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International Trade and Economic Growth In Nigeria (1981-2015)

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ABSTRACT

This research work evaluates the impact of international trade on the Nigeria's economic growth between 1981 and 2015. International trade was captured by Export trade (EXPT), Import trade (IMPT), and trade openness (OPN) while the Nigeria's economy was captured with Gross Domestic Product (GDP) at current price. The study was guided by three specific objectives; to determine whether there is any significant long run relationship between international trade and economic growth in Nigeria, to evaluate the impact of export trade on Nigeria's economic growth; and to evaluate the impact of import trade on Nigeria's economic growth. The study first and foremost conducted a test of stationarity using Augmented Dickey-Fuller (ADF) technique and the result showed that all the variables are stationary after first difference. Johansen cointegration test was used to test for long run relationship between the specified model and the result showed one cointegrating vectors. Vector error correction mechanism was use was used to determine the speed of adjustment from short run to long run equilibrium, and the estimation shows asignificant speed of adjustment approximately 9 percent annually. The VECM result shows that both Export and import trades impacts positively and significantly on economic growth in Nigeria. The test of significance shows that all the exogenous variables including the intercept are statistically significant on GDP at 95% confidence level, justifying the statistical significance of the model at 95% confidence level that international trade is a reliable predictor of economic growth. Having observed from the study that export is a major catalyst for economic growth in Nigeria, the study recommended among others that government should pursue policies which are favourable to export producers as a way of ensuring that more goods and services are exported in order to promote international trade which is a veritable tool for economic growth.

Keywords: Economic growth, tradeopenness, Export, Import, relationship

INTRODUCTION

Trade is generally accepted as a major engine of economic growth of countries. This has been the experience of Nigeria since 1960s even though the composition of trade has changed over years. Economists have been long concerned with what causes different countries to grow at different rates and achieve different level of economic growth and

development. One of such factors is international trade. In the work of Edwards (1992)[1], International trade is referred to as buying and selling of goods and services between nationals of different countries, or trade agencies of the government of different countries. With the world having evolved into a global village, it is a precept for a nation to be in alliance with other nation(s). One of the coherent ways to create such an alliance between or among nations is via international trade. International trade allows for the exchange of goods and services cum foster healthy relations among countries irrespective of their level of economic development (Imran Ali and Muhammad, 2010)[2]. A country involved in international trade need not have fear of hegemony or loss of its sovereignty because it is a mutual agreement to engage in trade across their border. A nation not participating in international trade is at risk of a slow pace of economic development due to the cogent fact that a country cannot be fully endowed with all the resources essential to be utilized for sustainable economic development (Imran Ali and Muhammad, 2010)[2]. International trade can be interchangeably referred to as 'foreign trade' or 'global trade' or 'external trade'. It encompasses the inflow (import) and outflow (export) of goods and services in a country. A country's imports and exports represent a significant share of her gross domestic product (GDP); thus, international trade is correlated to economic growth. In an open economy, development of foreign trade greatly impacts GDP growth (Dollar and Kraay 2001)[3]. Countries would be limited to goods and services produced within their territories without international trade.

International trade is directly related to globalization because increase in trade activities across border is paramount to the globalization process. The globalized nature of an economy enhances its direct participation in the world market consequently leading to market expansion. According to Adam Smith, expansion of a country's market encourages productivity which inevitably leads to economic growth[4].

According to Adewuyi (2000)[5], international trade is the exchange of capital goods and services between countries and it consists of export and import trade. Export trade involves sale of goods and services to other countries while import trade consists of purchases from other countries. When goods are traded by ways of imports and exports, the transactions are regarded as visible trade. International trade in service is referred to as invisible trade. Thus, for example, if Nigerian exporters avail of British shipping services for transportation of goods, they have to pay for transport services. Hence, services used may be called invisible import by Nigeria. Sale of services would also be regarded as invisible exports. Likewise other services such as banking, warehousing, insurance and railway services are also required in external trade (Adewuyi, 2000)[5]. Several countries have achieved significant increase in their economy through an export-led strategy. Small economics in particular have little opportunity to attain productivity and efficiency gains to support growth without tapping into larger domestic markets through external trade. Nigeria's relatively large domestic market can support growth but alone cannot deliver sustainable growth at rates needed to make a visible influence on poverty reduction. Hence Nigeria has continued to depend on foreign markets as well (Edwards, 1993)[6]. Many economists widely agree that openness to foreign trade accelerates economic development. The more rapid growth may be a transition effect rather than a move or a change to different steady state growth rate. Clearly, the transition takes a couple of decades or more, so that it is reasonable to speak of trade openness accelerating growth rather than merely leading to a sudden adjustment in the real income[3].

Nigeria is basically an open economy with international transactions constituting a significant proportion of her aggregate output. The economic growth of Nigeria to large extent depends on her trade with other nations. Nigeria as a developing country has been

grappling with realities of developmental process not only politically and socially but also economically. In 1960s, agriculture was the main stay of the economy and the greatest foreign exchange earner, and Nigerian government was able to execute investment projects through domestic savings, earnings from exports of agricultural products and foreign aids (Ekpo and Egwaikhide 1994)[7]. But since the advent of oil as a major source of foreign exchange earning in Nigeria since 1974, the picture has been almost that of general stagnation in agricultural exports. This led to loss of Nigeria's position as an important producer and exporter of palm oil produce, groundnut, cocoa and rubber (Elenaya, (2013)[8]. Between the year 1960 and 1980, agricultural and agro-allied exports constituted an average of sixty percent of total export in Nigeria, which is now accounted for, by petroleum oil export, Elenaya, (2013)[8]. However the importance of international trade in the Nigerian economy has grown rapidly in recent time, especially since 2002. Economic openness measured as the ratio of export and imports to GDP has risen from just above 3 percent in 1991 to over 11 percent in 2008 due to the unrest in Nigeria's oil producing Niger Delta region which resulted in significant disruption in oil production and shortfalls in oil export from Nigeria.

Nigerian economy has grossly underperformed relative to its economic endowment and her peer nations. With about 37 solid minerals types and a population estimate of over 180 million people and one of the largest gas and oil reserves in the world, the economic performance of the country is rather weak when compared to the emerging Asian countries such as Thailand, Malaysia, China, India and Indonesia and even Brazil (Katricioğlu Kahyalar and Benar, (2007)[9]. These countries had by far lagged behind Nigeria or at par with Nigeria in terms of GDP per capital in 1970s, but later they were better able to transform their economies to emerge as major players on the global economic arena. In 1970, for instance, Nigeria had a GDP per capital of US\$233.35 and was ranked 88th in the world, when China was ranked 114th with a GDP per capital of US\$111.82 (Evans, 2007)[10]. Today, China occupied an enviable position even as the second largest economy after the United State of America, largely owing to her self-esteemed trade position (Engle and Grange, 1987)[11]. Apart from oil, Nigeria export mainly primary products and often rely almost exclusively on a limited number of commodities, such exports are characterized by lower prices than manufactured goods plus highly volatile markets. Thus, Nigeria is often on the wrong end of unbalanced trade environment that favours developed countries. Nigeria with the abundant human and natural resources is paradoxically being regarded as one of the poorest countries in the world (Frankel and Romer, 1999)[12]. In Nigeria, despite the implementation of trade liberalization measures and persistent signs of economic recovery (reduction in external debt and in final consumption), macroeconomic indicators still show poor performances of the economy generally as the economy is being characterized with infrastructure inadequacy, widespread corruption, public sector inefficiency and low degree of private sector participation in economic activities, poor living standing, high rate of unemployment and most currently skyrocketing rate of inflation. Most economic analysts have attributed the present economic woes bedeviling the country to excessive importation relative to exportation which has drastically reduced the value of the country's currency. These set of people argue that trade restrictions should be put in place as a means towards checking unnecessary import especially of items that could be produced in Nigeria so as to encourage Nigerian producers and consequently improve her terms of trade. However, while some maintains this position like Foster (2008)[13] who posits that international trade has not been of help in promoting economic growth of Nigeria because her economy still experience some element of economic instability and this trade has also changed the country into an import dependent economy; others like (Adesanya, 2014)[14] is of the view that trade results to steady improvement in human status by increasing the standard of living of people and preference, since no

country has grown or advanced without trade. It is upon this basis that this paper seeks to view international trade from the perspective of import and export so as to establish their relative effects on economic growth in Nigeria.

THEORETICAL LITERATURE

The neoclassical economist Adam Smith, who established the theory of Absolute Advantage, was the first to elucidate why unrestricted free trade is beneficial to a country. In the 1600 and 1700 centuries, mercantilists stressed that countries should simultaneously encourage exports and discourage imports. Although mercantilism is an old theory, it echoes in modern policies and trade policies of many nations (Iyoha and Adamu, 2015)[15]. Mercantilist earlier initiated the idea of external trade. The doctrine consists of many characteristics. Such as, it was highly nationalistic and regarded the welfare of the nation first in their order of importance. According to the theory, the most crucial way for a country to become wealthy and self-reliant is to exports its product than its imports. Some of the mercantilists are Thomas Hobbes and Jean Colbert. Mercantilism proposed tariff, quotas and other commercial policies to curb the importation of goods and services in order to protect a country's trade position (Omoke and Ugwuanyi 2010)[16]. And also for the favorable balance of payment to be achieved, the volume of export must exceed or be better than import. Mercantilism did not favour free trade. Mercantilism development theory also advocated colonialism. According to the leaders of those nations who were involved in mercantilism intervened comprehensively in the market; imposing tariffs on foreign commodities restrict import trade, and granting subsidies to enhance export prospects for domestic goods. Mercantilism appeared to represent the elevation of commercial interest to the level of national policies. Mercantilist countries practiced so called zero-sum game also known as conductive or distributive bargaining, which meant that world wealth was constrained and that countries only could improve their share at expense of their neighbors. Despite the criticism faced by the foundation of mercantilism, mercantilism is still alive today. New mercantilism now emphasized employment rather than holding some gold. They also posited that exports are beneficial as jobs are made available domestically (Iyoha and Adamu, 2015)[15]. Import is considered evil as jobs are taken away and transferred to the foreign employees. To the new mercantilist, trade is a zero-sum game activity which a country must loose for the other to gain. And that there is no acknowledgement that trade can provide benefits to all countries.

Entrepreneurs naturally compare the money cost of the same good in different locations to draw inferences about the direction of trade. Absolute cost advantage appears to imply that a country imports goods that are cheaper abroad and exports goods that are more expensive abroad. The reason is insidious because it makes sense in many contexts. Absolute advantage addresses the householder's question appropriately of which good should be purchased; the businessmen can appropriately take all other prices as given when contemplating his own actions, such as entering a new export market (Ajayi, 2013)[17]. In order to see the difference between absolute and comparative advantage clearly return to the Ricardian for example, if wages (measured in a common currency) were equal in the two countries prior to the opening of trade the home country would have a "competitive" or absolute advantage in both commodities. It could undersell naturally be worried that they could all be driven from the market. This universal bankruptcy could not be equilibrium, however, because the foreign employees have no income to pay for domestically produced goods. Imbalance between expenditure and income would also mirror the absence of exports to pay for imports. Market equilibrium would be reached through price change, lowering the foreign wage or raising the domestic wage until the foreign employees could be employed in the industry in which the foreign economy has the comparative advantage (Greanaway *et al.*, 2002)[18]. Unless the two nations were pegged,

the exchange rate of the foreign economy could depreciate and create the same effect (Gujarati, 2004)[19]. More general models of production lead to the same conclusion: equilibrium costs will adjust to confer absolute advantage in the good in which each country has a comparative advantage. The absolute advantage is fatigue in the mathematical sense in the case where both countries continue to produce the good.

Ricardo in (1817) introduced this basic principle of comparative advantage. It remains a major influence in foreign trade policy and is therefore important in understanding the modern global economy. The principle of comparative advantage states that a country should specialize in producing and exporting those goods in which has a comparative or relative cost advantage compared with other countries and it should import those goods in which it has a comparative disadvantage (Ajayi, 2013)[17]. Out of such advantage, it is argued that it will accrue greater benefit for all. The theory also assumed the level of technology to be fixed for both nations. Different nationals may use different technology but all firms within each nation utilize a common production method for each commodity. It also assumed that trade is balanced and rolled out the flow of money between nations. The distribution of income within a nation is not affected by trade[17].

In the early 1900s, a foreign trade theory emerged by two Swedish economists Eli Hecksher and Bertil Ohlin. This theory is called the Hecksher-Ohlin theory. The theory stressed that countries should produce and export goods that require resources (factors) that are abundant and import goods that require resources in short supply (Iyoha, 2008)[15]. This theory is quite different from the comparative advantage and absolute advantage since these theories focus in the productivity of the production process for a particular good. On the contrary, the Hecksher Ohlin theory states that a nation should specialize in production and export using the factors that are most abundant, and this the cheapest. The model suggests that the less developed countries that are labor abundant should specialize in the production of primary product especially agricultural product because the labor requirement of agriculture is high except in the mechanized form of farming (Hassan, 2015)[20]. On the other hand, the less developed countries should import capital-intensive product mostly the manufactured goods from developed countries that are capital intensive.

EMPIRICAL LITERATURE

A particular feature of the world economy is that the growth rate in merchandise trade is exceeding world output by a considerable margin. Despite these seemingly positive growth aspects of foreign trade, the empirical evidence on the effect of trade on economic growth appears to be mixed. As indicated by Edwards (1993)[6] in lies of this literature, the ambiguous results are related to conceptual and empirical shortcomings. In this review of these issues, Hye (2011)[21] confirmed the empirical ambiguity but emphasized that the gains from international trade, or openness, would probably be most favourable to countries already specialized in manufacturing export goods. From this exposition, it would appear that the most favourable gains from trade would come from international trade.

Harrison (1996)[22] examined the relationship between openness to international trade and economic growth in developing countries using cross section and panel data for the period from 1960 to 1987. The empirical estimation is based on an augmented production function. The result suggested that the choice of time period for analysis is critical, that is, more evidence of the positive influence of openness to foreign trade on economic growth is found when a longer time series data is used. This may suggest the significant importance of analyzing the short-run and long-run impact of openness to international trade.

Generally, the results were quite robust. Openness to foreign trade positively affects economic growth. The results of Granger-causality suggested that the causality between openness to external trade and economic growth runs in both directions, that is, more openness to external trade precedes a higher economic growth and higher economic growth leads to more openness to foreign trade.

Eleanya (2013)[8] studies openness and economic growth in Nigeria using ordinary least square (OLS) techniques and data from 1970-2008. The results shown that, a unit increase in the degree of openness holding other variables constant, lead to about 5% increase in GDP, one percent (1%) increase in investment holding other variables constant, led to about 18% increase in GDP. 1% increase in GDP and 1% crease in previous GDP given other variables lead to about 100% increase in the current GDP. It also shown that adjust R^2 of 0.99. The cointegration test shows that there exists long-run equilibrium between economic growth, trade openness, investment and government expenditure in Nigeria. The study reveals that openness impacts significantly on economic growth in Nigeria.

Adesanya (2014)[14] examined the impact of trade on economic growth in Nigeria using data from 1980 to 2010. Adopting Ordinary Least Square (OLS) technique, the study showed that trade, foreign direct investment, government expenditure and exchange rate have a significant positive impact on economic growth.

Emeka, Frederick and Peter (2014)[4] evaluated the role of trade on Nigeria's economy for the period 1970 to 2008. By applying a combination of bi-variate and multivariate models, the relationships between the selected macroeconomic variables was estimated. \The findings indicated that exports and foreign direct investment inflows have positive and significant impact on economic growth. The study suggested that there should be congruence of exports and fiscal policies, towards a greater diversification of non-oil exports by the Nigerian government in order to attain the desired growth prospects of external trade.

Katricigbu, Kahyalar and Benar (2007)[9] in their study of the impact of trade liberalisation on export growth for a sample of 22 developing economies for the period from 1972 to 1998 used a typical export growth function, which postulates that export volume depends upon real exchange rate and world income. Trade openness is measured in two ways; Firstly, as a ratio of export duties to total export which measures the degree of anti-export bias and secondly, as a dummy variable of the introduction of trade liberalization measures. The results of Ordinary Least Square (OLS) estimate showed export duty significant either negative sign or the dummy variable is also significant with a positive sign. Therefore, it was concluded that exports grow faster in open economies.

Pazim (2009)[23] evaluated the influence of openness to external trade and financial development on economic growth in Malaysia. The empirical model in the study is based on an augmented production, where the real GDP per capita is specified as a function of the employment, the capital, a measure of openness to foreign trade and financial development. The study found that on the whole all the variables are found to have a unit root. Moreover, the results of the Johansen (1988)[24] multivariate cointegration procedure show that economic growth, the employment, the capital, a measure of openness to external trade and financial development are cointegrated. All the variables are found to have the expected signs, except the measure of financial development. The Error correction models estimates show openness to international trade and financial development to have a significant impact on economic growth. Generally, the results imply that openness to external trade and financial development are important for economic growth in Malaysia.

However, there is strong evidence that openness to external trade Granger causes economic growth and not vice versa. However, Granger causality between financial development and economic growth was found to be less robust depending on the measure of financial development.

Greenaway, Morgan and Wright (2002)[18] estimated the long and short-run effects of trade liberalization using panel data approach and reported that there is J curve relationship between trade liberalization and economic growth, that is, trade increases economic growth at certain levels of trade liberalization and then declines.

Jin (2003)[25] used data of North Korean economy to realize the effect of trade liberalization on economic growth. The results indicate that trade openness increases domestic productivity which leads to the improvement in living standards of the nation by increasing per capita income. This implies that an increase in trade openness leads to economic growth of the nation.

Rahmaddi and Ichihashi (2011)[26] investigated the relationship between exports and economic growth in Indonesia during the period 1971-2008 using a VAR model. Based on the analysis conducted in a VECM framework, the authors found that exports and economic growth exhibit bi-directional causal structure, and concluded that both exports and economic growth are significant to the economy of Indonesia.

Harrison (1994)[27] examined the relationship between foreign trade and economic growth in India, using annual data over the period 1972 - 2011. The cointegration and Granger causality tests confirmed that economic growth and foreign trade are cointegrated, implying the existence of a long-run equilibrium relationship between the two, and the presence of bi-directional causality which runs from economic growth to foreign trade and vice versa.

Obiora (2009)[28] analyzed empirically the causality relationship between trade liberalization and economic growth in Bangladesh by employing co-integration and Granger causality techniques of time series economics for the period of 1975-2010. The empirical results shown that, there exist short-run and long-run co-integration and causality relationship among variables in the growth model. It is also found that causality runs from economic growth to trade liberalization.

Ogbokor (2001)[29] investigated the macroeconomic impact of oil exports on the economy of Nigeria. Utilizing the popular ordinary least square technique (OLS) He observed that economic growth reacted in a used in the study. He also found that 10% increase growth. He concluded that export-oriented strategies should be given more practical supports. Oviemuno (2007)[30], looks at international trade as an engine of growth in developing countries taking Nigeria (1960-2003) as a case study, he uses four important variables which are: export, import, inflation and exchange rate. The results show that Nigeria exports value does not act as an engine of economic growth in Nigeria.

Obiora (2009)[28] used VAR models to examine the magnitude and sources of growth spillovers in Nigeria from key trading partners, as well as from the country's exchange rate. The results debunked the decoupling theory, and confirmed the existence of significant cross-country spillovers from the US and other major trading partners to Nigeria.

Omoke and Ugwuanyi (2010)[16] used Granger causality and cointegration tests to investigate the relationship between export, domestic demand and economic growth in Nigeria. The results from Trace and Maximum Eigen Value test conducted showed that the

variables do not have long-run relationship, but the Pair-wise Granger Causality test showed that economic growth Granger causes both export and domestic demand, while a bilateral causality exists between export and domestic demand.

Peter and Oliver (2006)[31] investigated the impact of trade and diversification on growth in Nigeria. Their result shown that in 2004, the share in GDP of imports plus exports of goods and services amounted to 86% in Nigeria. They found that Nigeria has enjoyed a sizeable current account surplus in recent years, which according to Gross Domestic Product (GDP) in 2004. They concluded that the impact of trade policy on productivity and investment is critical and greater openness is generally associated with higher productivity, larger investment and stronger growth.

Imram, Ali and Muhammad (2010)[2] assessed the impact of trade liberalization on Bangladesh economy between the periods 1980 to 2010. The research analyzes the achievements of the economy in terms of important variables such as growth, inflation, export and import after trade liberalization. The study employs simple ordinary least square (OLS) technique as a methodology for empirical analysis. The results clearly indicated that Gross Domestic product (GDP) growth increased consequent to liberalization. Trade liberalization does not seem to have affected inflation in the economy. The result also suggests that greater openness has had a favourable effect on economic development. Both real export and import have increased with greater openness. Liberalization policy certainly improves export of the country which eventually leads to higher economic growth after 1990's

Hye (2011)[21] empirically examine the impact of foreign trade on economic growth in Nigeria from 1970 to 2010 using ordinary least square (OLS) technique. Empirical investigations reveal that three variables are statistically significant at 5 percent level of significance and these variables are export, foreign direct investment and exchange rate and they are positively related to real Gross Domestic Product (GDP) while other variables such as import, inflation rate, openness exert a negative influence on real GDP. The study demonstrates that increase participation in global trade helps Nigeria to reap static and dynamic benefit of external trade despite non conformity of the coefficient of the openness. Both international trade and trade structure towards high technology export result in positively effect on Nigeria economy.

Evans (2007)[10] investigated the impact of trade openness on economic performance of economic Community of West African States (ECOWAS) members focusing on Ghana and Nigeria for the period 1975-2004. Data were analyzed employing ADF/PP stationary, cointegration and vector error correction technique. A unique long-run relationship between economic performance, trade openness, real government expenditure, labour force and real capital about 88.9% and 83.1 of errors made in the previous periods were found to be corrected in the current period for the respective countries. In addition, trade openness and real government expenditure impact positively on the economies of Ghana and Nigeria. However, the effects were higher in the former than the later.

Ohlin, Bertil (1933)[31] analyzed the effects of growth of openness and investment on the growth of Gross Domestic Product (GDP) for 15 Asian countries during 1950 to 1992. They developed a model which specified Gross Domestic Product (GDP) a function of growth rates of openness (export plus import), Domestic investment and population. The Auto Regressive model Iran, Iraq, Israel, Myanmar, Parkistan and Singapore, the coefficient of the growth of openness is positive and significantly different from zero. For china, Hong-kong, Indonesia, Israel, Japan, Jordan, Philippines, Singapore and South Korea, the

coefficient of the growth of domestic investment is positive and significantly different from zero, in some cases, the coefficient of the growth of population is negative but in all such cases, it is significantly different from zero. Thus, they find support for the proposition that the growth rate of Gross Domestic Product (GDP) is positively related to the growth rate of openness and domestic investment. However, the relationship between the growth rate of Gross Domestic (GDP) and the growth rate of population is not that clear cut.

Frankel and Romar (1999)[12] investigated the relationship between growth and international trade while explicitly eliminating problems of causality and measurement errors. They applied geographic features of the sample countries to explain trade and this featured as an instrumental variable in determining the effect of trade on income, or economic growth. They concluded that trade had a positive effect on income or growth by stimulating investment in physical and human capital. Moreover, trade appears to increase output forgiven levels of capital.

In summary, of the empirically reviewed works, there are some weaknesses which were observed and which this study intends to fill. For instance, some of the researchers used the methodology of ordinary least square (OLS) to estimate the parameters of economic relationship existing among the variables specified instead of ECM or VECM, given that the variables were not stationary at level. Hence they failed to include speed of adjustment. On the choice of time scope, some of the studies made use of short time span which may not give room for adequate degree of freedom. As an improvement in knowledge and in the bid towards filling some of the observed gaps in the studies done by other researcher, this study first and foremost conducted unit root tests to determine the stationarity status of the variables employed, cointegration test for long run equilibrium relationship while vector error correction mechanism (VECM) was used to estimate the parameters of economic relationship. Finally, the scope of the study will be between 1981 and 2015 so as to give enough room for adequate degree of freedom.

RESEARCH METHODOLOGY

The methodology of this study is ordinary least square (OLS) technique, which was used to estimate and analyze the influence of the explanatory variables; export (EXPP), import (IMPT) and trade openness (OPN) on Gross Domestic Product (GDP) at current price (dependent variable). For this study, ex post facto research design is adopted. This is because the study attempts to explore cause and affect relationships where causes already exist and cannot be manipulated. Ex-post facto research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulated. Inferences about relations among variables are made, without direct intervention, from commitment variables of independent and dependent variables. This research work embraces the use of secondary time series data in examining the impact of international trade on economic growth in Nigeria.

In determining empirically the impact of international trade on economic growth of Nigeria, this study adopted the econometric model used by Robertson (1938)[33] who investigated the effect of international trade on the economic growth of Nigeria in the 21st century. The model specified economic growth measured by gross domestic product as dependent on international trade proxy by imports, exports, and trade openness. Hence, in capturing study, these variables were used as proxy. Thus, the model is represented in a functional form as shown below:

$$GDP = F(EXPT, IMPT, OPN)..... 1$$

Statistically, it is represented as follows,

$$GDP = b_0 + b_1 EXPT + b_2 IMPT + b_3 OPN + U_t \dots\dots\dots 2$$

Where

GDP = Gross Domestic Product; EXPT=Exports; IMPT=Imports; OPN=Trade openness

b_0 = Constant term, b_1 = Regression coefficient of EXPT; b_2 = Regression coefficient of IMPT; b_3 = Regression coefficient of EXR; U_t = Error Term

RESULTS AND DISCUSSIONS

Attempt to examine the impact of international trade on economic growth in Nigeria led the researcher to gather data on export (EXP), import (IMP) and trade openness (OPN) which are considered to have influential impact on the economic growth of Nigeria proxied by Gross Domestic Product (GDP). These variables are subjected same to series of econometric tests including unit root test using Augmented Dickey-Fuller (ADF) and Johansen cointegration while vector error correction mechanism was used to estimate the coefficients of the parameters specified in chapter three. The test results and their discussions are presented below.

Unit Root Test: Augmented Dickey-Fuller (ADF) unit root test was employed to determine the stationarity status of the variables considered. ADF relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favor of the alternative hypothesis of stationarity by comparing the T-statistics usually referred to as Augmented Dickey-Fuller (ADF) tests statistics with the critical value at any chosen level of significance (1%, 5% or 10%). In a case where the ADF test statistics is greater than the critical value in absolute value (neglecting the negative signs) at 5 % level of significance, such a series will be said to be stationary if not it will be said to contain unit root which will require differencing. The summary result of the unit root test result is contained in table 1 and 2 below:

Table 1: Augmented Dickey Fuller Unit Root Test Trend and Intercept (Series at Level)

Series	ADF Test Statistic	5% critical values	Order	Remarks
LGDP	-1.941077	-3.548490	I(0)	Not Stationary
LEXPT	-0.980912	-3.548490	I(0)	Not Stationary
LIMPT	-1.756640	-3.548490	I(0)	Not Stationary
OPN	-1.377957	-3.548490	I(0)	

Sources: Researchers' compilation from E-view (version 9.0)

Table 2: Augmented Dickey Fuller Unit Root Test Trend and Intercept (Series at 1st Difference)

Series	ADF Test Statistic	5% critical values	Order	Remarks
LGDP	-5.283922	-3.552973	I(1)	Not Stationary
LEXPT	-6.226828	-3.552973	I(1)	Not Stationary
LIMPT	-6.663912	-3.552973	I(1)	Not Stationary
OPN	-7.691266	-3.552973	I(1)	

Sources: Researchers' compilation from E-view (version 9.0)

Table 1 and 2 above contain summary of the ADF test result conducted both at level and first difference respectively. The result of the unit root test in table 1 above reveals that

none of the variables (LGDP, LEXPT, LIMPT and OPN) was stationary at levels since their ADF test statistics were less than critical values in absolute value. Hence, all the variables contain unit root and we therefore accept the unit root null hypothesis of non stationarity and then proceed to employ first differentiation approach to establish the order of integration of the variables. The result of the first differenced variables is contained in the table 2. As can be observed from table 2, all the variables became stationary after first difference since the absolute value of their ADF Statistics were greater than their critical values at 5 Percent level of significance. Hence we reject the null hypothesis of non stationarity at first difference and concluded that the variables of the model are stationary at first difference hence are integrated to order one.

Cointegration Test: Cointegration test was employed to test for presence of long run relationship between the variables considered. This is in following the foot path of Engel and Granger (1987) who postulates that individual series may be non-stationary but if a linear combination of the series produces an error which is stationary, then such model should not be regarded as spurious but instead the relationship existing among the non-stationary variables should be seen as cointegrated or long run relationship. For this purpose, the Johansen co integration test was adopted and the summary result is presented in table 3 and 4 below:

Table 3: Johansen cointegration test for the series; LGDP, LEXPT, LIMPT and OPN (Trace statistics test)

Hypothesized		Trace	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	
None *	0.659587	55.48781	55.24578	0.0476	
At most 1	0.306784	19.92716	35.01090	0.7114	
At most 2	0.200632	7.835520	18.39771	0.6997	
At most 3	0.013415	0.445688	3.841466	0.5044	

Sources: Researchers' compilation from E-view (version 9.0)

Table 4: Johansen cointegration test for the series; LGDP, LEXPT, LIMPT and OPN (Eigen value test)

Hypothesized		Max-Eigen	0.05		
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	
None *	0.659587	35.56065	30.81507	0.0122	
At most 1	0.306784	12.09164	24.25202	0.7569	
At most 2	0.200632	7.389832	17.14769	0.6702	
At most 3	0.013415	0.445688	3.841466	0.5044	

Sources: Researchers' compilation from E-view (version 9.0)

Using the Johansen's method, cointegration is said to exist if the values of computed trace statistics is greater than 5 % critical value at any number of the hypothesized equation (s) if the estimated maximum Eigen value is significantly greater than zero. Both trace statistics and maximum Eigen value from the co-integration result presented in table 3 and 4 above indicates the presence of one cointegrating equation. Hence there is a long-run stability relation between international trade and economic growth in Nigeria. In other words, the null hypothesis of no cointegration among the variables in equation is rejected. The test result shows the existence of a long-run equilibrium relationship in the equation at 5% significance level.

Vector error correction mechanism (ECM): Having differenced the variables used for this analysis before stationarity was induced; it implies that long run relationship has been lost. In order to capture the short run fluctuation and to estimate the parameters of economic relationship existing among the chosen variables, VECM is therefore meant to tie the short-run dynamics of the cointegrating equations to their long-run static dispositions. Below is the VECM result for the given data alongside the p-values of the cointegrating equation (ECM (-1)) estimated with the aid of the system equation.

Table 4: VECM Estimate

CointegratingEq:	CointEq1	
LGDP(-1)	1.000000	
LEXPT(-1)	1.512238	
	(0.21257)	
	[7.11411]	
LIMPT(-1)	0.546182	
	(0.21341)	
	[2.55930]	
OPN(-1)	3.312853	
	(0.42181)	
	[7.85396]	
C	-2.823678	
Error Correction:	D(LGDP)	p-value
CointEq1	-0.092129	0.7537
R-squared	0.125724	
Adj. R-squared	-0.231934	
F-statistic	0.351520	

Sources: Researchers' compilation from E-view (version 9.0)

Above is the VECM result computed from the data collected. From the result presented above, the coefficient of export (LEXPT) is 1.512238. This entails that a one percent increase in export will bring about a 1.51 percent increase in gross domestic product. However, with a standard error value of 0.21257 which is less than half of the coefficient of LEXPT, the coefficient of export is statistically significant. The coefficient of import (LIMPT) is 0.546182 which entails that a one percent increase in import will bring about an increase in GDP by 0.55 percent. Equally, it has a standard error value of 0.21341 showing that the coefficient is statistically significant as the standard error is smaller than half of the coefficient of LIMPT.. The coefficient of trade openness (OPN) stands at 3.312853. Hence, one percent increase in total value of export and import as a ratio of GDP will bring about increase in GDP by 3.3 percent units. Judging from the value of its standard error, the estimated coefficient is statistically significant. Furthermore, the estimated coefficient of ECM (-1) equals -0.092129. The coefficient reveals that the speed of adjustment between the short-run and long-run realities of the cointegrating equations is 9 percent. This entails that the model corrects its previous period disequilibrium at the speed of 9 percent annually. However, its p-value of 0.7537 shows that the ECM (-1) coefficient is not statistically significant since it is less than 0.05. The sign and significant status conflicts the granger representative theorem which holds that a negative and statistically significant error correction coefficient is a necessary condition for the variables to be cointegrated.

DIAGNOSTIC TESTS

The validity of the estimated vector error correction result was tested against serial correlation using Breusch-Godfrey test and the result is presented below.

VEC Residual Serial Correlation LM Tests

Lags	LM-Stat	Prob
1	9.446276	0.8939

From the LM test above, the LM statistics is approximately 9.446276 and its P-value is 0.8939 while the level of significance 5%. Since The P-value is greater than 0.05 and in accordance with Breuch-Goddfrey test, we accept the null hypothesis of no autocorrelation and conclude that the error terms are not serially correlated.

CONCLUSION AND POLICY IMPLICATIONS

This research work evaluates the impact of international trade on the Nigeria's economic growth between 1981 and 2015. International trade was captured by Export trade (EXPT), Import trade (IMPT), and trade openness (OPN) while the Nigeria's economy was captured with Gross Domestic Product (GDP) at current price. The study was guided by three specific objectives; to determine whether there is any significant long run relationship between international trade and economic growth in Nigeria, to evaluate the impact of export trade on Nigeria's economic growth; and to evaluate the impact of import trade on Nigeria's economic growth. The study first and foremost conducted a test of stationarity using Augmented Dickey-Fuller (ADF) technique and the result showed that all the variables are stationary after first difference. Johansen cointegration test was used to test for long run relationship between the specified model and the result showed one cointegrating vectors. Vector error correction mechanism was used to determine the speed of adjustment from short run to long run equilibrium, and the estimation shows a significant speed of adjustment approximately 9 percent annually. The VECM result shows that both Export and import trades impacts positively and significantly on economic growth in Nigeria. While the coefficient estimate of export is in line with a priori expectations, the estimated coefficient of import does not conform to a priori expectation. It was expected that import should have a negative relationship with GDP since it involves outflow of fund from the country inform of foreign currency but the empirical analysis proved otherwise. The implication of the sign borne by export is that the government should consider exporting more goods and services in order to promote international trade which is a veritable tool for economic growth. Equally, the implication of the positive coefficient obtained for import against a priori expectation is that the country is still highly underdeveloped in terms of economic activities and usually requires importation of most of the materials required both for direct consumption and for consumptions by industries from other developed countries. Hence, the country still relies on other countries economically. The test of significance shows that all the exogenous variables including the intercept are statistically significant on GDP at 95% confidence level, justifying the statistical significance of the model at 95% confidence level and that international trade measured with imports, exports and trade openness is a reliable predictor of economic growth. The overall implication is that international trade is a catalyst for economic growth in the Nigeria.

Having observed from the study that export is a major catalyst for economic growth in Nigeria, government should pursue policies which are favourable to export producers as a way of ensuring that more goods and services are exported in order to promote international trade which is a veritable tool for economic growth. Equally, in order to reap the benefits inherent in open economy as was observed from the positive relationship between trade openness and GDP, Nigeria should adopt more policies on trade liberalization like reducing non-tariff barriers, reducing tariffs, reducing or eliminating

quotas that will enable the economy to grow at spectacular rates. Finally, the government should encourage export diversification i.e. Non-oil sector exports should be encouraged and concentration on oil sector export should be minimal.

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