

Re- Evaluation of the Influence of Foreign Earnings on Economic Growth in Nigeria

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Abstract: *The study investigated the effect of foreign earnings on economic growth in Nigeria from 1981 to 2018, by adopting ex-post facto research design. It utilized multiple regression analyses in which the Auto-Regressive Distributed Lag model was the main method of analysis. The variables analyzed in the investigation include real non-oil exports, real oil exports, real foreign remittances, real FDI, real money supply, real private domestic investment, and real GDP. The results indicated that real oil exports had a positive and significant contribution to real GDP in the short-run, and a positive and insignificant influence on real GDP in the long-run. It also showed that real non-oil exports had a positive and insignificant impact on economic growth in both the short-run and the long-run. Similarly, real foreign remittances had a negative and significant effect on real GDP in the short-run; and a negative and insignificant effect on real GDP in the long-run. Thus, the study recommended that the government should not over-rely on oil export earnings in formulating and implementing long-term macroeconomic policies in the economy. But can diversify the nation's export base by raising its budget spending on non-oil sectors as a way of improving the export earnings in Nigeria.*

Keywords: *Capital Market, Economic Growth, Cointegration Test, Vector Error Correction Model*

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I. Introduction

Growing the nation's economy has over time been the main target of every government of most countries of the world, especially the developing countries, Nigeria inclusive. To this end, various governments in an attempt to attain this goal often adopt several economic measures, aimed at promoting the growth and development of their economies. According to Ugwuegbe and Uruakpa (2013), the desire to improve the living standard of the citizenry, raise capacity utilization which improves productivity, reduce unemployment; and achieve increased foreign earnings, among others, led to enunciations of economic vibrant policies by various governments in the developing countries. Accordingly, the shift from trade restricted economy to liberalized trade economy with the objective of achieving the aforementioned goals has been linked to the positive correlation existing between exports and the growth of an economy (Pop-Silaghi, 2009).

Bhagwati (1973) conceived that efficient distribution of limited resources among nations and for the purpose of increasing the volume of world trade, unrestricted trade in any kind have enormous benefits to countries engaged in the external trade. In this view, Nigeria, in a quest to benefit from external trading, opt for free trade policies in order to participate fully in international trading, knowing full well that it generates more foreign earnings, and boosts the nation's capacity utilization. The authors further argued that unrestricted trade leads to social-welfare improvement and alleviation of poverty due to its role in generating job opportunities, promote the living standard of the citizenry as well as enhance economic growth of the nation.

Theoretically, foreign earning has a positive association with the growth of any economy. It is generated basically through exporting activities and international remittances. The foreign exchange earned via exporting activities is channeled towards importing capital goods. In order to improve foreign exchange, countries seek and gain access to a wider external demand primarily to raise foreign earnings, and stimulate productivity level alongside increased economic growth in the economy (Holman & Graves, 1995).

In Nigeria, foreign earnings are generated through oil exports, non-oil exports and international remittances, which augment the domestic savings in financing developmental projects, in order to promote the economic growth of the country. Foreign earnings, therefore, are very important in supplying the economy with the required capital for investments and hence, accelerate economic growth due to its role in promoting infrastructures and providing a climate favourable for investments to thrive. Essentially, foreign earning is one of the components of national income in Nigeria and over time, it has played an essential role in providing succor to the domestic economy.

However, the prominent features of the export sector in the country have since the 1960s remained unchanged. The export sector, which generates the major part of the foreign earnings, is now dominated by a

lone export product. This was against the stance of the economy at independence in 1960, in which the economy was dominated by agricultural export products. By 1970s, the oil sector emerged in commercial quantities and became the major exporting product of the nation. The oil sector now contributes over 90% of the total exports of the economy. As a result, the non-oil sectors were neglected, and its overall performance declined drastically. But with the frequent or persistent negative shocks on the global market price of oil, which made the Nigeria's economy vulnerable, the policy concern of the government has been extended to non-oil export sectors, mainly to diversifying the export-base of the country. The economic diversification becomes imperative in Nigeria, knowing full well that exports facilitate the overall performance of any economy.

The huge foreign earning share of the oil export sector against the non-oil-export sectors was as a result of the sectors' neglect by the government, especially on the area of agricultural sector. Hence, two-thirds of the country's foreign earnings are obtained from the oil-export sector. Over time, however, the nation's oil production and oil market price have been declining due to persistent civil unrest in the country such as militant operations and oil price shocks in the world market. A situation that appears to have decreased the foreign earnings of the country and consequently, slow investments, productivity, and as well raises unemployment rate, persistent depreciation of exchange rate, excessive borrowing by the government and debt overhang and above all, slow economic growth.

Statistically, in Nigeria, the oil-exports growth rate stood at 27.3% in 1985 and rose to 93.8% and 362.2% in 1990 and 1995 respectively. It however, decreased to 64.2%, 59.1%, and 39.4% in 2000, 2005, and 2010 respectively. By 2015, the oil exports recorded a negative growth rate of 31.8% and rose to 57.9% in 2017. In the same vein, the non-oil export growth rate was 150% in 1985 and decreased to 10% in 1990. In 1995, the growth rate rose to 335.5% and fell to 27.2% in 2000. By 2005, non-oil exports showed a negative growth rate of 6.4%, and increased to 41.9% in 2010; and in 2015, it again revealed a negative growth rate of 30.7%, and rose to 63.7% in 2017.

On the other hand, the inflows of international remittances recorded negative growth rates of 10%, 69.2%, 58.2%, and 88.8% in 1985, 1990, 1995 and 2000, respectively. In 2005, the growth rate rose to 226.2% and fell to 9.5% in 2010, and again rose to 1881.4% in 2015. By 2017, the international remittance inflows again recorded a negative growth rate of 63.1%. For the economy, the corresponding GDP growth rate stood at 8.5% in 1985 and rose to 11.6% in 1990. By 1995, the growth rate of the GDP fell to 1.9% and increased to 5.5%, 7.0%, and 9.5% in 2000, 2005, and 2010 respectively. By 2015 and 2017, the GDP growth rates decreased to 2.8% and 0.8% respectively.

From the trend analyses, it appears that there is a contradiction to a priori expectation between foreign earnings and the Nigerian economic growth. For instance, as the foreign earnings from oil-export and non-oil export sectors and international remittances trend fluctuates, the GDP contradicts the trends of the variables. For example, when the foreign earnings from the oil and the non-oil sectors increased in 1995, the GDP growth rate decreased to 1.9%, and when both export earnings fell in 2005, the growth rate of GDP increased to 7.0%. Similarly, when both oil-export and non-oil-export earnings recorded negative rates of growth in 2015, the GDP growth rate rose to 9.5%; and they rose in 2017, the GDP growth rate decreased to 0.8%.

The facts above suggest that foreign earnings inflow in Nigeria appears to have deviated from economic postulation, which opined that inflow of foreign earnings brings about improved level of economic activities by stimulating investment demand, aggregate demand, employment, promote productivity level, balance of payments and economic growth. Nigeria has since the 1970s had several economic booms resulting from the price oil per barrel in the world market, in addition to the inflow of foreign remittances plus other export policies put in place by the successive governments to improve economic growth; but it appears that these developments are yet to translate to consequential economic growth as the economy is still ravaged by low standard of living of the people, low investments, high unemployment, low productivity, balance of payments deficits and unsustainable growth. It is on this note, that this research investigates the effect of foreign earnings on economic growth in Nigeria.

II. Review Of Related Literature

2.1 Theoretical Review

There are several foreign trade, international remittance and economic growth theories explaining the relationship between foreign earnings and economic growth in the development process of nations. However, the major ones considered in this study include the Heckscher – Ohlin Trade Theory, The Theory of Reciprocal Demand, The Vent-for- Surplus Theory of Exports, Optimistic and Pessimistic Theory of Migration, Network Theory of Migration, neoclassical and endogenous growth theories.

The Heckscher – Ohlin Trade Theory

The Heckscher-Ohlin trade theory of endowment otherwise referred to as the theory of factor proportion was initially hatched in 1919 by Eli Heckscher and developed in 1933 by Bertin Ohlin in his book

titled, "Interregional and International Trade". The earlier approaches foreign trade was concerned primarily with the demonstration of the gains from trade and the analysis of various questions of trade policies, and not with an explanation of how a situation of differing comparative costs set in. However, Bertin Ohlin in his book published in 1933 criticized the earlier classicalists' viewpoint on external trade and postulated the theory of factor endowment or general equilibrium in order to explain foreign trade. This theory represents the modern theory of international trade in the world. The theory of the Heckscher-Ohlin explains the country's trade in terms of its factor endowments. It indicates that the relative factor abundance of the country's resources endowment is relatively better suited to the production of the good, which uses relatively large amounts of the abundant factor. Thus, a commodity that requires more intensive use of the more abundant factors will always be cheaper than the other.

The theory postulated that foreign trade emerged due to differences in factor proportion or factor endowments among countries of the world. Some nations are intensively endowed with capital, while others are intensively endowed with labour. Therefore, countries endowed with much labour intensive should engage in the production and exports of commodities that are labour intensive, while the countries endowed with much capital intensive should engage in the output production and exports of commodities that are capital intensive.

The Theory of Reciprocal Demand (John Stuart Mill, 1844)

The reciprocal demand trade theory, also referred to as the theory of international value was propounded by John Stuart Mill in 1844. The theory accepted the theory of labour value of David Ricardo and clearly re-echoed the theory of comparative cost advantage. It, therefore, formulated his theory in terms of comparative effectiveness of labour or comparative cost advantage as a contrast to David Ricardo's comparative labour cost to tackle the issue of international value or the ratios whereby goods can exchange for one another in the global markets. Thus, theory instead of conceiving that a certain output level is given in each of the two nations with different labour costs, inversely postulated the same amount of labour is given for each of the two nations with the different output levels. By implication, the reciprocal demand theory of trade opined that international trade among countries emerged as a result of relative strength and demand elasticity of the two trading nations for each other's product (Anowor & Agbarakwe, 2015).

Therefore, Mill through the theory of reciprocal demand contributed to foreign trade theory and political economy, which were in twofold. In his explanations on the price-specie flow mechanism, the theory treated money as intermediate goods by equating precious metals and money, which made it easier to model foreign trade in the form of trade by barter. The other contribution of the reciprocal demand to trade theory on the concept of division of gains from trade, and the manner by which the reciprocal demand for countries' products are determined.

Neo-Classical Theory of Economic Growth and Savings

The neoclassical growth theory was developed, as a result of the intensive research in the field of growth-economics by Robert Solow and Trevor Swan in 1956. Solow's growth model focused on constant returns to production scale using two inputs, capital and labour, and substitution possibilities between inputs and diminishing marginal productivity (Reza et al, 2014). It postulated that economic growth occurs via capital accumulation and that a stable rate of growth is determined through technological progress. The theory further argued that despite that changes in the population growth and savings rate can change the growth path, they have no significant effect on the long-run growth rate. Thus, an increase in the savings rate leads to an increase in the long-run growth path rather than, an increase in growth rate.

This theory was one of the growth theories, which outlines how steady economic growth results from a combination of three factors including capital stock, labour and technical process. It identified that short-term equilibrium occurs from changes in the volumes of labour and capital. A change in technology has a significant effect on the economy in the long-run; hence, economic growth occurs through technological advancement. The model presumes that total output is produced in a Cobb-Douglas production function, and hence, it considered technology as an exogenous factor (Solow, 1956).

Endogenous Theory of Economic Growth and Savings

The endogenous economic growth theory postulated that economic growth is endogenously determined by growth factors such as investment, size of the capital stock and human capital. It, therefore, predicts that an increase in the rate of savings results to increase in economic growth due to its positive effect on capital accumulation and investment (Barro & Sala-i-Martin, 1995). It also posited that an increase in savings promotes national income and investment progress in the economy. In the theory, saving is treated as an endogenous variable, as shown by the optimization behavior of firms and households. However, it conceived that growth in the capital stock only promotes economic growth in the short-run but the influence is inconsequential in the long-run

2.2 Theoretical Framework

The study adopts the neo-classical growth theory as the theoretical framework guiding this research work. The theory assumed that output (Y) is produced through the interactions of technology, labour and physical capital [i.e. $Y = f(A, K, L)$]; where Y is the aggregate output, A is the number based on the current state of technology, K is the quantitative measure of the size of the stock of manufactured capital, and L is the quantity of labour employed during the period of time (Precious, 2015). The theory believed that improvement in factors of production productivity due to technological change as well as changes in organization and practices results in an increase in output growth rate in the economy.

Hence, the assertion that growth results from increased capital stock as means of production is linked to series of equations, which indicate the relationships among labour, capital stock, and savings as factors that determine investment and output growth (Faris, 2017). Therefore, gross domestic product is estimated as a function of capital accumulation, labour supply, stock market contribution, and technological progress. The factors as mentioned above are measured by market capitalization, all-share index and savings accumulation by the private sector.

Given the role of the theoretical model to the growth of the economy, the study will instead of employing the functions $Y=f(A,K,L)$, now modified the functions as $RGDP = f(ROX, RNOX, RFRMT, RPDI, RFDI, RMS)$; where RGDP depicts real gross domestic product, ROX is real oil export, RNOX is real non-oil export, FRMT is real foreign remittances, RPDS is real domestic investment, RFDI is real foreign direct investment, and RMS is real money supply.

2.3 Empirical Review

Anthony, Yuansheng, Robert, and Rahman (2018) analyzed the correlation between the exports of agricultural products and Ghanaian economic growth at a disaggregated level using the stationarity test, ARDL model and Granger causality approach with using time series data for the period 1990Q1-2011Q4. The variables utilized in the investigation were the investment, cocoa exports, real gross domestic product, banana exports, exchange rate and pineapple exports (PINX). The unit root test indicated a mixed order of integration with stationarity achieved at both level and first differencing. The results also showed that exports of cocoa products had a significant and positive effect on economic growth while the exports of banana and pineapple negatively affect economic growth, though the effect of pineapple export was insignificant on RGDP. Similarly, the research discovered a unidirectional relationship with causality ran from banana to RGDP; it also observed bi-directional causality between RGDP and cocoa export, and no causation between Ghanaian RGDP and pineapple export. This study was conducted in a foreign country.

Isiaka and Abiodun (2018) investigated the impact of the revenues of government such as foreign earnings from non-oil and oil export activities on economic growth in Nigeria from 2014 to 2017, using stationarity test, ARDL model, co-integration framework as well as causality test. The study modeled and analyzed total revenue, gross domestic product, non-oil revenues, trade openness, oil revenues, school enrolment, foreign direct investment, and private domestic investment. The estimation results indicated stationarity for all the variables at first differencing. The estimation also revealed that gross domestic product (GDP) responds to oil income than that of non-oil income.

Wasiu and Mubaraq (2018) examined the nexus between flows of foreign capital and Nigeria's economic growth for the period 1986-2015 using the stationarity test and ARDL model. The model of study consists of gross capital formation, real gross domestic product, net foreign direct investment, net external debt, net foreign aids, net foreign portfolio investment, net foreign remittances, natural log of West Texas intermediate, trade openness, financial dept indicator, and a dummy variable. The study also indicated that net FDI had a positive influence on GDP in the short-run, whereas flows of net foreign remittances and net portfolio investment had a significant and negative influence on GDP in the economy in the short-run. More so, the research revealed that net external debt and net foreign aids facilitate economic growth, whereas excess flow level retards economic growth.

Onyeisi and Odo (2018) analyzed the effect of foreign remittance inflows on economic growth in the Nigerian economy for the period ranging from 1980 to 2015 by employing the stationarity test, method of Johansen co-integration test, VECM and causality technique. Data on the real gross domestic product (RGDP), international remittance inflows, oversee development assistance, balance of trade, inflation rate, exchange rate, and interest rate were analyzed in the study. The estimation results revealed that a significant and negative nexus exists between real gross domestic product and inflows of foreign remittance. More so, oversee development assistance was revealed to significantly and positively correlate with real GDP; the balance of trade had a significant and positive influence on RGDP, whereas inflation exhibits an insignificant and positive nexus with the real GDP. Furthermore, the causality results indicated significant causality between real GDP and inflows of foreign remittances in the economy.

Hezekiah (2018) evaluated the effect of foreign earnings from non-oil exports on the growth of Nigeria's domestic economy from 1980 to 2016 using stationarity test, ARDL model, ordinary least square (OLS), FMOLS and method of Johansen co-integration approach. The variables modeled in the study were the gross domestic product, non-oil export, agricultural product income, and solid mineral income. The results indicated that earnings from non-oil export had a significant and positive influence on growth of the domestic economy in Nigeria.

Onuorah (2018) studied the role of export earnings from the non-oil sectors in the economic growth of Nigeria from 1985-2017 through the applications of the technique of judgmental sampling, ordinary least square regression analysis and longitudinal survey research design. The variables modeled in the study were gross domestic product (GDP), cassava export (CASX), groundnut exports (GROX), millet exports (MILX), and yam exports (YAMX). The study discovered that there was a positive nexus existing between GDP and the regressors including groundnut, cassava, yam, millet, and maize exports, and they significantly contribute to GDP.

Dennis and Godspower (2018) researched the influence of foreign remittances on the reduction of the poverty level in Nigeria by employing a stationarity test, ARDL model, and Parsimonious Error Correction ARDL model. The variables analyzed in the regression model include outward remittances, official development assistance, inward remittances, poverty headcount, and technical cooperation grants. The results indicate that inward remittances had positive and significant effects on Nigeria's reduction of the poverty level in the short run, while outward remittances had an insignificant and positive influence on poverty reduction in the economy.

III. Methodology

To empirically examine the effect of foreign earnings on economic growth in Nigeria for the period between 1981 and 2018, foreign earnings indicators including real oil exports, real non-oil exports, and real foreign remittances are employed to investigate their impacts on economic growth. The stationarity test and auto-regressive distributed lag (ARDL) model are utilized in the analysis. The variables modeled in the study include the real gross domestic product (GDP), real oil exports (ROX), real non-oil exports (RNOX), real foreign remittances (RFRMT), real private domestic investment (RPDI), real foreign direct investment (RFDI), and real money supply (RMS). Data on these variables are obtained from the Central Bank of Nigeria (CBN) statistical bulletin, volume 29, 2018; and World Bank data, 2018, ranging from 1981 to 2018.

3.1 Model Specification

The specification of the model of this study follows the leads of neoclassical growth theory anchored on the Augmented Cobb-Douglas model as developed by Solow-Swan in 1956, which expresses growth as a function of labour, capital, and technology. That is,

$$Y = f(L, K, T) \tag{1}$$

The assertion that growth results from increased capital stock as means of production is linked to series of equations that indicate the relationship among labour, capital stock, savings as factors that determine investment and output growth (Faris, 2017). Thus, gross domestic product is estimated as a function of capital accumulation, labour supply, contribution of the stock market, and technological progress. These are measured by oil export earnings, non-oil export earnings and foreign remittances. Therefore, the model showing the relationship between foreign earnings and economic growth is specified in functional form as:

$$RGDP = f(ROX, RNOX, RFRMT, RPDI, RFDI, RMS) \tag{3}$$

Where; RGDP represents real gross domestic product, ROX is real oil exports, RNOX is real non-oil exports, RFRMT is real foreign remittances, RPDI is real private domestic investment, RFDI is real foreign direct investment, and RMS is real broad money supply

In linear function, the model is illustrated as:

$$RGDP_t = \phi_0 + \phi_1 ROX_t + \phi_2 RNOX_t + \phi_3 RFRMT_t + \phi_4 RPDI_t + \phi_5 RFDI_t + \phi_6 RMS_t + \mu_t \tag{4}$$

Where; RGDP is the dependent variable, whereas ROX, RNOX, RFRMT, RPDI, RFDI, RMS are the explanatory variables; ϕ_0 is the constant term, ϕ_{is} are the coefficients of the regression equations and μ_t is the stochastic variable.

In the logarithm function, it is specified as:

$$\log RGDP_t + \phi_0 + \phi_1 \log ROX_t + \phi_2 \log RNOX_t + \phi_3 \log RFRMT_t + \phi_4 \log RPDI_t + \phi_5 \log RFDI_t + \phi_6 \log RMS_t + \mu_t \tag{4}$$

4

This equation represents the logarithm function of the equation.

3.2.1 A Priori Expectation

Theoretically, the study expects that real oil exports, real non-oil exports, real foreign remittances, real private domestic investment, real foreign direct investment, and real broad money supply to have positive relationships with the gross domestic product (GDP). The a priori expectation trends of the behaviour of the variables in terms of their coefficients are $\phi_1 > 0$, $\phi_2 > 0$, $\phi_3 > 0$, $\phi_4 > 0$, $\phi_5 > 0$, $\phi_6 > 0$.

IV. Results and Discussion

This section of the study illustrates the results estimated from the econometric approaches used in the study; and consequently, discusses the results in line with the goals of the research. The estimation results are presented below.

4.1 Stationarity Test

The stationarity test is conducted mainly to determine the level of integration among the variables under consideration, through the application of the Augmented Dickey-Fuller (ADF) unit root test. The results are indicated in Table 1 below.

Table 1: ADF Unit Root Test

Variables	Level		First Difference		Remarks	Rank
	ADF Statistic	5% Critical Value	ADF Statistic	5% Critical Value		
LRGDP	-0.027819	-2.945842	-3.395053	-2.945842	Stationary	I(1)
LROX	-1.166181	-2.943427	-6.266537	-2.945842	Stationary	I(1)
LRNOX	-1.533496	-2.945842	-7.950121	-2.945842	Stationary	I(1)
LRFRMT	-1.950188	-2.948404	-7.750056	-2.954021	Stationary	I(1)
LRPDI	-0.592334	-2.943427	-4.472136	-2.945842	Stationary	I(1)
LRFDI	-3.457956	-2.943427	-9.080640	-2.945842	Stationary	I(0)
LRMS	-0.756056	-2.943427	-3.662953	-2.945842	Stationary	I(1)

Sources: Researcher's computation from E-view 9

Table 1 of section above, represents a unit root test through the application of the Augmented Dickey-Fuller (ADF) unit root test. The results showed that all the variables (LRGDP, LROX, LRNOX, LRFRMT, LRPDI, and LRMS) except RFDI were non-stationary at levels; however, all the variables became stationary after first differencing at 5% level of significance. These claims are evidenced by the ADF statistics and their p-values, which proved to be greater than the chosen 0.05 critical value. At level, the critical values except RFDI are all greater than the ADF statistics, but at first differencing, the ADF statistics of the variables are greater than the critical values. These results revealed that all the variables possessed long-run properties. It, therefore, implies that their mean, variance and covariance are constant overtime. Thus, the research concludes that all the variables have mixed order of integration [i.e., I(1) and I(0)].

4.2 Auto-Regressive Distributed Lag (ARDL) Model Test

The ARDL model is an estimation procedure utilized to examine the long-run relationship and short-run dynamics among the underlying variables. The technique was developed by Pesaran, Shin, and Smith (2001); and Pesaran and Shin (1999) in their efforts to investigate the long-run and short-run coefficients of the variables. The application of the ARDL model is most appropriate when there is either a mixed order of integration or when there is small size data of the underlying variables [i.e. I(1) and I(0)]. In this investigation, the ARDL results are presented in tables 2 and 3 below.

4.2.1 ARDL Short-run and Long-run Coefficients Tests

This estimation procedure is applied to examine the short-run dynamics and long-run association of the variables under study. The results of the ARDL model are illustrated in table 2 of section four below.

Table 2: ARDL Short-run Coefficients Test

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LRGDP(-1))	0.502988	0.133968	3.754536	0.0021
D(LROX)	0.010172	0.024888	0.408728	0.6889
D(LROX(-1))	0.030492	0.011671	2.612543	0.0205

D(LRNOX)	0.028477	0.026280	1.083629	0.2968
D(LRFRMT)	-0.015186	0.006625	-2.292383	0.0379
D(LRFRMT(-1))	0.007279	0.004913	1.481650	0.1606
D(LRPDI)	0.075165	0.033377	2.251996	0.0409
D(LRPDI(-1))	0.100380	0.043299	2.318319	0.0361
D(LRFDI)	-0.000724	0.005652	-0.128044	0.8999
D(LRFDI(-1))	0.015707	0.070584	2.225292	0.0473
D(LRMS)	-0.210693	0.068639	-3.069583	0.0083
D(LRMS(-1))	0.070013	0.042302	1.655091	0.1201
ECT(-1)	-0.167508	0.064269	-2.606374	0.0207

Source: Researcher's compilation from E-view 9

Model: $LRGDP = 0.030492LROX + 0.028477LRNOX - 0.015186LRFRMT +$
 $(0.011671) \quad (0.026280) \quad (0.006625)$
 $[2.612543] \quad [1.083629] \quad [-2.292383]$
 $0.075165LRPDI + 0.015707LRFDI - 0.210693LRMS$
 $(0.033377) \quad (0.007584) \quad (0.068639)$
 $[2.251996] \quad [2.225292] \quad [-3.069583]$
 $R^2 = 0.999651; F\text{-stat} = 2226.623, \text{ and Prob}(F\text{-stat}), DW \text{ stat} = 2.055780$

Table 2 above, depicts the estimation results of the ARDL short-run test in which the coefficients of the economic variables considered in the research were tested. From the estimation, the results indicated that real oil exports (LROX) and real private domestic investments (LRPDI) have significant and positive contributions to LRGDP in the short-run. The results further showed that money supply (LRMS) and real non-oil exports (LRNOX) have insignificant and positive effects on real GDP. Similarly, the results revealed that real foreign remittances (LRFRMT) have a significant and negative contribution to real GDP in the short-run. In the same way, it is indicated that real foreign direct investment (LRFDI) positively and significantly influences real GDP in the short-run.

The evidence of these claims is demonstrated by the p-values and the coefficients of the variables estimated in the short-run coefficient test. By the results, the coefficients of LROX, LRNOX, LRFRMT, LRPDI, LRFDI and LRMS are 0.030492, 0.028477, -0.015186, 0.100380, 0.015707 and -0.210693 respectively and its associated p-values include 0.0205, 0.2968, 0.0379, 0.0361, 0.0473, and 0.0083 respectively. More so, the results indicate the ECT value of -0.167508 and p-value of 0.0207, which is less than 5% level of significance. The result implies that the short-run disequilibrium that can be corrected towards the long-run equilibrium relationship by the way of the speed of adjustment is 2.07% annually. The ECT is negative, fractional and significant as shown by the estimation results. Thus, the significance of the ECT satisfies all conditions while the negative sign satisfies the order condition required for the application of econometric techniques in any research.

Table 3: ARDL Long-run Coefficients Test
Long-Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LROX	0.022585	0.194146	0.116328	0.9090
LRNOX	0.170006	0.166721	1.019701	0.3252
LRFRMT	-0.107678	0.070881	-1.519139	0.1510
LRPDI	0.342713	0.476074	0.719873	0.4834
LRFDI	-0.066241	0.081660	-0.811179	0.4308
LRMS	-0.119551	0.617813	-0.193507	0.8493
C	10.451066	1.409282	7.415877	0.0000

Source: Researcher's compilation from E-view 9

Model: $LRGDP = 10.451066 + 0.022585LROX + 0.170006LRNOX - 0.107678LRFRMT +$
 $(0.194146) \quad (0.026280) \quad (0.070881)$
 $[0.116328] \quad [1.019701] \quad [-1.519139]$
 $0.342713LRPDI - 0.066241LRFDI - 0.119551LRMS$
 $(0.476074) \quad (0.081660) \quad (0.617813)$
 $[0.719873] \quad [-0.811179] \quad [-0.193507]$
 $R^2 = 0.999651; F\text{-stat} = 2226.623, \text{ and Prob}(F\text{-stat}), DW \text{ stat} = 2.055780$

Table 3 above, reveals the results of the ARDL long-run coefficients test of the series considered. The estimation results of the analysis indicated that export activities involving real non-oil (RNOX), real oil (LROX), and real private domestic investments (LRPDI) in the long-run have positive and insignificant contributions to real GDP in the country. More so, the estimation results revealed that real foreign remittances (LRFRTM), real foreign direct investment (LRFDI) and real money supply (LRMS) have an insignificant and negative influence on the real GDP in the long-run.

Evidence of these claims is indicated by the p-values and the coefficients of the variables under consideration. From table 3, the coefficients of the variables: LROX, LRNOX, LRFRTM, LRPDI, LRFDI and LRMS are 0.022585, 0.170006, -0.107678, 0.342713, -0.066241, and -0.119551, respectively whereas the associated p-values include 0.9090, 0.3252, 0.1510, 0.4834, 0.4308, and 0.8493, respectively.

Theoretically, these results are in accordance with the postulation of Keynesian growth theory, which opined that a rise in exports is one aspect of the factors causing improve in aggregate demand and thus, brings about rises in output growth of nations (Lin & Li, 2007). This assertion simply implies that exports have an increasing contribution to the growth of nations' economies. Furthermore, the results also met the postulation of the neoclassical growth theory, which argued that the output level produced in any economy depends on the growth of capital stocks, labour, and technological applications. All these factors according to the theory are very necessary for the production of export products that facilitates an increase in exports of countries and improved net export inflows that in turn, result in higher growth of a country's economy (Precious, 2015). The theory also revealed that a rise in investments facilitates the economic growth of nations. Thus, nations with more capital formation tend to grow faster as investment returns on each capital is higher than the nations with low capital.

Empirically, these results conform to the findings of Essosinam (2017), Hezekiah (2018), Onuorah (2018), Asagunla and Agbede (2018), Ezenekwe, Umeghalu, and Uzodigwe (2018), etc. The studies were undertaken to evaluate the impact of export earnings on the growth of the domestic economy across the globe including the economies of Togo, Vietnam, Syria, Iran, Libya, Nigeria, etc., and found that export earnings had a significant and positive contribution to GDP. However, the estimation results negate the results of Idowu (2016), etc who undertook research on the nexus between economic growth and export earnings in the USA, Nigeria, etc and discovered that export earnings have a negative influence on the growth of the economies.

Table 4: ARDL Bounds Test

Null hypothesis: There is no existence of a long-run relationship

Test Statistic	Value	K
F-statistic	6.545358	6
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

Source: Researcher's compilation from E-view 9

The bound test is employed to examine the presence of long-run equilibrium association of the variables under consideration. As a result, the test would reject the H_0 of no existence of equilibrium long-run association of the variables modeled in the research, if the F-statistic is greater than the 0.05 critical value of the upper bound. From the estimation results, the F-statistic value is 6.545358 while the upper bound of the critical value is 3.61. Since the F-statistic of 6.545358 exceeds the 3.61 upper bounds, the research rejects the H_0 that says no long-run equilibrium association existed between the variables and concludes that there is the existence of equilibrium long-run cointegrating equations between the variables modeled in the research.

4.2.2 Diagnostic Tests

The validity of the regression underlying the VECM model was undertaken to check for serial correlation and heteroscedasticity in the model. These diagnostic tests were utilized with the objective of

determining the stability of the parameters of the model as proposed by Pesaran and Pesaran (1997). The below table 5 revealed the results of the tests.

Table 5: Diagnostic Tests

S/N	Diagnostic test	Obs*R-squared	Prob. Chi-Square(2)	Remarks
1.	Serial Correlation LM Test	3.355134	0.1868	No evidence of serial correlation in the model
2.	Heteroskedasticity Test: ARCH	0.151936	0.6967	No evidence of heteroscedasticity in the model

Source: Researcher's compilation from E-view 9

Table 6: Non-Stability Test

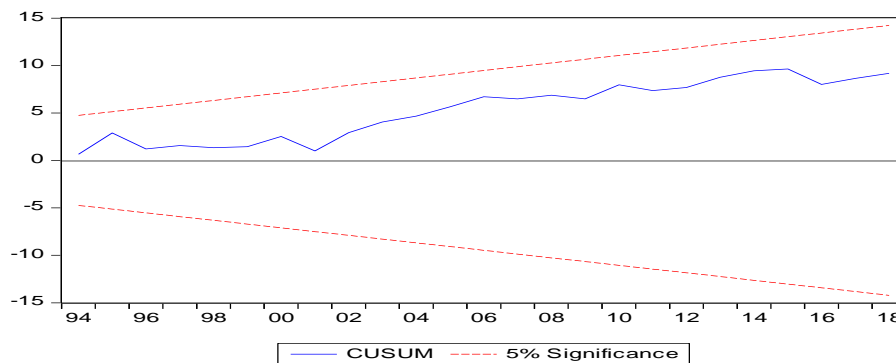
Ramsey RESET Test

	Value	Df	Probability
t-statistic	0.336953	13	0.7415
F-statistic	0.113537	(1, 13)	0.7415

Source: Researcher's compilation from E-view 9

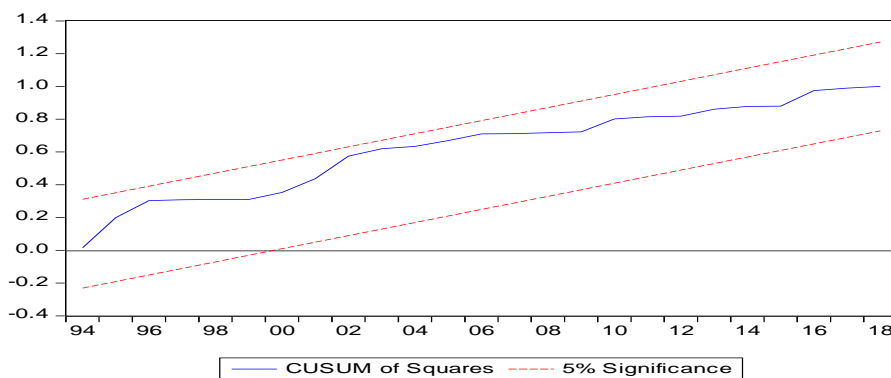
Table 6 of section four, demonstrates the test of stability in the regression specification model using the RESET test. The RESET represents the test for error specification in the regression model. From the results, the evidence obtained shows evidence of stability in the model. This claim is evidenced by the p-value of the t-statistic and F-statistic of the Ramsey RESET test. The results showed F-statistic and t-statistic of 0.113537 and 0.336953, respectively and the p-value of 0.7415, which further supported the earlier claim since 0.336953 of the p-value is statistically insignificant at 5% significance level. Since the p-value is greater than the level of significance, the study concludes that error specification does not exist in the model.

In order to validate the estimated results of the ARDL model, the study carried out a stability test using the cumulative sum of recursive of squares and the cumulative sum of recursive of residuals. Thus, the diagrams are indicated in figures 1 and 2 below.



Source: Compilation from E-view 9

Figure 2: CUSUM Stability Test



Source: Compilation from E-view 9

Figure 3: CUSUM of Square Stability Test

Recursive cumulative sum (CUSUM) of residuals and the CUSUM of square stability tests were employed to determine whether there is stability in the parameters and constancy in the random variables in the regression model. From figures 1 and 2, the results indicate the presence of stability in the parameters as the plots of the statistics of the CUSUM test and CUSUMSQ test fell within the critical bands at 5% level of significance.

4.4 Policy Implications of the Results

From the results, real oil export has a positive and significant contribution to real GDP in the short-run, and a positive and insignificant contribution to real GDP in the long-run. It is estimated that 1% increase in real oil export will lead real GDP to increase by 0.03% in the short-run, and 0.02% in the long-run. More so, non-oil export earning positive and insignificant influence on real GDP in both the short-run and long-run. Thus, the study, estimated that 1% rise in the non-oil export earnings will result in a 0/03% increase in real GDP in the short-run, and 0.2% rise in real GDP in the long-run in the country. The results also indicated that foreign remittances have a negative and significant effect on real GDP in the short-run, and a negative and insignificant effect on real GDP in the long-run. Hence, it implies that 1% rise in foreign remittances will raise real GDP by 0.0.02% in the short-run, and 0.11% increase in the long-run. It was also indicated in the results that real FDI in the short-run, has a positive and consequential effect on real GDP; and negative and insignificant effect on real GDP in the long-run. Thus, it is averagely estimated that 1% improve in real FDI in the short-run, will result in 0.02% increase in real GDP; but in the long-run, 1% rise in RFDI will decrease real GDP by 0.1%.

In the same vein, the results showed that real private domestic investments (LRPDI) in the short-run has a positive and significant influence on the real GDP (LRGDP) while in the long-run; LRPDI has an insignificant and positive effect on RGDP in the country. Thus, the research estimated that 1% increase in real private domestic savings in the short-run, will result in 0.1% improve in RGDP and in the long-run, real GDP will improve by 0.3%. In the same vein, the result indicated that real money supply (LRMS) in the short-run, has an insignificant and positive effect on real GDP, while real money supply affects real GDP in the long-run insignificantly and negatively in Nigeria. Thus, it is averagely estimated that a 1% improve in real money supply, will lead to a 0.1% rise in real GDP in the short-run; and a 0.12% fall in real GDP in the long-run.

6.3 Conclusion and Recommendations

The research examined the influence of the foreign earnings on economic growth in Nigeria from 1981 to 2018. Auto-Regressive Distributed Lag (ARDL) model was employed in the analysis. Unit root test conducted revealed that all the variables including LGDP, LROX, LRNOX, LRFRMT, LRPDI, and RMS except RFDI were non-stationary in levels; but all the variables became stationary after first differencing at a 5% level of significance.

The estimation results also revealed that real oil exports (LROX) in the short-run has a positive and significant contribution to real GDP, and has a positive and insignificant influence on RGDP in the long-run. Similarly, the results revealed that real non-oil export (LRNOX) has an insignificant and positive influence on LRGDP in both the short and the long-runs. Furthermore, the results indicated that real foreign remittances (LRFRMT) has a negative and significant influence on real GDP in the short-run; while in the long-run, it has an insignificant and negative influence on the real GDP. The results also indicated that LRFDI in the short-run, has a significant and positive influence on LRGDP; and in the long-run, it indicated an insignificant and negative influence on the real GDP.

Furthermore, the results revealed that LRPDI in the short-run has a positive and significant effect on LRGDP; but in the long-run, it has an insignificant and positive effect on RGDP in the country. More so, it was discovered that LRMS in the short-run, has an insignificant and positive influence on LRGDP, while in the long-run, LMS affects real GDP insignificantly and negatively in Nigeria.

Thus, the research recommends that the government should not over-rely solely on oil export earnings in formulating and implementing long-term macroeconomic policies in the economy, but should make frantic efforts to diversify the nation's export base away from the oil sector. This can be possible by increasing budget expenditures on non-oil sectors with the objective of expanding the level of exports and generate more net export inflows required to bridge the gaps in foreign exchange and savings in the economy.

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