INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH AND ANALYSIS

ISSN(print): 2643-9840, ISSN(online): 2643-9875

Volume 06 Issue 06 June 2023

DOI: 10.47191/ijmra/v6-i6-82, Impact Factor: 7.022

Page No. 2806-2821

Transnational Trade and Economic Growth in Nigeria

David Theophilus Briggs[1], Alwell Nteegah[2]

[1]Institute of International Trade and Development, University of Port Harcourt

[2]Department of Economics, University of Port Harcourt

ABSTRACT: The study investigated the impact of transnational trade on economic growth in Nigeria. To achieve the purpose of the study, transnational trade was disaggregated into: oil import, oil export, non-oil import, non-oil export, trade openness, foreign direct investment share of real gross domestic product and real effective exchange rate and regressed on economic growth proxied by growth rate of real GDP. Data on the variables above were sourced from the Central Bank of Nigeria statistical Bulletin and the World Bank database. The data were analysed using the Autoregressive and Distributed Lag (ARDL) approach due to the mixed order of stationarity of the variables. The results indicate that in the short run, non-oil export has positive and significant impact on economic growth while oil import and FDI share of real GDP have negative and significant effect on economic growth. The long run result shows that: oil import has direct and insignificant effect on growth while non-oil import, non-oil export, FDI share of real GDP and real effective exchange rate have negative and insignificant impact on economic growth. From the results the study concludes that transnational trade has serious implication on economic growth in the short run and less effect on economic growth in the long run in Nigeria over the period of this study. Based on these findings, the study suggests that policies should be geared toward increase in non-oil export, reduction in oil import, review of FDI inflow policies and trade liberalization as possible ways of improving the productive capacity of the Nigerian economy.

KEY WORDS: Growth rate of GDP, Transnational trade, oil export, oil import, non-oil export, non-oil import, FDI and Real effective exchange rate

I. INTRODUCTION

Transnational trade is usually considered as interest area to economists as well as to policy-makers globally. It helps nations to sell their locally produced commodities to other nation globally (Adewuyi, 2002). Over the years, development economists have recognized the role of trade in the growth process of national economies as trade provides both foreign exchange earnings and market stimulus, for accelerated economic growth (Yakubu et al, 2015). The part played by trade in economic growth and development is very notable and its importance is widespread because it provides market for goods made locally, serve as means for technology transfer between nations and also serve as means for fund generation. Since no nation can grow without trading, thus, there exists direct impact of transnational trade on the economy of any nation laudably or undesirably. Trade also plays crucial part in restructuring economic and social features of any nation globally particularly for less advanced nations. Trade is central to curbing global poverty. Economies that are open to international trade tend to grow faster, innovate, improve productivity and provide higher income and more opportunities to their people. Open trade also benefits lower-income households by offering consumers more affordable goods and services. Integrating with the world economy through trade and global value chains helps drive economic growth and reduce poverty locally and globally (www.worldbank.org/trade)

The Nigerian situation revealed that economic growth of any nation relies, to reasonable extent, on her trading relationship with other nations globally. Nigeria as a developing nation has struggled with achieving fundamental macroeconomic objectives like: sustained economic growth, complete employment of both human and material resources, stable price and poverty alleviation over years but has not had the capacity to resolve these issues due to insufficient benefit from transnational trade. However, the level of trade openness of any nation determines their gains from external business and level of economic performance.

Before the discovery of crude-oil in marketable amount in Nigeria, agriculture was major contributor to Nigeria economic growth and greatest foreign exchange income earner for the nation. Since the emergence of crude-oil as main income source in Nigeria from 1960s, revenue generation ability from agriculture reduced massively triggering the “Dutch disease” and poor benefits from trading because of single-product nature of nation’s exports base.

Despite the formulation of trade policies and implementations, production has remained on subsistent level while exports are mostly primary products with low or no value addition (Mathew et al, 2017). This has led to higher volume of imports over exports. Contrarily, OEC in 2015 rated Nigeria as 49th largest export nation globally, having exported commodities worth over $47.8B and imported commodities worth nearly $39.5B. From the foregoing, it is certain that transnational trade is like a double-edge sword that can make or mar a nation's economic prosperity. The extent to which trade has affected real economic growth is subjected to critical analysis in this investigation. We shall progress with our study by reviewing related literature, present the methodology, analyse data and report results of the finding and present the conclusion and recommendations of the study.

II. LITERATURE REVIEW

Adam Smith inscribed virtues for free trading amongst countries of the world. His theory of comparative advantage states that, trading should be based on absolute benefits which express their ability of nation to produce specific good with few resources / efficient than another nation (Meier, 1988). Due to international division for labour, nation could consume commodity that she cannot produce. As counties specialize in commodities in which they have absolute benefits, wide range of goods will be available in world market. The over-all result will be increase in living standard (Gbosi, 2011). Hence this theory sees international trade as a creator of wealth of a nation. However, Ellsworth criticized Smith analysis as weak and unrealistic because there are many under-developed nations which do not possess absolute benefits in producing commodity and they have trading connection with other nations. Other theories of trade like: the David Ricardo's Theory of Comparative Advantage, The Neoclassical Theory of Trade, The Heckscher-Ohlin theory, The Heckscher-Ohlin-Samuelson Theory and the new trade theory all traced economic prosperity of a nation to trade with other countries of the world. The efficacy of these theories to developing economies like Nigeria given her low productive capacity and institutional bottlenecks shall be empirically examined in this paper.

Myriad of empirical studies exist on the nexus between trade and economic prosperity of a country. Osabohien, Akinpelumi, Matthew Okafor, Iku, Olawande and Okorie (2019) assessed the impact of agriculture export on Nigeria economic growth. The study used ARDL econometric procedure in analyzing long run nexus and impact of agriculture exports on Nigeria's economic growth. Economic growth proxied by real GDP was the dependent variable, while the explanatory variables were: agriculture export, FDI, rate of price-increase and labour force. The outcome from ARDL revealed that agriculture exports positively impacted on Nigeria's economic growth; which implies that, 1 unit rise in agriculture export boost economic growth by nearly 25 units thus based on this result, it was inferred that agriculture export need to be encouraged through increasing agriculture production base.

Ewetan and Okodua (2016) conducted econometric study on exports and economic growth in Nigeria and they also assessed the relevance of Export-Led-Growth proposition for Nigeria's economy using yearly time-series data covering 1970 to 2010. Their estimation outcome from co-integration test and Granger Causality assessment within VAR model framework failed to align with Export-Led Growth proposition. The work then concludes that Nigeria state need to widen the product-base of the economy, encourage non-crude-oil exports, and design effective service-based infrastructure to propel private local and oversea investment.

Adenugba and Dipo (2013) worked on effect of non-crude-oil exports on Nigeria's economy covering the period 1981 to 2010. The findings from their work revealed that non-crude-oil exports performed below target, therefore, creating essence of doubting the efficacy of export support technique that was used and implemented. This work correctly revealed that Nigerian economy is not close to moving from crude-oil exports and therefore crude-oil sub-sector continues to represent the only most crucial sector of Nigeria monetary sector.

Omotor (2008) employed robust estimation procedure called bounds test procedure and unrestricted ECM in analyzing longrun nexus between export-factors and economic growth in Nigeria covering period 1979 to 2005. Based on this model, the study found that: export-factors, work-force and economic liberalization policies stimulated economic growth, whereas, imports and rate of currency exchange negatively affected economic growth. The outcome of the study further revealed that economic growth, exports, imports, workforce and rate of currency exchange are co-integrated. Estimated long-term elasticity of economic growth in terms of exports and imports are 1.46 and -0.234 respectively. Further result revealed that economic growth has unidirectional causation with exports during study period. Therefore, this work does not provide proves to support export-based economic growth proposition in Nigeria's economy.

Efobi and Osabuhien (2010) worked on promoting non-crude-oil export within Nigeria. The study deployed variance decomposition technique along with co-integration test. The outcome of the study indicates that long run nexus exists between non-crude-oil export and agriculture credit guarantee program funding along with political hindrances in Nigeria. The findings further showed that in the long run, agriculture credit guarantee program, food-crops and livestock showed significant effects on non-crude-oil export value in Nigeria. Agriculture credit guarantee program fund on cash-crop and political hindrance have long term negative effect on non-crude-oil exports. Based on these findings, the study recommends that provided long run explanatory

variables are elastics; their changes would trigger more proportionate alterations in non-crude-oil export level. The essential implication inferred was that to appreciably encourage non-crude-oil exports within Nigeria, providing credit facilities especially revamping ACGSF through different sub-components would produce satisfying results on non-crude-oil exports. This result is relevant given intended need to widen export-base of Nigeria especially as current international economic issues is significantly and negatively affecting Oil &Gas price.

Anthony and Somiara (2010), conducted study on possible effects of macroeconomic variables on non-crude-oil exports performance in Nigeria covering the period 1986 to 2010 using the OLS technique. Its outcome revealed that rate of currency exchange, government capital expenses and government wage-based expenses impacted and contributed significantly to non-crude-oil exports. While agriculture sector, manufacturing sub sector and interest rate do not contribute significantly to non-crude-oil exports during this researched period. The study then suggests that investment or funding must be raised in the real sector since the result shows that they are associated to macroeconomic factors used excluding cost of credit.

Ezike and Ogege (2012) assessed Nigeria external trade policy and how it affects non-crude-oil export. The work employed correlation and OLS techniques and its outcome revealed that negative nexus exists between trade policy and non-crude-oil exports in Nigeria. Thus, non-crude-oil export has positive impact on economic growth. Also rate of currency exchange has positive and significant at 5% level. The study therefore inferred that any nation that widen its export-base stand better opportunity to accomplishing economic growth. Thus, trade policies that focuses on one-product like crude-oil would expose such nation to unpredictability and shocks from global market. Nigeria would benefit more if it would put needed effort to widen its economic sector by motivating production and exportation of non-oil products.

Abogan, Akinola and Baruwa (2014) researched on the impact of non-crude-oil export on economic growth in Nigeria covering 1980 and 2010. The OLS technique was used after conducting unit roots test using ADF and PP test for time series properties. The researchers observed that the impact of non-crude-oil exports on economic growth was marginal and not all heartening as a unit rise in non-crude-oil export impacted positively by 26% of productive ability of goods and services in the economy within this period.

Igwe, Edeh and Ukpere (2015) assess empirically possible effects from non-crude-oil exports on economic growth in Nigeria covering 1981 to 2012 using econometric procedure of Johansen co-integration, ECM along with Granger Causality to examine the direction of effect between economic growth and non-crude-oil exports. The outcomes of the study showed that in short run and long run, non-crude-oil exports influenced economic growth. Also, long-run association exists between non-crude-oil exports and economic growth over studied time period in Nigeria.

Aladejare and Saidi (2014) worked on the impact of total non-oil sector and their determinant on economic growth in Nigeria using bound test procedure. The outcome of the study revealed that appreciable effect exists between non-crude-oil export and economic growth both in the long run and short run in Nigeria.

Adegboyega (2017) assessed the impact of import on economic growth in Nigeria using Vector Autoregressive (VARs) technique and various types of structural analysis of Granger causality tests, impulse response functions, and forecast error variance decompositions to examine the dynamic effects of various shocks on macroeconomic variables. The results of VAR show that the predominant sources of Nigeria economic growth variation are due largely to “own shocks” and import-export trade innovations. While Johansen Cointegration results showed that there is a stable, long- run relationship between import-export and economic growth, but the magnitude is minimal. In conclusion, the study agreed that government should always embark on policies that will encourage exports with proper implementation of import control measures.

Ogbonna (2015) studied the effect of import trade on economic growth in Nigeria. Basically, the study investigated whether it is the import-led or export-led growth hypothesis that holds for Nigeria. The Johansen testing approach to cointegration and the standard desk top pairwise Granger-causality test technique were implemented to achieve this objective. The cointegration test results demonstrate that the relationship between economic growth and disaggregated import factors in Nigeria are stable and converged in the long run. Variables of interest in this study were Food & Life Animal, Manufactured Goods, and Machinery & Transport Equipment as the trio constitute over 75 percent of aggregate import bills during the period under review. Evidence from the pairwise granger casualty tests, contrary to expectation, suggested that import-led growth hypothesis does not hold for Nigeria. These results cannot be divorced from certain factors such as lack of capacity to take advantage of the advanced technologies embodied in the imported capital goods, inability to sustain installed manufacturing capacity and corrupt practices in procurement processes, associated with contracts for the importation of manufactured and capital goods for most failed capital projects.

Sunday and Ahmed (2019) investigated the effect of trade openness on the economic growth in Nigerian economy between 1980 - 2016 empirically. Utilising time series data sourced from the Central Bank of Nigeria Statistical Bulletin and OLS after carrying out

pre-estimation test of unit root test. The result revealed that trade openness has negative impact on the economic growth in both the short run and long run. Based on study findings, it was recommended that since the imports of the country are more than its exports; the government needs to intensify efforts to sustain the diversification of the economy to achieve economic growth led by exports.

Ijirshar (2019) in another study examined the impact of trade openness on economic growth among ECOWAS countries using secondary data from 1975 to 2017. The study used non-stationary heterogeneous dynamic panel models through the application of Pooled Mean Group (PMG) and Mean Group (MG) estimators since time dimension was more than cross-sections. Using the Hausman test, PMG estimator was preferred. Results showed that trade openness has positive effects on growth in ECOWAS countries in the long-run but mixed effects in the short-run. The study therefore recommended that ECOWAS member countries improve cooperation among economic actors by using export consortia so as to help SMEs in the region access international markets and to pursue a twin strategy of trade and competitiveness.

Egbulonu and Ezeocha (2018) investigated empirically the relationship between trade openness and economic growth in Nigeria. The study covered the period 1990 – 2015, using ARDL approach to cointegration. The ARDL result confirmed the existence of a long-run relationship between economic growth, trade openness, foreign direct investment and gross capital formation. It was found that trade openness and gross capital formation had positive and negative impacts respectively on growth rate of GDP in the short run. The study recommended that trade openness should be regulated by government as an increase in trade openness caused a decrease in our GDP.

Anichebe (2019) in another study investigated the effect of foreign direct investment on economic growth in Nigeria. The study covered the period of 37 years from 1981 to 2017. The annual time series data for the study were analysed using the OLS technique. The results of the estimated model show that foreign direct investment had strong positive nexus with economic growth. Foreign exchange rate and gross fixed capital formation both have direct relationships with economic growth while trade openness and expenditure on education have strong but indirect effect on economic growth. The study therefore concluded that foreign direct investment has long run impact on economic growth in Nigeria.

Akinyemi, Muideen, Olusogo and Oluwaseun (2018) in a similar study, examined the sectoral impact of foreign direct investment (FDI) on economic growth in Nigeria. The study employed descriptive analysis, unit roots test, Johansen co-integration test, error correction mechanism, and fully modified least squares technique. The correlation analysis of aggregate FDI on sectorial GDP growth indicates that only the oil sector GDP has a significant positive correlation with aggregate FDI over the period 1981 and 2017. While the sectorial analysis revealed that only the flow of FDI into the communication sector has a positive and statistically significant impact on economic growth for the period considered. Given the positive significant growth impact for FDI in the telecommunication sector, and the negative significant growth impact of FDI in the manufacturing sector, the strategy for attracting and managing FDI in Nigeria must be sector specific and the National Bureau of Statistics must maintain a database of FDI on sectoral basis.

Odo, Anoke, Nwachukwu and Promise (2016) also assessed the impact of foreign direct investment on the growth of the Nigeria stock market from 1984 to 2015 using the OLS method. The results of the test revealed a long run equilibrium relationship between the dependent and explanatory variables. The findings from the VECM indicated that foreign direct investment and export have negative relationship with stock market growth both in the long and short run while Import and Gross Capital Formation was found to have a positive nexus with stock market growth both in the short and long run periods. Based on the results, the study concluded that foreign direct investment has no significant impact on stock market growth in Nigeria.

Olokoyo (2012) studied the effects of foreign direct investment (FDI) on the development of Nigerian economy. The study employed the OLS technique to test the time series data from 1970 – 2007. The results evidently do not provide much support for the view of a robust link between foreign direct investment and economic growth in Nigeria as suggested by extant previous literatures. Though the result does not imply that foreign direct investment is unimportant, the model analysis reduces the confidence in the belief that foreign direct investment has exerted an independent growth effect in Nigeria.

The review of related literature on the issue we are studying shows that several works have been done on external trade and economic growth both in Nigeria, Africa and the world. However, our consultation reveals to us that the studies visited do not take a comprehensive analysis of the various components of transnational trade that affect economic prosperity of a country. This paper identified the various components of transnational trade such as: oil export, oil import, non-oil export, non-oil import, FDI, trade openness and real effective exchange rate and their effect on economic growth. Most of the studies consulted do no cover these variables. The paper also used the ARDL which most of the studies did not used. These are some of the gaps this paper seeks to cover.

III. METHODOLOGY

Adam Smith inscribed virtues for free trade. In his theory of absolute advantage, he states that, trade should be based on absolute benefits which express the ability of nations to produce specific good with few resources / efficient than another nation (Meier, 1988). Due to transnational division for labour, nation could consume commodity that it cannot produce. To him, as countries specialize in commodities in which they have absolute benefits, wide range of goods will be available in the world market. The over-all result will be increase in living standard and economic prosperity (Gbosi, 2011). Ellsworth however, criticized Smith analysis as weak and unrealistic because there are many under-developed nations which do not possess absolute benefits in producing commodity and they have trading connection with other nations with strong production capacity.

Nigeria since the discovery of petroleum in commercial quantity and the availability of other mineral and agricultural resources has been involved in transnational trade with the aim of improving economic prosperity of the country. The effect of these resources through trade transaction shall be examined using the equation below:

$$Gdpr = f(Oimp^{\chi_1}, Noim^{\chi_2}, O\exp^{\chi_3}, Noex^{\chi_4}, Topn^{\chi_5}, Fdig^{\chi_6}, Excr^{\chi_7}) \quad \text{----------1}$$

Equation 1 could be stated in mathematical form to enhance estimation thus:

$$Gdpr_t = \chi_0 + \chi_1 \ln Oimp_t + \chi_2 \ln Noim_t + \chi_3 \ln O\exp_t + \chi_4 \ln Noex_t + \chi_5 \ln Topn_t + \chi_6 \ln Fdig_t + \chi_7 \ln Excr_t + \mu_t \quad \text{--2}$$

Where: $Gdpr_t$ = Growth rate of real GDP; Ln = natural logarithm; χ_0 = intercepts of growth rate of GDP; $Oimp_t$ = oil imports; $Noim_t$ = Non-oil Imports; $Oexp_t$ = Oil exports; $Noex_t$ = Non-oil exports; $Topn_t$ = Trade openness; $Fdig_t$ = foreign direct investment share of real GDP; $Excr_t$ = Real effective exchange rate, U_t = error/stochastic term. Annual time series data on the above variables were sourced from the World Bank Development indicators and the Central Bank of Nigeria statistical bulletin.

ARDL Bounds test for Cointegration

In order to ascertain the long run capacity and short run dynamic connections among the time series variables under study – growth rate of GDP, oil import, non-oil import, oil export, non-oil export, trade openness, FDI share of real economic growth and real effective exchange rate, The ARDL co-integration technique as general 16 VAR model of order p, in Z_t ,

Where: Z_t = column vector composed of the six variables: $GDpr_t$ = Growth rate of GDP

$Z_t = (Gdpr_t\ Oimp_{it}\ Noim_{it}\ Oexp_{it}\ Noex_{it}\ Topn_{it},\ Fdig_{it},\ Excr_{it})'$ was also used. ARDL is represented as follows:

$$D(Gdpr_t) = \alpha_{01} + \lambda_{1i}(Gdpr_{t-1}) + \lambda_{2i}\ln(Oimp_{t-1}) + \lambda_{3i}\ln(Noim_{t-1}) + \lambda_{4i}\ln(O\exp_{t-1}) +$$
$$\lambda_{5i}\ln(Noex_{t-1}) + \lambda_{6i}\ln(Topn_{t-1}) + \lambda_{7i}\ln(Fdig_{t-1}) + \lambda_{8i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{1i}D(Gdpr_{t-1}) +$$
$$\sum_{t=1}^{q}\alpha_{2i}D\ln(Oimp_{t-1}) + \sum_{t=1}^{q}\alpha_{3i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{4i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{5i}D\ln(Noex_{t-1}) \quad \text{--3}$$
$$+\sum_{t=1}^{q}\alpha_{6i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{7i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{8i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$\ln D(Oimp_{it}) = \alpha_{02} + \lambda_{2i}\ln(Oimp_{t-1}) + \lambda_{3i}(Gdpr_{t-1}) + \lambda_{4i}\ln(Noim_{t-1}) + \lambda_{5i}\ln(O\exp_{t-1}) +$$
$$\lambda_{6i}\ln(Noex_{t-1}) + \lambda_{7i}\ln(Topn_{t-1}) + \lambda_{8i}\ln(Fdig_{t-1}) + \lambda_{9i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{2i}D\ln(Oimp_{t-1}) +$$
$$\sum_{t=1}^{q}\alpha_{3i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{4i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{5i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{6i}D\ln(Noex_{t-1}) + \quad \text{--4}$$
$$\sum_{t=1}^{q}\alpha_{7i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{8i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{9i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$D\ln(Noim_{it}) = \alpha_{03} + \lambda_{3i}\ln(Noim_{t-1}) + \lambda_{4i}\ln(Oimp_{t-1}) + \lambda_{5i}(Gdpr_{t-1}) + \lambda_{6i}\ln(O\exp_{t-1}) +$$

$$\lambda_{7i}\ln(Noex_{t-1}) + \lambda_{8i}\ln(Topn_{t-1}) + \lambda_{9i}\ln(Fdig_{t-1}) + \lambda_{10i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{3i}D\ln(Noim_{t-1}) +$$

$$\sum_{t=1}^{q}\alpha_{4i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{5i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{6i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{7i}D\ln(Noex_{t-1}) \quad \text{---5}$$

$$+\sum_{t=1}^{q}\alpha_{8i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{9i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{10i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$D\ln(O\exp_{it}) = \alpha_{04} + \lambda_{4i}\ln(O\exp_{t-1}) + \lambda_{5i}\ln(Oimp_{t-1}) + \lambda_{6i}\ln(Noim_{t-1}) + \lambda_{7i}(Gdpr_{t-1}) +$$

$$\lambda_{8i}\ln(Noex_{t-1}) + \lambda_{9i}\ln(Topn_{t-1}) + \lambda_{10i}\ln(Fdig_{t-1}) + \lambda_{11i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{4i}D\ln(O\exp_{t-1}) +$$

$$\sum_{t=1}^{q}\alpha_{5i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{6i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{7i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{8i}D\ln(Noex_{t-1}) + \quad \text{---6}$$

$$\sum_{t=1}^{q}\alpha_{9i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{10i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{11i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$D\ln(Noex_{it}) = \alpha_{05} + \lambda_{5i}\ln(Noex_{t-1}) + \lambda_{6i}\ln(Oimp_{t-1}) + \lambda_{7i}\ln(Noim_{t-1}) + \lambda_{8i}\ln(O\exp_{t-1})$$

$$+\lambda_{9i}(Gdpr_{t-1}) + \lambda_{10i}\ln(Topn_{t-1}) + \lambda_{11i}\ln(Fdig_{t-1}) + \lambda_{12i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{5i}D\ln(Noex_{t-1})$$

$$+\sum_{t=1}^{q}\alpha_{6i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{7i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{8i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{9i}D\ln(Noex_{t-1}) \quad \text{----7}$$

$$+\sum_{t=1}^{q}\alpha_{10i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{11i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{12i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$D\ln(Topn_{it}) = \alpha_{06} + \lambda_{6i}\ln(Topn_{t-1}) + \lambda_{7i}\ln(Oimp_{t-1}) + \lambda_{8i}\ln(Noim_{t-1}) + \lambda_{9i}\ln(O\exp_{t-1})$$

$$+\lambda_{10i}\ln(Noex_{t-1}) + \lambda_{11i}(Gdpr_{t-1}) + \lambda_{12i}\ln(Fdig_{t-1}) + \lambda_{13i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{6i}D\ln(Topn_{t-1})$$

$$+\sum_{t=1}^{q}\alpha_{7i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{8i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{9i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{10i}D\ln(Noex_{t-1}) \quad \text{----8}$$

$$+\sum_{t=1}^{q}\alpha_{11i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{12i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{13i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$D\ln(Fdig_{it}) = \alpha_{07} + \lambda_{7i}\ln(Fdig_{t-1}) + \lambda_{8i}\ln(Oimp_{t-1}) + \lambda_{9i}\ln(Noim_{t-1}) + \lambda_{10i}\ln(O\exp_{t-1})$$

$$+\lambda_{11i}\ln(Noex_{t-1}) + \lambda_{12i}\ln(Topn_{t-1}) + \lambda_{13i}(Gdpr_{t-1}) + \lambda_{14i}\ln(Excr_{t-1})\sum_{t=1}^{p}\alpha_{7i}D\ln(Fdig_{t-1})$$

$$+\sum_{t=1}^{q}\alpha_{8i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{9i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{10i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{11i}D\ln(Noex_{t-1}) \quad \text{---9}$$

$$+\sum_{t=1}^{q}\alpha_{12i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{13i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{14i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

$$D\ln(Excr_t) = \alpha_{08} + \lambda_{8i}\ln(Excr_{t-1}) + \lambda_{9i}\ln(Oimp_{t-1}) + \lambda_{10i}\ln(Noim_{t-1}) + \lambda_{11i}\ln(O\exp_{t-1}) +$$
$$\lambda_{12i}\ln(Noex_{t-1}) + \lambda_{13i}\ln(Topn_{t-1}) + \lambda_{14i}\ln(Fdig_{t-1}) + \lambda_{15i}(Gdpr_{t-1})\sum_{t=1}^{p}\alpha_{8i}D\ln(Excr_{t-1}) +$$
$$\sum_{t=1}^{q}\alpha_{9i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\alpha_{10i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\alpha_{11i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\alpha_{12i}D\ln(Noex_{t-1}) \quad \text{---10}$$
$$+\sum_{t=1}^{q}\alpha_{13i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\alpha_{14i}D\ln(Fdig_{t-1}) + \sum_{t=1}^{q}\alpha_{15i}D\ln(Excr_{t-1}) + \varepsilon_{1i}$$

Consequent upon earlier works by Pesaro and Shin (1999) and Perasan et al (2001) short run dynamic parameters is arrived at by estimation of ECM linked with long-run estimates. The model where null hypothesis of no co-integration is rejected is derived with ECM. Hence the vector ECM is therefore stated thus:

$$D(Gdpr_t) = \alpha_0 + \sum_{i=1}^{p}\lambda_{0i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\lambda_{1i}D\ln(Oimp_{t-1}) + \sum_{t=1}^{q}\lambda_{2i}D\ln(Noim_{t-1}) +$$
$$\sum_{t=1}^{q}\lambda_{3i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\lambda_{4i}D\ln(Noex_{t-1}) + \sum_{t=1}^{q}\lambda_{5i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\lambda_{6i}D\ln(Fdig_{t-1}) \quad \text{-----11}$$
$$+\sum_{t=1}^{q}\lambda_{7i}D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(Oimp_t) = \alpha_0 + \sum_{i=1}^{p}\lambda_{1i}D\ln(Oimp_{t-1}) + \sum_{t=1}^{q}\lambda_{2i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\lambda_{3i}D\ln(Noim_{t-1}) +$$
$$\sum_{t=1}^{q}\lambda_{4i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\lambda_{5i}D\ln(Noex_{t-1}) + \sum_{t=1}^{q}\lambda_{6i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\lambda_{7i}D\ln(Fdig_{t-1}) \quad \text{---12}$$
$$+\sum_{t=1}^{q}\lambda_{8i}D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(Noim_t) = \alpha_0 + \sum_{i=1}^{p}\lambda_{2i}D\ln(Noim_{t-1}) + \sum_{t=1}^{q}\lambda_{3i}D\ln(Oimp_{t-1}) + \sum_{t=1}^{q}\lambda_{4i}D(Gdpr_{t-1}) +$$
$$\sum_{t=1}^{q}\lambda_{5i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\lambda_{6i}D\ln(Noex_{t-1}) + \sum_{t=1}^{q}\lambda_{7i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\lambda_{8i}D\ln(Fdig_{t-1}) \quad \text{--13}$$
$$+\sum_{t=1}^{q}\lambda_{9i}D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(O\exp_t) = \alpha_0 + \sum_{i=1}^{p}\lambda_{3i}D\ln(O\exp_{t-1}) + \sum_{t=1}^{q}\lambda_{4i}D\ln(Oimp_{t-1}) + \sum_{t=1}^{q}\lambda_{5i}D\ln(Noim_{t-1}) +$$
$$\sum_{t=1}^{q}\lambda_{6i}D(Gdpr_{t-1}) + \sum_{t=1}^{q}\lambda_{7i}D\ln(Noex_{t-1}) + \sum_{t=1}^{q}\lambda_{8i}D\ln(Topn_{t-1}) + \sum_{t=1}^{q}\lambda_{9i}D\ln(Fdig_{t-1}) \quad \text{--14}$$
$$+\sum_{t=1}^{q}\lambda_{10i}D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(Noex_t) = \alpha_0 + \sum_{i=1}^{p} \lambda_{4i} D\ln(Noex_{t-1}) + \sum_{t=1}^{q} \lambda_{5i} D\ln(Oimp_{t-1}) + \sum_{t=1}^{q} \lambda_{6i} D\ln(Noim_{t-1}) +$$

$$\sum_{t=1}^{q} \lambda_{7i} D\ln(O\exp_{t-1}) + \sum_{t=1}^{q} \lambda_{8i} D(Gdpr_{t-1}) + \sum_{t=1}^{q} \lambda_{9i} D\ln(Topn_{t-1}) + \sum_{t=1}^{q} \lambda_{10i} D\ln(Fdig_{t-1}) \quad \text{--15}$$

$$+ \sum_{t=1}^{q} \lambda_{11i} D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(Topn_t) = \alpha_0 + \sum_{i=1}^{p} \lambda_{5i} D\ln(Topn_{t-1}) + \sum_{t=1}^{q} \lambda_{6i} D\ln(Oimp_{t-1}) + \sum_{t=1}^{q} \lambda_{7i} D\ln(Noim_{t-1}) +$$

$$\sum_{t=1}^{q} \lambda_{8i} D\ln(O\exp_{t-1}) + \sum_{t=1}^{q} \lambda_{9i} D\ln(Noex_{t-1}) + \sum_{t=1}^{q} \lambda_{10i} D(Gdpr_{t-1}) + \sum_{t=1}^{q} \lambda_{11i} D\ln(Fdig_{t-1}) \quad \text{--16}$$

$$+ \sum_{t=1}^{q} \lambda_{12i} D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(Fdig_t) = \alpha_0 + \sum_{i=1}^{p} \lambda_{6i} D\ln(Fdig_{t-1}) + \sum_{t=1}^{q} \lambda_{7i} D\ln(Oimp_{t-1}) + \sum_{t=1}^{q} \lambda_{8i} D\ln(Noim_{t-1}) +$$

$$\sum_{t=1}^{q} \lambda_{9i} D\ln(O\exp_{t-1}) + \sum_{t=1}^{q} \lambda_{10i} D\ln(Noex_{t-1}) + \sum_{t=1}^{q} \lambda_{11i} D\ln(Topn_{t-1}) + \sum_{t=1}^{q} \lambda_{12i} D(Gdpr_{t-1}) \quad \text{---17}$$

$$+ \sum_{t=1}^{q} \lambda_{13i} D\ln(Excr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

$$D\ln(Excr_t) = \alpha_0 + \sum_{i=1}^{p} \lambda_{7i} D\ln(Excr_{t-1}) + \sum_{t=1}^{q} \lambda_{8i} D\ln(Oimp_{t-1}) + \sum_{t=1}^{q} \lambda_{9i} D\ln(Noim_{t-1}) +$$

$$\sum_{t=1}^{q} \lambda_{10i} D\ln(O\exp_{t-1}) + \sum_{t=1}^{q} \lambda_{11i} D\ln(Noex_{t-1}) + \sum_{t=1}^{q} \lambda_{12i} D\ln(Topn_{t-1}) + \sum_{t=1}^{q} \lambda_{13i} D\ln(Fdig_{t-1}) \quad \text{---18}$$

$$+ \sum_{t=1}^{q} \lambda_{14i} D(Gdpr_{t-1}) + \lambda ECT_{t-1} + \varepsilon_t$$

Where: $\lambda_{1i}, \lambda_{2i}, \lambda_{3i}, \lambda_{4i}, \lambda_{5i}, \lambda_{6i}, \lambda_{7i}, \& \lambda_{8i}$, are the short-run dynamic coefficients of the model's convergence to equilibrium and α is the speed of adjustment

IV. RESULTS

The descriptive statistics result reported in table 1 reveals a very high degree of dispersion in both trade variables and economic growth in Nigeria. This is evidenced in the values of standard deviation, minimum values and maximum values for all the variables. These statistics provide proofs of high level of instability in both transnational trade and economic growth in Nigeria. Nigeria has witnessed serious decline in economic growth which many scholars and policy makers attributed to unfavourable foreign trade over the years. Foreign direct investment and exchange rate had also staggered and worsen over the years under investigation. The implication of this result is the Nigeria's trade performance is unfavourable which has resulted to poor economic performance and development.

Table 1. Descriptive Statistics

Statistic	GDPR(%)	OIMP(Nb)	NOIM(Nb)	OEXP(Nb)	NOEX (Nb)	TOPN(%)	FDIG(%)	EXCR(N=$1
Mean	2.98	960.26	3275.41	5231.81	409.77	32.13	1.70	148.94
Median	3.70	228.97	942.64	1744.70	31.62	33.87	1.58	100.67
Maximum	15.33	4368.20	19077.61	20475.87	3788.04	53.27	5.79	541.46
Minimum	-13.13	0.05	5.07	7.20	0.20	9.14	0.26	50.17

Std. Dev.	5.50	1285.86	4753.25	6155.11	732.91	12.29	1.25	118.27
Skewness	-0.78	1.23	1.96	0.94	2.84	-0.33	1.36	1.91
Kurtosis	4.37	3.31	6.68	2.68	12.55	2.25	4.96	5.84
Jarque-Bera	7.24	10.56	48.16	6.04	205.53	1.66	18.73	37.71
Probability	0.03	0.01	0.00	0.05	0.00	0.44	0.00	0.00
Sum	119.41	38410.52	131016.5	209272.6	16390.73	1285.13	67.94	5957.70
Sum Sq. Dev.	1177.99	644836	8.81	1.48	20949	5892.54	61.05	545559.5
Observations	40	40	40	40	40	40	40	40

Source: Computed result (e-view 12)

The correlation result in table 2 reports very weak relationship between the dependent variable (GDPR) and the independent variables. Though the correlation between real GDP growth rate, non-oil imports and real effective exchange rate was negative and weak the correlation between real GDP growth rate, oil import, oil export, non-oil export, trade openness, share of FDI to real GDP were all positive but weak. However, high correlation was reported between some independent variables. For instance, the correlation between oil import and oil export is very strong, oil import and non-oil import is also very strong likewise oil import and non-oil export.

Table 2: Correlation Result of Growth rate of GDP model

Variable	GDPR	OIMP	NOIM	OEXP	NOEX	TOPN	FDIG	EXCR
GDPR	1							
OIMP	0.06	1						
NOIM	-0.01	0.90	1					
OEXP	0.17	0.93	0.86	1				
NOEX	0.01	0.89	0.93	0.85	1			
TOPN	0.51	0.16	0.07	0.24	0.08	1		
FDIG	0.15	-0.27	-0.30	-0.22	-0.29	0.424	1	
EXCR	-0.47	-0.25	-0.23	-0.30	-0.17	-0.582	-0.378	1

Source: Computed Result e-view 12

Table 3: Unit Root Test Result

Variable	**PP Statistic**	**1%**	**5%**	**Decision**
Log(OIMP)	-3.33	-3.61	-2.94	Stationary@ i(0)
GDPR	-3.99	-3.61	-2.94	Stationary@ i(0)
Log(NOIM)	-7.70	-3.62	-2.94	Stationary @ i(1)
Log(OEXP)	-6.13	-3.62	-2.94	Stationary @ i(1)
Log(NOEX)	-8.97	-3.62	-2.94	Stationary @ i(1)
Log(TOPN)	-7.36	-3.62	-2.94	Stationary @ i(1)
Log(FDIG)	-10.42	-3.62	-2.94	Stationary @ i(1)
Log(EXCR)	-4.59	-3.62	-2.94	Stationary @ i(1)

Source: Researcher's Computation (e-view 12)

The unit roots test conducted using the Philip-Perron method is presented in table 3. The result indicates that growth rate of GDP (GDPR) and oil import (OIMP) are stationary at level or i(0). This implies that the null hypothesis of no unit roots was accepted for economic growth and oil import without differencing. Unemployment rate (UNPR), non-oil import (NOIM), oil export (OEXP), non-oil export (NOEX), trade openness (TOPN), FDI share of real economic growth (FDIG) and real effective exchange rate (EXCR) are all stationary at first difference i(1). This implies that these variables became stationary at i(1) and the null hypotheses of presence of unit roots were rejected after first differencing. The conduct of unit roots test is key in analyzing time series data and fulfilling the assumptions of Ordinary Least Square (OLS) estimation.

Table 4. ARDL Bound Test for Real Economic Growth Rate (GDPR) Model

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	4.27	10%	1.92	2.89
K	7	5%	2.17	3.21
		2.5%	2.43	3.51
		1%	2.73	3.9

Source: Computed Result e-view 12

The ARDL bound test for the presence of long run relationship in table 4 indicates that the F- statistic of 4.27 is greater than the asymptotic lower and upper bounds at the critical levels of 5 percent. This is a proof of the evidence of long run relationship between the dependent and independent variables in the economic growth model being investigated. The confirmation of long run nexus among the variables is a pre-condition for estimating the long equation and the error correction/short run dynamics for the economic growth model being investigated.

Table 5. ARDL Result Long run Form for Real GDPR Selected Model :(2, 3, 0, 0, 2, 0, 3, 0)

Variable	Coefficient	t-Statistic	Prob.
LOG(OIMP)	3.891778	0.850351	0.4057
LOG(NOIM)	-14.48765	-2.013965	0.0584
LOG(OEXP)	8.054435	1.785076	0.0902
LOG(NOEX)	-0.133106	-0.042889	0.9662
LOG(TOPN)	3.651420	0.639868	0.5299
LOG(FDIG)	-3.900071	-0.811932	0.4269
LOG(EXCR)	-1.843386	-0.645329	0.5264
C	20.91787	0.716487	0.4824

Source: Author's analysis – e-view 12.

The long run Autoregressive and Distributed Lag (ARDL) result as shown in table 5 indicates that oil import is positively related to economic growth but insignificant at 5 percent level. This implies that oil import improves economic growth marginally over the period of the study. This result deviated from apriori theoretical expectation and economic theory. Oil import leak out domestic resources and exert pressure on scare foreign exchange thereby starving the domestic economy requisite funds for investments and economic growth.

Non-oil import is negatively linked to economic growth and significant at 5 percent level. This shows that non-oil import retarded economic growth in the long run. This result is in agreement with economic theory and apriori theoretical expectation. Increases in imports starve the local economy financial resources required for investment, productive activities and economic growth.

Oil export agrees with the apriori theoretical expectation and economic theory by bearing a positive coefficient. This is an indication that oil export is a promoter of economic growth in Nigeria. Oil export has remained the major source of import and government revenue since the late 1960s. Revenue from oil export constitutes about 90 percent of government expenditure in Nigeria over the years leading the "Dutch Disease" syndrome.

Non-oil export from the result is negatively and insignificantly related to economic growth. This implies that non-oil export is unfriendly with economic growth. This result is not in agreement with economic theory. Increases in non-oil export is a sign of diversification of economic activities and revenue which leads to sustenance of revenue and economic growth. The export of primary produce (perishable agricultural products) and mainly raw materials which are mainly sold to foreign countries at cheaper prices may have explained this result.

Trade openness which measures the extent of trade liberalization and contribution to economic growth has positive coefficient. This result complies to economic theory and reveals that trade openness is economic growth friendly. Relaxation of trade policies allows for the free flow of both human and material resources across national borders which sometimes help to improve human capital development and local capability for production.

Foreign direct investment share of economic growth is negatively and insignificantly related to economic growth. This result is not in consonance with economic theory thus implies that foreign direct investment retarded real national income. During the period under investigation, the flow of FDI has been to mostly the oil and gas sector which has low multiplier effect on national income growth and development.

Real effective exchange rate complies with apriori theoretical expectation and economic theory. This implies that real effective exchange rate is not friendly with economic growth. Real effective exchange compares the effect of price level on a country's domestic currency. Usually, depreciation of local currency may promote trade and correct adverse balance of payment if a country has significant productive capacity but appreciation may be dangerous to country with high trade deficit and adverse balance of trade. Nigeria had devalued its currency in order to improve trade and correct unfavourable BOP but this exchange rate strategy has not yielded much result due to the mono-product nature of the economy.

Table 6: ADRL Error Correction Regression for Real GDPR Model: ARDL (2, 3, 0, 0, 2, 0, 3, 0)

Variable	Coefficient	t-Statistic	Prob.
D(GDPR(-1))	-0.338144	-3.394471	0.0030
DLOG(OIMP)	-3.366993	-5.255140	0.0000
DLOG(OIMP(-1))	-3.002145	-3.536856	0.0022
DLOG(OIMP(-2))	-1.198472	-1.887687	0.0744
DLOG(NOEX)	6.099220	6.584848	0.0000
DLOG(NOEX(-1))	3.228347	3.014152	0.0071
DLOG(FDIG)	-2.358452	-2.763907	0.0124
DLOG(FDIG(-1))	-0.191467	-0.206706	0.8384
DLOG(FDIG(-2))	-2.067520	-2.497898	0.0218
CointEq(-1)*	-0.457106	-7.391227	0.0000
R^2 = 0.84; R^2-adjusted = 0.79; DW Statistic = 2.1			

Source: Author's analysis – e-view 12.

The short run Autoregressive Distributed Lag (ARDL) error correction regression result for real gross domestic growth rate model reported in table 6 reveals that oil import at all levels and lags has negative coefficient and it is significantly related to real GDP growth rate. This indicates that oil import significantly retarded real national income in Nigeria over the period. This result is in consonance with apriori theoretical expectation and economic theory. Nigeria produces crude oil but imports refined petroleum products which are processed value of crude oil. This ugly development reduces the value addition of crude oil thus hampered investment and economic growth in the country.

Non-oil export another variable that featured in the ARDL error correction model has positive and significant coefficient. This result also agrees with apriori theoretical expectation and economic theory and it implies that non-oil export stimulates economic prosperity/real national income in Nigeria over the period under investigation. Increases in non-oil export helps broaden export base, revenue, domestic investment and economic prosperity.

Foreign direct investment share of real national income is negatively and significantly related to economic growth in Nigeria. This variable deviated from apriori theoretical expectation and theory. The implication of this result is that FDI retarded real national income growth rate. Though FDI inflow into Nigeria has staggered in recent years, its share of national income had declined also. It should be noted that greater proportion of FDI flows to the oil and gas sector hence starving the real sector requisite funds and investment needed for sustained economic growth and development. The low value chain associated with the oil and gas sector has reduced its multiplier effect and contribution to economic prosperity of Nigeria over the years. However, the oil and gas sector remained the highest revenue earners and export commodity for the country.

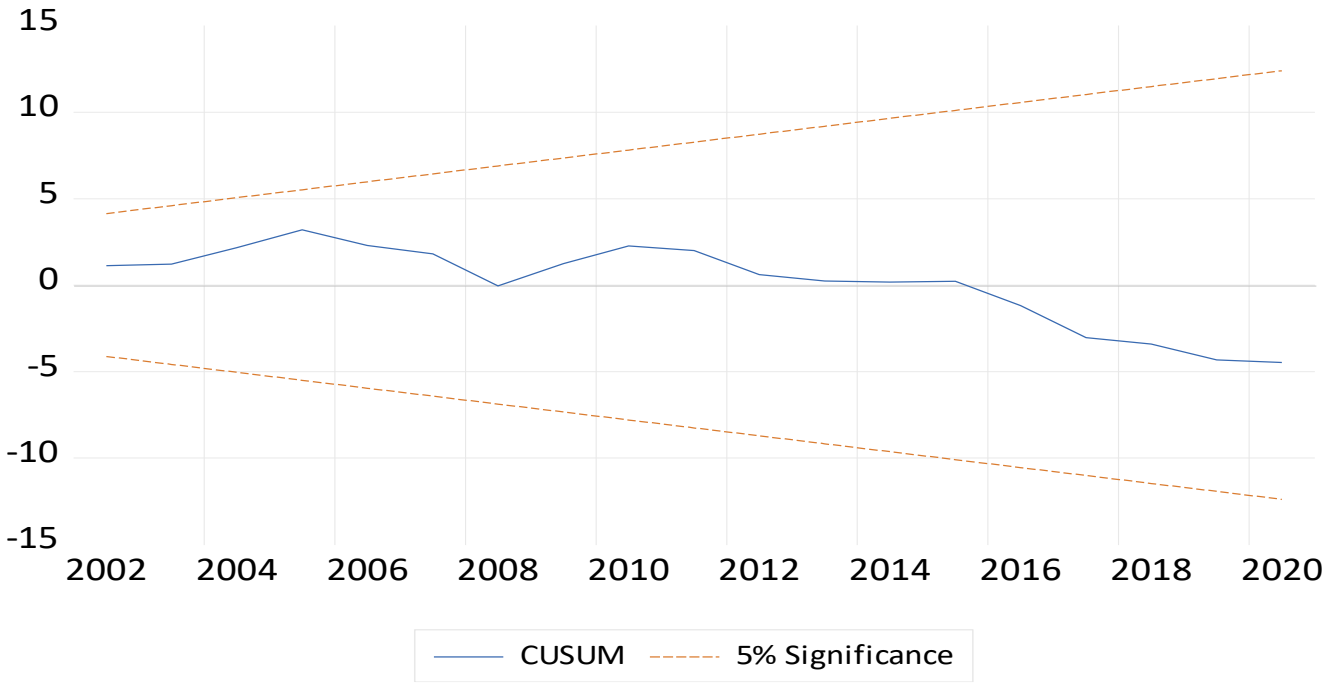
The speed of adjustment of the short run model to the changes in the long run dynamics shows that components of international trade adjust speedily to changes in long run dynamics in economic growth in Nigeria. Also, the coefficient of determination of 0.79 indicates that about 79 percent of the systematic variation in real growth rate in national income is explained by international trade in Nigeria over the period under study

Table 7: Post estimation Test Result for Real GDPR Model

Test	F- ratio	Probability
Jarque –Bera Test for Normality	2.55	0.28
Breusch_Godfrey Serial correlation Test	0.89	0.43
Breusch-Pagan-Godfrey Test for Heteroskedasticity	0.80	0.67
Ramsey RESET Test for Specification Error	0.03	0.86

Source: Author's analysis – e-view 12.

The post estimation tests results presented in table 4.10 show that the variables in the national income growth model are normally distributed around its mean with the F-ratio and probability values of 2.55 and 0.28 using the Jarque – Bera test. Hence the null hypothesis of the error term being normally distributed is accepted. In same manner, the test for serial correlation carried out using the Breusch-Godfrey technique indicates that serial correlation is absent in the model estimated given the F-ratio of 0.89 and the probability statistic of 0.43. The test for heteroscedasticity carried out using the Breusch-Pagan-Godfrey Test shows that the error term has constant mean and variance (homoscedastic) given the F-ratio and probability values of 0.80 and 0.67 respectively. Finally, the test for specification error using the Ramsey Reset test reveals that no evidence of specification error existed in the model estimated



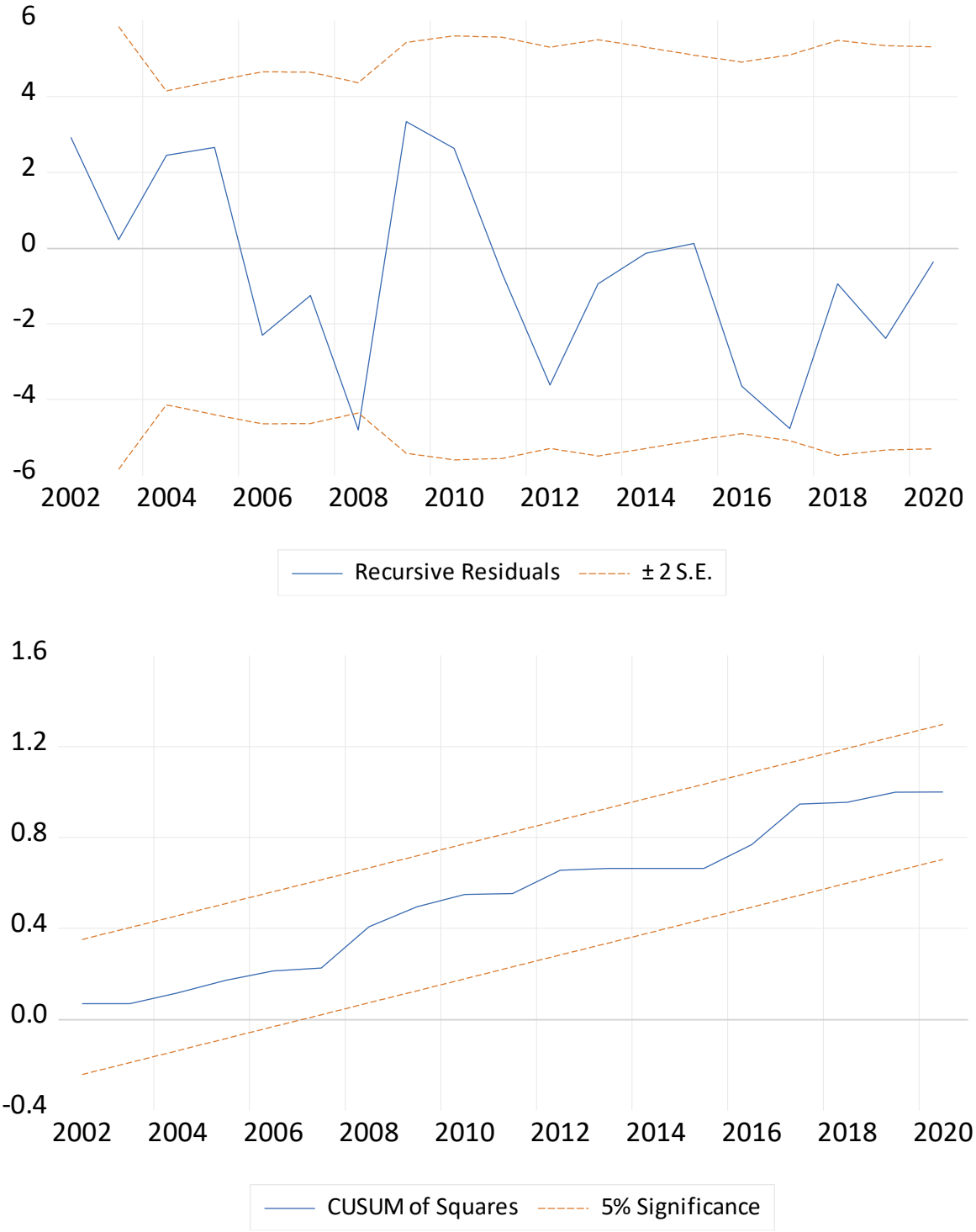


Figure 1. Stability Test Results for Economic growth rate model

Source: Author's analysis – e-view 12.

Given instability that sometimes-characterized time series data, testing for the stability of the variables in the national income equation is very important. In carrying stability test, it is crucial to combine short time dynamics to test stability of long run parameters of national income growth rate model. This study adopted Bahmani-Oskoee and Shin (2002) technique and apply CUSUM to residuals of ARDL ECM. For stability in short time dynamics and long-time parameters of national income growth rate equation, it is a crucial condition that recursive residuals, CUSUM and CUSUM of squares are within 5% Critical Value (CV) representing two straight-lines whose equation are align with Brown et al. (1975). As shown in Figure 1 neither recursive nor CUSUM, and CUSUM square graph crossed 5% CV lines, therefore, we could maintain that estimated features for short time dynamics and long-time of national income growth rate equation were stable. That is, stable real GDP growth rate equation exists over this study.

V. DISCUSSION OF FINDINGS AND CONCLUDING REMARKs

The result in the national income growth rate model indicates that during the period when the factors affecting it are allowed to change, oil import is positively and insignificantly related to growth level of the Nigerian economy while in the period when the variables are sticky, oil import is negative and has significant relationship with economic growth rate. The result during the period when the factors affecting it are allowed to change agrees with apriori theoretical expectation while the short run error correction result deviated from economic theory. The short run ECM result is in agreement with earlier finding by Obisike et al (2020). Increase in oil import starve the local economy of basic funds for investment and productive activities hence stifle economic prosperity of a country. Nigeria has been an importer of refine petroleum products due to the collapse of the nation's refineries. This has exerted significant pressure on scare forex and increase government spending due to the subsidization of local consumption of the imported petroleum product.

The result further reveals negative relationship between non-oil import and economic growth in Nigeria during the period when the factors affecting it are allowed to change. This result conforms to finding by Obisike et al (2020) import leaks domestic resources hence retard economic growth; Nigeria is a net importer to raw materials for production and final products for consumption. These high imports have distorted domestic production and economic growth in the country.

Oil export is positively related to economic growth during the period when the factors affecting it are allowed to change. This agrees with apriori theoretical expectation. This result deviated from the findings of Aboyomi et (2015) which finds that oil revenue retards economic growth in Nigeria. Nigeria export crude petroleum and import refined petroleum products. This development has reduced the additional values derived from crude oil activities and economic growth in Nigeria.

Non-oil export has positive nexus with economic growth both during the period when the factors affecting it are allowed to change and when the variables are sticky. Though non –oil export is less related to economic growth in the long run, in the short run, it is significantly linked to economic growth. This result is in consonance with the earlier work by Zoramawa et al (2020) which found non-oil export revenue to be positively related to economic growth during the period when the factors affecting it are allowed to change but negatively linked to economic growth when the variables are held constant. Though Nigeria's non-oil export is principally on agricultural produce and its raw form, non-oil export seems to contribute more to job creation and economic well-being of the people than oil export. This is because the agricultural sector remained the highest contributor to employment in the country.

Trade openness is positively related to economic growth in the period when the factors affecting it are allowed to change but insignificant at 5 percent. This implies that trade openness drives economic prosperity of Nigeria under the period under investigation. The result deviated from findings of earlier studies by Sunday and Ahmed (2019) and Egbulonu and Ezeocha (2018). Trade openness measures the extent of trade penetration and shows the degree of trade liberalisation of a country with other countries in the world. Nigeria has over the years opened her border for free flow of trade but the extent to which this policy has benefited the country is still contentious. The country export crude oil and gas in raw form and import refined petroleum products and other non-oil products including food, finished goods and raw materials for industrial production. These had made gain from trade liberalisation to be marginal over the years.

Foreign direct investment share of real economic growth is negatively related to economic growth in the period when variables are held constant and in the period when the factors affecting it are allowed to change but with less impact at 5 percent level in the period when the factors affecting it are allowed to change. This implies that foreign direct investment retarded economic growth over the period under investigation. This result is in tandem with earlier studies by Uwubaumwen and Ogiemudia (2016). Inflow of foreign direct investment increase economic activities in host countries, thus create additional jobs, increase production and economic growth. Though Nigeria has received more investment from foreign countries over the years, the effect of this investment on the Nigerian economy is still an issue of national debate. It is unfortunate to notice that most of the foreign investments are in the oil and gas sector. This sector is highly automated hence employ very few Nigerians. The oil and gas sector also has very low value chain due to non-processing of oil and gas in the country. These developments have reduced the gain from foreign direct investments in Nigeria over the years.

Real effective exchange rate is found to be negatively related to economic growth in the period when the factors affecting it are allowed to change but with less implication at 5 percent level. This implies that real effective exchange rate retarded economic growth in Nigeria over the period under investigation. This result corroborated earlier finding by Emehelu (2021). Nigeria is an import dependent economy hence exchange rate plays serious role in determining the gains from trade. Depreciation of local currency makes export cheaper and import expensive hence a country with adverse balance of payment could gain by exporting more commodities and earning more from trade. Unfortunately, Nigeria seems not to have benefited from devaluation due to export of few commodities which are in the raw form (crude oil and agricultural products).

The goodness of fit result shows that about 79 percent of the systematic change in real economic growth rate is explained by changes in international trade components during the period under investigation in Nigeria. Also, the negative sign of the error correction mechanism indicates that the variables in the growth model when variables are held constant adjust speedily to long run dynamics in the real economic growth rate model in Nigeria. Based on these findings, the study suggests: policies geared toward increase in non-oil export, reduction in oil import, review of FDI inflow policies and trade liberalization as possible ways of improving the productive capacity of the Nigerian economy.

REFERENCES

1) Abogan, O.P. Akinola, E.B. and Baruwa, O.I. (2014) Non-Oil Export and Economic Growth in Nigeria (1980-2011). *Journal of Research in Economics and International Finance, 3, 1-11.*
2) Adewuyi, A. O. (2002) Balance of Payments Constraints and Growth Rate Differences under Alternative Police Regimes, Nigerian Institute of Social and Economic Research (NISER) Monograph Series No. 10 Ibadan, Nigeria.
3) Adegboyega, R. R. (2017). The impact of export and import on economic growth in Nigeria: Evidence from VAR approach. *Journal of Management and Social Sciences, 6(2), 348-364*
4) Adenugba, A. A. & Dipo, S. O. (2013). Non-oil exports in the economic growth of Nigeria: A study of agricultural and mineral resources. *Journal of Educational and Social Research, 3(2), 403-418.*
5) Akinyemi, A. A., Muideen, A. I., Olusogo, O. O. & Oluwaseun, A. A. (2018). Foreign direct investment and economic growth in Nigeria Revisited: A Sector Level Analysis. *NileJBE, 6*: 69-85.
6) Aladejare, A. S. and Saidi, A. (2014). Determinants of non-oil export and economic growth in Nigeria: An Application of the Bound Test Approach. *Journal for the Advancement of Developing Economies. 4*
7) Anichebe, A. S. (2019). Effect of foreign direct investment on economic growth in Nigeria. *Journal of Accounting and Financial Management, 5(2), 48-58*.
8) Bahmani-Oskooee, M. and Ratha, A. (2004) The J-curve Dynamics of U.S. Bilateral Trade. *Journal of Economics and Finance, 28, (1)32-38.*
9) Egbulonu, K. G. & Ezeocha, J. A. (2018). Trade openness and Nigeria's economic growth (1990- 2015). *International Journal of Development and Economic Sustainability, 6(3), 1-11.*
10) Efobi, U. and E. Osabohien (2010) Trade Outcomes in Africa's Regional Economic Communities and Institutional Quality: *Economic Sciences Series Vol. LXIII No. 4/2011*
11) Emehelu, C. I. (2021). Effects of International Trade on Economic Growth of Nigeria. *International Journal of Innovative Finance and Economics Research, 9(1), 144-157.*
12) Ewetan, O. O. & Okodua, H. (2016). Econometric analysis of exports and economic growth in Nigeria. Department of Economics and Development Studies Covenant University.
13) Ezike J.E and Ogege S. (2012) Nigerian foreign trade policy: Its impact on non-oil exports. *Journal of Economics and International Finance Vol. 4(8), pp. 192-200*
14) Gbosi, A.N. (2011). *International trade in theory and practice*. Port Harcourt: Amethyst and Colleagues Publishers.
15) Ijirshar, V. U. (2019). Impact of trade openness on economic growth among ECOWAS Countries: 1975-2017. *CBN Journal of Applied Statistics, 10(1), 75-96.*
16) Igwe,A.; Edeh, C.E. and W.I. Ukpere (2015). Impact of non-oil sector on economic growth: A managerial economic perspective. *Problems and Perspectives in Management 13(2):170-182*
17) Mathew, J.K, Charles, K., Dorathy, P.N. & Suleiman, L. (2017). Contribution of non-oil export to economic growth in Nigeria (1985 – 2015*). International Journal of Economics and Finance, 9(4) 253 - 261*
18) Meier, G. (1988). *International economics.* New York: Oxford University Press.
19) Obisike, N. E., Onwuka, I. N., Okoli, U. V. & Udeze, R. C. (2020). Impact of international trade on Nigerian economic growth: Evidence from oil terms of trade. *International Journal of Economics and Financial Management, 5(2), 31-47.*
20) *Odo, S. I., Anoke, C. I., Nwachukwu, J. O. & Promise, E. A. (2016). Impact of foreign direct investment on stock market growth in Nigeria. Asian Research Journal of Arts & Social Sciences, 1(2), 1-14.*
21) Ogbonna, B. C. (2015). Disaggregated imports and economic growth in Nigeria. *International Journal of Development and Economic Sustainability, 3(5), 36-46.*
22) Olokoyo, F. O (2012). Foreign direct investment and economic growth in Nigeria. *Bvimsr's Journal of Management Research, Vol. 4, No 1.*

23) Omotor, D. G. (2008). The role of exports in the economic growth of Nigeria: The bounds test analysis. *International Journal of Economic Perspectives, 2(3), 222-235.*
24) Osabohien, R., Akinpelumi, D., Matthew, O., Okafor, V., Iku, E, Olawande, T. & Okorie, U. (2019). Agricultural exports and economic growth in Nigeria: An econometric analysis. *International Conference on Energy and Sustainable Environment, 1-10.*
25) Sunday, E. & Ahmed, B. M. (2019). Dynamic impact of trade openness on the economic growth in Nigeria. *International Journal of Engineering and Advanced Technology (IJEAT), 8(5), 609-616.*
26) *Uwuban*mwen, A. E. & Ogiemudia O. A. (2016). Foreign direct investment and economic growth: Evidence from Nigeria. *International Journal of Business and Social Science, 7(3), 89-103.*
27) Yakubu,M.M and B.N. Akanegbu (2015) The Impact Of International Trade On Economic Growth In Nigeria: 1981 – 2012. *European Journal of Business, Economics and Accountancy 3(6) 26-36*
28) Zoramawa, L.B., Ezekiel, M.P., Umar, S. (2020), An analysis of the impact of non-oil exports on economic growth: Evidence from Nigeria. *Journal of Research in Emerging Markets, 2(1), 15-23*