1965) attributed exports' favourable impact mainly to the production efficiency gains stemming from improved resources allocation, while Haberlar (1959) stressed the relevance of dynamics benefits, such as the improved availability of foreign capital and technology through the release of the balance of payments constraint. Vernon (1966) focused on the opposite causality channel, in which the self-propelled growth of the domestic economy leads to improved competitiveness and eventually to the expansion of exports. More recent "endogenous growth" theories emphasise the benefits stemming from a dynamics export sector, in a framework characterised by increasing returns to scale and by virtuous technological and managerial spill-over effects towards other sectors (Fedor, 1992). Helpman and Krugman (1985) developed some of Beckerman's and Vernon's ideas, arguing that the initial growth spurt favoured by export expansion through the efficiency and allocation effects reverberates in enhanced international competitiveness, fostering a new round of export expansion and paving the way for a virtuous development path.

After several decades and the accumulation of an ever-expanding body of research literature, however, "No consensus has emerged on the theoretical appropriateness of the export-led growth hypothesis...Theoretical disagreement on the role of exports is matched by mixed empirical evidence" (Jin 2002; Richards, 2001). To this end, it must be taken into account that attempts to show econometrically that exports are a crucial cause of growth face two basic problems. First, exports are themselves a component of GDP, and thus evidence of a correlation is insufficient to prove consistently any actual causal relationship which might, in fact, exist. Second, other relevant macroeconomic variables, and especially other components of aggregate demand, are also correlated with GDP growth, and thus a missing variables problem of model mis-specification inevitably arises (Sheehey 1990).

2.3. Empirical Evidences on Trade Export and Economic Growth

Ugochukwu and Chinyere (2013) employed least square regression test to determine the effects of export trading growth of Nigerian economy from 1986 to 2011 while granger causality test was employed to determine the direction of causality between the variables under consideration. The study concludes that oil and non-oil export have significant effect on economic growth. Using the same technique, Christopher, Omoniyi and Olufunke (2014) studied the relationship between non-oil export and economic development of Nigeria between 1980 and 2012. The study found and concludes that non-oil export exhibits a significant positive relationship with per capita income. Yakubu and Akanegbu (2015) in an empirical investigation on nexus

between foreign trade and growth rate of Nigerian economy between 1981 and 2012 discovered from least regression result that foreign trade proxied by degree of openness and foreign exchange rate significantly impacted economic growth whereas interest does not. Thus, it is concluded that foreign trade positively affect economic growth in Nigeria

Owolabi-Merus, Inuk and Odediran (2015) applied least square regression and Johansen cointegration tests to evaluate the effectiveness of international trade (via import and export channels) on Nigeria's economy from 1971 to 2012. The study does not only found long-run cointegrated relationship but also revealed that export contributes positively while import retards economic growth in Nigeria. Muhammad and Benedict (2015) employed least square regression to analyse the importance of foreign trade on economic growth in Nigeria for the period of 1981 to 2012. The finding showed that degree of openness significant influence economic growth. Okonkwo and Madueke (2016) applied single linear regression models to test the impact of petroleum revenue on economic development of Nigeria, between 1980 and 2013. Evidence from finding indicated that petroleum revenue has an insignificant effect on economic development of Nigeria in the short run while in the long run, there is no significant correlation between petroleum revenue and economic development of Nigeria.

By employing a more unique cointegration test, Lawal, Nwanji, Asaleye and Ahmed (2016) used the ARDL bound estimation techniques to investigate the nexus of association among economic growth, financial development and trade openness in Nigeria from 1981 to 2013. The results show that a two-way cointegration exists between economic growth and financial development, on the one hand, as well as between economic growth and trade openness, on the other hand. Nwinee and Olulu-Briggs (2016) investigated the relationship between changes in different variables of trade openness and financial development; and its impact on the growth rate of the Nigerian economy from 1981 to 2013. The Granger Causality test demonstrated a bi-directional causality between real effective exchange rate and total trade; and uni-directional causality from gross domestic product to total trade, gross domestic product to credit to the private sector, total trade to foreign direct investment, total trade to credit to the private sector and real effective exchange rate to foreign direct investment.

Sajo and Li (2017) applied stationarity test which involved ADF and PP test, Johansen co-integration, Granger causality test and Ordinary least square (OLS) to investigate the nexus among financial development, export and economic growth in Nigeria between 1994 and 2013. Evidence from the study found that exports and transportation development have a positive significant effect on economic growth while financial development, international trade structure and energy sector has a negative effect on economic growth. Abiodun (2017) made use of Granger causality

test to estimate the causality international trade and economic growth in Nigeria from 1981 to 2014. The study disclosed that a uni-directional relationship was established in the study which implied that there is, overall, a positive relationship between economic growth and international trade. Stephen and Obah (2017) evaluated the implication of international trade on the economic growth of Nigeria from 1981 to 2015. The model specified economic growth measured by gross domestic product as dependent on international trade proxied by non-oil imports, oil imports, Non-oil exports, and oil exports. It was evidenced that international trade has a significant and positive implications on economic growth in Nigeria.

Lawal and Ezeuchenne (2017) used Johansen cointegration and vector error correction model (VECM) to show the existing relationship among imports, exports, balance of trade, trade openness and real gross domestic product from the years 1985-2015. The study found long run existing relationship between international trade and economic growth; it further showed that import and trade openness are both insignificant in the short run but significant in the long run while export and balance of trade are significant in both the short and long run. The granger causality test showed that economic growth is independent of imports, exports and balance of trade but economic growth is unidirectional with trade openness. Dumani, Nelson Siaisai (2018) studied the effects of oil imports, non-oil imports, oil exports, and non-oil exports on economic growth in Nigeria from 1981 to 2016. The multiple regression was applied and findings indicated that oil import has a linear but insignificant impact on economic growth, non-oil imports and non-oil exports have a positive and significant impact on economic growth and oil exports have a nonlinear and insignificant impact on real economic growth in Nigeria. Elias, Agu and Eze (2018) evaluated the impact of export and import trade on the Nigeria's economic growth from 1980 to 2012. The study found through the use of multiple regression analysis that export trade significantly impacted on economic growth while import trade does not.

3. Research Method

3.1. Research Design and Model Specification

This study applied ex-post-factor research design suitable in this study. The study adapted the model used by Christopher, Omoniyi and Olufunke (2014), where it was used to investigate the impact of non-oil export on economic development in Nigeria. Their model was specified as follows:

$$PCI = f(NOE, TOP, EXR, CPPF, INF) \dots\dots\dots 3.1$$

Where: PCI = per capita income

NOE = Non-oil export volume

TOP = Trade openness

EXR = Exchange rate

CPF = Capital formation

INF = Inflation rate

f = Functional notation

However, this study adapted the model in equation 3.1 and modified it by replacing per capita income with growth rate of real gross domestic product. The study further removes replace trade openness and capital formation with balance of payment. The justification for the changes is because this study focused on non-oil trade export and economic growth. Hence, the model for this study is stated as:

$$gRGDP = f(NOTT, EXR, BOT, INF, \mu_t) \dots \dots \dots 3.2$$

Where: gRGDP = growth rate of Real Gross Domestic Product; NOTT = Non-Oil Total Trade; EXR = Exchange Rate; BOT = Balance of Trade; INF = Inflation; μ_t = error term.

3.2. Estimation Technique

This study applied both descriptive which included the mean, median, standard deviation, etc and inferential statistics which included the stationarity test, Johansen test and error correction mechanism. The econometric form of the models in 3.2 is presented as:

$$gRGDP = \beta_0 + \beta_1 NOTT + \beta_2 EXR + \beta_3 BOT + \beta_4 INF + \mu_t \dots \dots \dots 3.3$$

Where: β_0 = Constant; $\beta_1 - \beta_4$ = Intercepts; μ = Error Terms

The log-linearity form of the equation is displayed as:

$$gRGDP = \beta_0 + \beta_1 NOTT_{t-1} + \beta_2 EXR_{t-1} + \beta_3 BOT_{t-1} + \beta_4 INF_{t-1} + \mu_t + ECM_{t-1} + \Sigma t \quad 3.4$$

Where:

μ_t = error term

ECM_{t-1} = Error correction term

t-1 shows the variables were lagged by one period

Σt = white noise residual

3.3. Description of Variables and Sources of Data

Economic Growth: This is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another.

Non-Oil Total Trade: This refers to the total value received from non-oil export and import during a period of time.

Exchange Rate: This is a means of changing one country's currency to another country's currency.

Balance of Trade: This is the difference between the value of all the goods and services a country exports and the goods and services it imports. This is employed as an independent variable.

Inflation: This is a quantitative measure of the rate at which the average price level of goods and services in an economy increases over a period of time.

These variables were sourced and obtained from publication of CBN and NBS respectively.

4. Result and Analysis

4.1. Descriptive Statistics

The descriptive analysis made use of time series data spanning between 1986 through 2018.

Table 4.1. Descriptive Result

	gRGDP	NOTT	BOT	EXR	INF
Mean	3.932309	2.946038	-19.75666	1.794763	1.158790
Median	4.054316	3.095419	2.707377	2.073828	1.071882
Maximum	5.106404	4.048950	3.766035	2.485324	1.862131
Minimum	2.306288	0.749875	-644.8000	0.305351	0.732394
Std. Dev.	0.889008	0.945533	113.2564	0.593140	0.301580
Skewness	-0.365235	-0.685638	-5.332931	-1.098040	0.942422
Kurtosis	1.846097	2.390874	29.90059	2.973725	2.851738
Jarque-Bera	2.564483	3.095722	1151.429	6.632258	4.915100
Probability	0.277415	0.212702	0.000000	0.036293	0.085645

Source: Author's computation from E-view 9 (2020)

Evidence from Table 4.1 denoted that the mean for gRGDP (gross domestic product), NOTT (Non-oil total trade), BOT (balance of trade) EXR (exchange rate) and INF (inflation rate) are 3.932309, 2.946038, -19.75666, 1.794763 and 1.158790 respectively. The median for gRGDP (gross domestic product), NOTT (Non-oil total

trade), BOT (balance of trade) EXR (exchange rate) and INF (inflation rate) are 4.054316, 3.095419, 2.707377, 2.073828 and 1.071882 respectively.

Evidence from Table 4.1 further revealed that INF has positive skewness which implied that it has long right tails while gRGDP, BOT, NOTT and EXR have negative skewness which implied that they have long left tail. Kurtosis measures the peakedness or flatness of the distribution of the series. If the kurtosis is above three, the distribution is peaked or leptokurtic relative to the normal and if the kurtosis is less than three, the distribution is flat or platykurtic relative to normal. From the Table 4.1, gRGDP (1.846097), NOTT (2.390874), EXR (2.973725) and INF (2.851738) are less than three which implies flat or platykurtic, that is, flatter than a normal distribution with wide peak while only BOT (29.90059) is more than three therefore it implied peaked or leptokurtic distribution, that is, sharper than a normal distribution for extreme value. As the value of skewness and kurtosis of the international trade series are not equal to 0 and 3 respectively, this suggests that data are not normally distributed.

Jarque-bera is a test statistic to test for normal distribution of the series. It measures the difference of the skewness and kurtosis of the series with those which have normal distribution. From Table 4.2.1, BOT and EXR variables do not follow normal distribution as evident from the probability value which is less than 5% while all other variables (gRGDP, NOTT and INF) follow normal distribution.

4.2. Unit Root Stationarity Test

This provides statistical importance of the explanatory variables on the dependent variable.

Table 4.2. Unit Root Stationarity Test

Variables	ADF Test Statistics	CRITICAL VALUES			Integration	ADF REMARKS
		1%	5%	10%		
<i>gRGDP</i>	-4.151018	-4.284580	-3.562882	-3.215267	I(1)**	S
<i>NOTT</i>	-9.102882	-4.284580	-3.562882	-3.215267	I(1)*	S
<i>EXR</i>	-6.926650	-4.284580	-3.562882	-3.215267	I(1)*	S
<i>BOT</i>	-7.201295	-4.284580	-3.562882	-3.215267	I(1)*	S
<i>INF</i>	-3.646077	-4.284580	-3.562882	-3.215267	I(1)**	S

Source: Author's computation from E-view 9 (2020)

Note: *(**)(***) - Significant at 1%(5%)(10%) percent level of significant

The above Table 4.2 showed the time series performance of the variables using the ADF unit root test statistics. It showed the level of stationarity at first difference. The result at first difference thereby showed that all the variables, growth rate of real gross domestic product, non-oil total trade, exchange rate, balance of trade and

inflation rate were stationary particularly at 5% and 1% level of significance respectively.

The confirmation of the presence of non-stationary variables in the series, which brings to book the possibility of spurious relationship in the short run, and the fact that they are integrated of the same order after differencing, suggested that long run association test should be carried out, to test for the presence of co-integrating equation amidst the multivariate series in the long run. The co-integration test was done using Johansen maximum likelihood ratio approach. Hence, the study proceeded to long run test which will involve Johansen cointegration test.

4.3. Johansen Co-Integration Test Results

Table 4.3a. Trace Statistics Result

Series: gRGDP, NOTT, EXR, BOT, INF

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.898276	191.6263	125.6154	0.0000
At most 1 *	0.644322	83.83207	69.81889	0.0025
At most 2 *	0.525811	51.78646	47.85613	0.0204
At most 3	0.393525	28.65585	29.79707	0.0673
At most 4	0.273425	13.15300	15.49471	0.1093

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level
 * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

Source: Author's computation from E-view 9 (2020)

Table 4.3b. Max-Eigen Value Statistics Result

Series: gRGDP, NOTT, EXR, BOT, INF

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.898276	70.85031	46.23142	0.0000
At most 1	0.696307	36.94390	40.07757	0.1081
At most 2	0.525811	23.13061	27.58434	0.1680
At most 3	0.393525	15.50285	21.13162	0.2552
At most 4	0.273425	9.901821	14.26460	0.2184

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
 * denotes rejection of the hypothesis at the 0.05 level
 **MacKinnon-Haug-Michelis (1999) p-values

Source: Author's computation from E-view 9 (2020)

Table 4.3c. Normalized Cointegrating Coefficients**Series: gRGDP, NOTT, EXR, BOT, INF**

1 Cointegrating Equation(s):	Log likelihood	71.70471		
Normalized cointegrating coefficients (standard error in parentheses)				
gRGDP	NOTT	BOT	EXR	INF
1.000000	0.722515 (0.13935)	0.001768 (0.00015)	0.833160 (0.07276)	0.319978 (0.04716)

Source: Author's computation from E-view 9 (2020)

Table 4.3a and Table 4.3b showed the unrestricted cointegration rank test in which Table 4.3a showed the Trace Statistics test while Table 4.3b showed the Max-Eigen Statistics test. However, Table 4.3a revealed that Trace test indicated 3 cointegrating equations at 5% level of significance also Table 4.3b revealed that the Max-Eigen value test indicated 1 cointegrating equations at 5% level of significance.

Moreover, Table 4.3c indicated the long-run cointegration equation among the variables in the model. From the Table 4.3c, it can be inferred that all the explanatory variables have positive long-run equilibrium with growth rate of real gross domestic product in the long-run. The estimated long-run model revealed positive relationship between non-oil total trade, balance of trade, exchange rate, inflation rate and growth rate of real gross domestic product. This implied that 1% change in the level of non-oil total trade, balance of trade, exchange rate, inflation rate will bring about an increase of 72%, 01%, 83% and 32% respectively to economic growth in Nigeria. Having identified the long run relationship among the variables, the study proceeded to investigate the dynamics of the model. The Error Correction Mechanism (ECM) was used to validate the presence of long-run relationship and incorporate the short-run dynamics into the long-run equilibrium relationship.

4.4. Parsimonious Model

Table 4.4. Parsimonious Error Correction Model Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.005122	0.030208	-0.169573	0.8668
NOTT	0.112607	0.048229	2.334846	0.0282
D(BOT(-1),2)	0.127628	0.059538	2.143628	0.0434
D(EXR,2)	0.111778	0.048473	2.305972	0.0301
D(INF(-1),2)	0.035291	0.018597	1.897680	0.0698
ECM(-1)	-0.527975	0.175803	-3.003229	0.0065
R-squared	0.740029			
Adjusted R-squared	0.723368			
F-statistic	3.771873			
Prob(F-statistic)	0.011605			
Durbin-Watson stat	2.158901			

Source: Author's computation from E-view 9 (2020) software

The results of the parsimonious error correction model as presented in Table 4.4 revealed coefficient of the parameters estimated, alongside with the standard errors, t-values and the probability values used in conducting diagnostic test to verify the stability and predictive accuracy of the series. The result revealed that there existed feed-back of the previous period disequilibria from the long-run trends of the series. Specifically, the results indicated feed-backs of about 52.79 percent from the previous period disequilibria between the present and past values of variables. The result showed that the ECM coefficients of the series is significant and correctly signed, thus validating the presence of long run relationship amidst the variables and that about 52.79 percent of the short run inconsistencies are corrected and incorporated into the long run dynamics annually.

The study indicated that non-oil total trade is positive and statistically significant at 0.05% level of significance. The result conformed to the earlier expectation of positive relationship. The result thereby implies that any attempt by the government to increase the level of non-oil total trade by a percent will lead to 11.26% increase in economic growth of the country. Furthermore, Balance of trade and exchange rate variables have positive and significant effect on economic growth in Nigeria. As a result, a percent change increase in the level of balance of trade and exchange rate will produce a significant and positive effect of about 12.76 and 11.17% increase on economic growth respectively. More so, inflation rate impacted economic growth with a positive and insignificant result. Therefore, any attempt to further increase the value of inflation rate will lead to an insignificant increase of about 03.52% on economic growth in Nigeria. Beautifully, the result conformed to the long run relationship result where all the variables indicated positive relationship with the dependent variable.

The result also showed that the overall model is significant, given the F-statistics probability value of 3.771873. This implies that the adjusted R-square value of 72% is significantly different from zero. Thus the series is a good-fit. The Durbin Watson Statistics of 2.158901 revealed that there is no presence of serial auto-correlation between successive error terms.

4.5. Summary and Implication of Finding

The study empirically investigated the short and long run effects of non-oil trade export on economic growth in Nigeria using a time series data spanning from 1986 through 2018. The study employed the unit root test, Johansen Multivariate Co-integration, Error correction mechanism to ascertain the short and long run relationships of non-oil total trade, balance of trade, exchange rate and inflation rate behaviour and the economic growth proxy in this study (growth rate of real gross domestic product,). The ADF unit root test indicated that there is presence of stationarity in tests which signified that all the variables were significant at 5% level after differencing at the first difference.

The co-integration result revealed that there is a long run association between the variables. This is evident from the co-integration result where there were 3 co-integrating equation at 5% level of significance. The long run cointegration result is in connection with the existing study of Adeleye, Adeteye and Adewuyi (2015) that international trade has long run relationship with economic growth in Nigeria.

The estimation of error correction model revealed that the control variables of balance of trade and exchange rate have positive and significant effects on economic growth while the inflation rate has an insignificant positive effect on economic growth. The main variable of non-oil total trade has a positive and significant effect on economic growth in Nigeria under the studied period. This result indicated that contributions from non-oil sectors like Agriculture, manufacturing, health, service, financial, etc have the tendency to sustain economic development in Nigeria. The implication of this result is that any attempt by the government to diversify into other sectors will serve as another source of revenue thereby leading to economic growth in Nigeria. This result is in agreement with Christopher, Omoniyi and Olufunke's (2014) research that non-oil export exhibits a significant positive relationship with economic growth and development. This is also consistent with the study of Adeleye, Adeteye and Adewuyi (2015) that total export has positive and significant effect on economic development in Nigeria.

5. Conclusion

The study has empirically investigated the short and long-run effects of non-oil trade export on economic growth in Nigeria between the period of 33 years which spanned from 1986 to 2018. According to statistical evidence, non-oil total trade, balance of trade and exchange rate have positive and significant effects on economic growth in Nigeria whereas inflation has positive and an insignificant effect on economic growth. The study concluded that non-oil trade export significantly contributed to economic growth in Nigeria both in the short run and long run under the studied period. The study validated the study of Christopher, Omoniyi and Olufunke (2014) that non-oil export has positive and significant effects on economic growth in Nigeria. Thus, as evidenced from the finding, Government are advised to diversify into other non-oil sector (Agriculture, manufacture, mining, financial services, etc) to augment the revenues from the oil sector; more funds and improvement should be appropriated to the non-oil sector in order to make our produce compete in the world market. The study contributed to knowledge by building on recent time series data and also based on the significant result emanating from the finding.

For the benefit of those who may want to study beyond the scope covered in this research, It is suggested that other studies should conduct a comparative analysis between oil and non-oil trade on Nigeria's economic growth. Furthermore, other studies may include more variables, other than the variables used in this study In order to achieve generalisation of findings and conclusion. Lastly, other studies may use quarterly data to validate the findings of this study.

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