

International Trade and Economic Growth in Nigeria

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ABSTRACT: *This study evaluated the impact of international trade on economic growth in Nigeria from 1986 to 2021. The variables used in this study comprised of gross domestic product as a dependent variable, while oil exports, non-oil exports, oil imports, non-oil imports and exchange rate are the explanatory variables. The employed variables have different order of integration ranging from zero and one, which led to the application of auto-regressive distributed lag (ARDL) model as the method of analysis. The ARDL model investigated long-run and short-run interactions among the variables. The results showed evidence of co-integrating equations amongst the variables. Hence, the key findings that satisfied the research objectives are (i) oil exports have significant positive impact on economic growth in Nigeria in both short-run and long-run. (ii) Non-oil exports exerted positive and significant influence on economic growth in Nigeria in both short-run and long-run. (iii). Oil imports negatively and significantly affected the growth rate of the Nigeria's economy and (iv) non-oil imports affect the economic growth in Nigeria negatively and insignificantly in both the short-run long-run. The results imply that ₦1 rise in oil exports increases economic growth by ₦0.089 in the short-run and by ₦0.376 in the long-run; whereas ₦1 rise in non-oil exports increases economic growth by ₦0.047 in the short-run and ₦0.199 increase in the long-run. However, ₦1 rise in oil imports, decreases economic growth by ₦0.019 in the short-run and ₦0.092 decrease in the long-run; whereas ₦1 rise in non-oil imports, decreases economic growth by ₦0.022 in the short-run and ₦0.92 decrease in the long-run. Based on the findings, the study recommended that Nigerian government should make judicious use of proceeds from export of crude oil to diversify other productive sectors of the economy. Again, the activities of non-oil sectors like agriculture, industry, etc, should be stimulated to enhance non-oil exports in Nigeria.*

KEYWORDS: international trade, economic growth, imports, exports, Nigeria.

INTRODUCTION

Predominantly in our world today, there is hardly a country that can survive on its own without engaging in trade relationships with other countries (Attahir & Kamal, 2015). This suggests that the role of international trade in promoting growth and development of a nation cannot be over-

Publication of the European Centre for Research Training and Development -UK emphasized as it provides impetus for industrial development by making inputs available for domestic investment (Maria, 2020). In fact, international trade is called an engine of growth, because it leads to the increase of foreign exchange revenues, makes a wide variety of goods accessible in the global market, expands the technology transfer among nations and also improves the well-being of the masses with greater employment opportunities (Attahir *et al.* 2015). This simply implies that the relevance of international trade on a country's economy is not only limited to the quantitative gains, but also, structural change in the economy by facilitating the international capital inflow through foreign earnings (Elias, Agu & Eze, 2018). In other words, international trade enhances the efficient production of goods and services through allocation of resources to countries that have comparative advantage in their production.

Conceptually, international trade is a trade across national boundaries. It refers to all commercial transactions in goods and services between or among nations of the world (Attahir *et al.*,2015; BigBen, 2016). Hence, this international trade also known as foreign trade or global trade is described as an exchange of goods and services between the residents of a given country and those of the rest of the world (Babatunde, Jonathan & Muhyideen, 2017; Maria, 2020; Odey, Oko & Onwuneme, 2022). It involves the flow of capital or services produced outside national borders. International trade could be bilateral (trade between only two countries) or multilateral (trade between many countries). Therefore, when these transactions are made with foreign countries, it becomes foreign trade. International trade occurs in the form of inflow (import) and outflow (export) of goods and services in a country and a country's imports and exports represent a significant share of her gross domestic product (Maria, 2020). In a nutshell, international trade is simply the interchange of capital, merchandises and services across international borders or areas (Diptibala, 2022).

Statement of the Problem

Squarely from the theoretical perspective, there is a direct relationship between international trade and economic growth of a nation. It is so because, by engagement in international trade, a closed economy is transformed into an open economy through increase in foreign exchange earnings, since it becomes possible for a variety of goods to be accessible in the global market; thereby expanding the technology transfer among nations and then improves the well-being of the masses with greater employment opportunities (Babatunde, Jonathan & Muhyideen, 2017; Maria, 2020; (Diptibala, 2022; Odey, Onwuneme & Ebiefie, 2022).

In Nigeria, international trade consists of exports and imports. The exports of the country include both oil and non-oil exports while the import comprises consumables and industrial goods. Exportation of oil and non-oil is a vital commodity for growth and development of an economy. This is because, it is a major source of income and input factor for many countries. This is due to its ability in the supply of foreign exchange, job chances, and intra-industry trade. According to Mercantilists trade theory, nations would become more rich and powerful by exporting more goods

than they import. In this case, a higher export is an important factor that promotes economic growth by generating foreign exchange utilized to provide infrastructure and create a favourable balance of payment (Elias *et al.*, 2018; Lawal & Ezeuchenne, 2017).

Consequently, considering neoclassical growth theory which assumed that the level of output in an economy is a function of factor inputs, we observed the existence of contradiction among the expected variables using trending analysis in Nigeria. In other words, exports and imports of both oil and non-oil are increasing without a corresponding increase in gross domestic product in Nigeria. For instance, between 1986 to 1990, oil exports, non-oil exports, oil imports, non-oil imports and GDP increased from 4.2 percent to 22percent, 0.5percent to 3.2percent, 0.9 percent to 6.7percent and 0.5percent to 3.9 percent and 2.5percent to 8.9 percent respectively. Again, between 1996 to 2000, oil exports, non-oil exports, oil imports and non-oil imports equally increased from 16.7percent to 19.2percent, 2.3percent to 2.4percent, 16.2percent to 22percent and 4percent to 7.6percent respectively. Within these periods, GDP only increased from 1.6 percent to 2.4 percent respectively. Similar event was observed between 2006 to 2010 when oil exports, non-oil exports, oil imports and non-oil imports increased from 7.1percent to 11.3percent, 13.3percent to 17.9percent, 7.1percent to 17.5percent and 2.3percent to 5.8percent respectively; while that of GDP increased from 3.3percent to 5.1percent. Again, between 2016 to 2020, oil exports increased from 8.1percent to 75.4percent and to 76.2percent in 2021. Non-oil exports increased from 6.5percent to 15.5percent and to 2.46percent in the same periods respectively. Oil imports equally increased from 2.3percent to 2.7percent and to 6.1percent in the same periods respectively. Non-oil imports increased from 6.4percent to 17.8percent and decreased to 15.2percent in the same periods respectively. On the other hand, GDP decreased from 4.1percent in 2016 to 1.8percent in 2020 and increased to 3.7percent 2021 (CBN, 2022). This suggests that international trade of Nigeria appears to have deviated from economic postulation, which opined that increase in exports and decrease in imports brings about improvement in economic activities by stimulating investment.

The economic implication of this is the country's periodic low rate of capital investments, unemployment and inflation; and these factors are highly conjectured as factors responsible for mitigating growth and development of a nation. That is why over the observed years, unemployment, inflation and exchange rates have been on increase. For instance, unemployment rate was 9.10 percent in 1980, but increased to 14.0 percent in 1985 and declined to 10.2 percent in 1990. At 11.9 percent in 1995, unemployment rate increased to 18.1 percent in 1999 but fell to 14.80 percent in 2002. It was 19.7 percent in 2008, 25.7 percent in 2012, 20.4 percent in 2017, and rose to 25.6 percent in 2020 (NBS, 2021). Under a regime of freely fluctuating exchange rates, if there is an excess supply of a currency, the value of that currency in foreign exchange market will fall. This will lead to depreciation of the exchange rate. For example, like we had in Nigeria a few years back; the exchange rate of Nigeria's Naira to the US Dollar was N158 to \$1 (precisely, as at December 2012) but moved to N168 to \$1 by December 2013 in the open market. It averages N227.78 between 2014 and 2017, and N342.94 between 2018 and 2021, respectively. at the rate

Publication of the European Centre for Research Training and Development -UK of N365 to \$1. This is as a result of high demand for dollar and excess supply of naira. Inflation rates have equally risen phenomenally from 5.72 percent in 1985 to 72.84 percent in 1990. It plummeted to 6.93 percent in 2000 but rose again to 13.72 percent in 2010. Inflation rate was 13.25 percent in 2020 and 16.95 percent in 2021 (CBN, 2022). The growth rate of GDP increased from -1.9 percent to 2.4 percent respectively. It further increased from -0.03 percent to 0.458 percent (CBN, 2020). Hence, having observed these growth rate inconsistencies, the need to empirically examine the impact of international trade on economic growth in Nigeria is felt. The facts above suggest that international trade of Nigeria appears to have deviated from economic postulation, which opined that increase in exports and decrease in imports brings about improvement in economic activities by stimulating investment, aggregate demand, employment, output growth, balance of payments and economic growth. But in Nigeria, the facts show the reverse case, resulting to highly imports dependent of the economy alongside high inflation level, persistent depreciation in exchange rate, low rates of investment, productivity, high rates of unemployment, poverty level, criminalities, balance of trade imbalance and low economic growth and standard of living of the people. It is against this backdrop that this study investigates the impact of international trade on economic growth of Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Review

International trade is also known as foreign trade or global trade. It is seen as a trade across national boundaries. Hence, it refers to all commercial transactions in goods and services between or among nations of the world (Attahir *et al.*, 2015; BigBen, 2016). In other words, international trade is defined as an exchange of goods and services between the residents of a given country and those of the rest of the world. It can equally be described as the exchange of goods and services across nations' borders. It involves the flow of capital or services produced outside national borders. The sale and purchase transactions, which enable the distribution of goods and services produced to consumers, represent trade. Therefore, when these transactions are made with foreign countries, it becomes foreign trade.

International trade occurs in the form of export and import in terms of delivery of sale and purchase transactions. Export is very crucial for growth and development of a national economy. Kanu and Nwadiubu (2020) conceived international trade as the trade of capital goods and services between countries or trade across territories or international borders. For Esezobor (2009), international trade is the trading between sovereign nations. More so, Encyclopedia Britannica postulated that international trade involves the sale and purchase of raw materials, securities, capital or consumer goods and services, or gold across country's borders. Similarly, Encyclopedia Americana described international trade as commercial trades between citizens of different sovereign political units. Clearly, it becomes distinct from domestic trade only as countries emerge and start to formulate national commercial policies, and then it becomes foreign trade.

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In this study, international trade is captured using both oil exports and imports as well as non-oil exports and imports. Oil exports are one of the components of international trade, which involve trading of a country with other countries using oil products. Therefore, oil exports are goods and services sold to other countries of the world other than one's domestic economy. Non-oil imports are economic activities, which occur outside the economic activities involving the petroleum and gas industry. It houses several sectors of the economy including agriculture, health, real estate, manufacturing, tourism, services, telecommunication, and finance sectors. The non-oil sector, dominated by the products of agriculture including groundnut, cocoa, rubber, beans, cotton, coffee, palm oil, palm kernel, hides and skin, and cattle are the major export products in the non-oil export sectors. Oil imports are goods and services purchased from other countries of the world other than the national economy. In national accounts, oil imports consist of trade in goods and services from non-nationals of other countries to nationals of a country. Similarly, in the non-oil producing countries or non-oil refined nations, oil imports are the major source of petroleum and gas products in their economies. The oil products imports include petroleum, diesel, Liquefied Petroleum Gases, and kerosene. Non-oil imports are economic activities involving the purchase of petroleum and gas products from other countries of the world. Non-oil import products purchased from other countries include products from such sectors as agriculture, health, real estate, manufacturing, tourism, services, telecommunication, and finance sectors. The non-oil imports involving agriculture include groundnut, cocoa, rubber, beans, cotton, coffee, palm oil, palm kernel, among others.

Economic growth on the other hand, is explained as a rise in the capacity of an economy to produce more volume of goods or per capita income in the domestic economy over a period of time. It is accurately measured by deflating or removing the inflation effects. It is the best way of measuring the growth and development of an economy. GDP takes into account the nation's entire economic output. The calculation of GDP involves the aggregate goods produced by the private sector of the economy for sale. It measures all the monetary value of all finished products including the products produced by the nationals and non-nationals who are residing in the country. However, it subtracts the income earned by the residents on the property owned abroad. In most countries, economic growth is measured in every quarter of the year.

Theoretical Review

This study is anchored on the export-led growth hypothesis, which is traceable to David Ricardo's and Smith's classical theories of trade (Ram, 1987). In this view, among modern economists, Beckerman in his postulation in 1965 opined that favourable exports contribute to gains resulting from efficiency production that stem from improved allocation of resources. Haberlar (1959) in his own argument conceived the importance of dynamic benefits, which include an increase in foreign capital availability and technology by loosening constraints to balance of payments in the economy. Vernon (1966) on the other hand, dealt with the opposite causality direction for which he postulated that self-induced growth in any economy brings about increase in competitiveness and hence, expansion in the exports of the nations. In a follow-up, endogenous theories of growth analyses gain that stem from export activities, using a model that is dominated by managerial,

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increasing returns to scale and effects of technological spill-over towards across all sectors of the economy (Fedor 1982). Similarly, Helpman and Krugman (1985) opined that the initial growth accelerates in expansion in the level of exports through allocation and efficiency effects; fosters export growth, stimulates international competitiveness, and development processes in the economy.

Empirical Review

Suriaganth and Mohamed (2021) examined the impact of foreign trade on economic growth of India. Using OLS method, they found that export and import have the significant positive impact on GDP while economic openness has a negative impact on GDP in India. The results confirm the importance of foreign trade on expansion and growth of Indian economy. Although economic openness is negatively related with GDP, the overall impact of trade on economic growth represented by export is positive and highly significant Their study also indicates that post liberalization era has certainly helped India in achieving high growth in the economy as there has been a rapid growth of imports of capital goods and technical raw materials to meet the requirement of industrialization and growing imports of petroleum products for meeting industrial and consumption requirement. It is also found that though import has a negative influence on economic growth, the volume of trade reflected by economic openness has a positive impact on the economic growth of India and its magnitude is increasing continuously.

Olayungbo (2019) investigated the effects of oil export revenue on economic growth in Nigeria. The study adopted the Bayesian time-varying parameter (TVP) model on annual data from 1970 to 2015. The results showed that during the period of study, oil revenue export was found to be positively and significantly contributing to economic growth in the country. The study recommended that formulation, implementation and commitment to sound educational and trade policies should be adopted for inclusive growth in Nigeria.

Ebimobowei (2022) studied the relationship between oil revenue and economic growth in Nigeria, from 1990 to 2019. Using descriptive statistics, Pearson moment correlation coefficient and ordinary least squares multiple regression to test data sourced from the Central Bank of Nigeria (CBN) statistical bulletin, Federal Inland Revenue Service Fact Book and the World Bank, the study found that Petroleum profit tax has a positive and significant relationship with real GDP, while Crude oil/gas export has a negative and significant relationship with the real GDP. Also, Domestic crude oil sales and Oil licensing fees have a negative and insignificant relationship with real GDP in Nigeria. The study concluded that there exists a significant relationship between oil revenue and economic growth in Nigeria. It recommended that oil funds should be utilized effectively to reduce poverty and enhance economic growth.

Yusuf, Nchom, Osuji, and Udeorah (2020) researched on the impact of international trade on the growth of the Nigerian Economy, using dynamic ordinary least square (DOLS) multiple regression analysis technique. The variables utilized in the study include foreign direct investment inflow,

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net-export, exchange rate and gross domestic product. The results revealed that all the explanatory variables except exchange rate were positively linked to economic growth.

Similarly, Obisike, Onwuka, Okoli, and Udeze (2020) evaluated the impact of international trade on Nigeria's economic growth with evidence from oil terms of trade through the application of ordinary least square regression technique and granger causality test. The results indicated that in the short run, the oil commodity terms of trade and non-oil commodity terms of trade had positive impact on Nigeria's economic growth. The Granger causality test shows that oil commodity terms of trade and non-oil commodity terms of trade and GDP were independent of each other. Thus, the study concludes that international trade both oil and non-oil commodity terms of trade had a significant impact on economic growth in Nigeria.

Awujola, Samuel and Alumbu (2019) examined the impact of oil export on the Nigerian economy from 1970-2012 using unit root test, co-integration test, vector error correction, and impulse response function. Variables used were real GDP, domestic consumption of crude oil, crude oil export, and total production of crude oil. The results indicated that domestic consumption crude oil, crude oil export and production of crude oil had positive and significant impact on economic growth in Nigeria.

Dilyara and Askar (2017) studied the impact of international trade on economic growth in Germany. Using the method of comparative macroeconomic analysis, questionnaires and ranking, the researchers found that Germany is a country where the economy is most dependent on the foreign trade; USA is described as a country with open economy, which for a long time had a high level of economic development, but now it is going through its recovery from the crisis and the recession; China has a similar situation as the USA, but in China, the impact of foreign trade on the economy is not so significant, and the indicator of that, is the level of well-being of the population, which continues to grow, despite the situation in the foreign trade; the Russian economy, which has suffered the consequences of ruble devaluation and sanctions, now is in the stage of growth, recovery; and the latest data are the indicators of decrease of Russia's dependence on the foreign trade.

Likewise, Kaka, Abdurrahman and Nnanna (2020) assessed the impact of non-oil trade on Nigeria's economic growth with an emphasis on export, import and aggregate trade. Unit root test and ARDL estimation technique was utilized in the analysis. The result revealed that non-oil export is paramount to economic growth in the short-run while export, import and aggregate trade are revealed to have a significant and positive influence in economic growth in the long-run.

Zubair, Salihu and Gyang (2021) investigated the effect of non-oil foreign trade on economic growth in Nigeria from 1986 to 2018 using unit root test, autoregressive distributed lag model and error correction model. The variables used in the study were gross domestic product, non-oil export, non-oil import and exchange rate. The results revealed that non-oil import and exchange

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rate had insignificant impact on economic growth; while non-oil export exerts significant influence on economic growth in Nigeria.

More so, Esiaka, Uwaleke and Amana (2021) studied the influence of non-oil trade on economic growth of Nigeria for the period 1986-2018 using unit root test, co-integration test and vector error correction model. The variables used are GDP, non-oil export, and non-oil imports. The results indicated that non-oil export had a negative and significant influence on economic growth while non-oil import had a positive and significant impact on economic growth.

Onuorah (2018) investigated non-oil exports' role on economic growth of Nigeria. The study analyzed data from the period of 1985-2017. Employing OLS technique, the study found that the agricultural export products used in the study had significant impact on GDP growth. However, despite that Onuorah exclude oil export earnings from his study thereby making his study limited only to the contributions of non-oil earnings to economic, moreover his chose of OLS technique for data analysis may not be the appropriate econometric tool to used series data used in the study before knowing the appropriate econometric technique to use for the study, but there is no evidence that he conducted unit root test for his study.

Akpa, Onuh, Kabuk, and Sanni (2022) examined the influence of non-oil export earnings on economic growth in Nigeria for the period 1990-2021 using ordinary least square (OLS) technique for the analysis. The variables employed in the investigation include gross domestic product and non-oil exports. The result showed that non-oil exports had a positive and significant effect on economic growth in Nigeria.

Diptibala (2022) investigated the relevance of international trade on economic growth in India. Using descriptive analysis, the researcher found that international trade has played an important role in India's economic growth in the past two decades. Overseas trade has boosted competitiveness in market place and expanded business chances for local markets. By eliminating unnecessary obstacles, it made easier for India and the US to export and import. Since the economic changes introduced in the year 1991, India has totally changed its trade relations with the United States of America. The trade between India and the US has climbed sharply in the present time. This paper is an attempt to study the realistic relationship between international trade and economic growth of India. We can say that there is a positive impact of the trade on economic growth for both countries.

Research Gap

Gap in empirical literature implies the missing constituent. In order words, it means doing what other researchers have failed to or did not do in the previous work; especially with respect to (a) variables employed (b) methodology employed in the studies, (c) geography (where the studies were conducted) and (d) time (period covered by the studies) which are considered to justify the

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 need for the current study. From the summary of the empirical literature, there is no doubt that there exists a superfluity of research works done in international trade in both developed and developing nations. However, most of the studies reviewed dwelt on the economies of foreign countries; while those who carried out their study in Nigeria, concentrated on aggregate exports and imports on economic growth, without disaggregating them so as to examine their respective effect on the economy. The findings of these studies may have been outmoded by events, since there have been series of policies such as the COVID-19 pandemic that may have impacted on the economy, thus, there is need to extend the scope of this study to 2022.

METHODOLOGY

Research Design

Research design is the general approach a researcher adopts to incorporate different components of the study towards handling the research problem. That is, research design constitutes the blueprint for the collection, measurement, and analysis of data. For the purpose of this study, ex-post-facto research design is adopted. This is because, the researcher made use of what already existed since it involves time series research. Also, ex-post facto research design focuses on determining the cause and effect of one or more variables on dependent variable in a model, especially where cause and effect relationship already existed and cannot be manipulated. Unit root test and Autoregressive Distributed Lag (ARDL) model were employed as the method of analysis. The test of unit root was used in the research to determine the rank of integration of the variables of the study; while the ARDL technique was adopted for the examination of the magnitude or elasticity of the coefficients of the independent variables in relation to the dependent variable. The variables that were analyzed in this study include gross domestic product, oil exports, non-oil exports, oil imports, non-oil imports, exchange rate and trade openness. Data employed in this research were sourced from the CBN statistical bulletin within 1986-2022; which enabled us to examine their magnitude after the era of Structural Adjustment programme.

Model Specification

The theoretical framework of this model is anchored on export-led growth theory which postulates that export expansion is one of the main determinants of growth; signifying that the overall growth of countries can be generated not only by increasing the amounts of labour and capital within the economy, but also by expanding exports. That is, the model assumes that the aggregate production in an economy is function of physical capital, human capital, merchandise exports and imports of goods and services. The model as adopted by Kalaitz and Chamberlain (2020) is expressed below:

$$Y_t = A_t K_t^\alpha H C_t^\beta$$

1

Where, Y_t represents the economic aggregate of production at time t, A_t denotes total factor productivity, whereas K_t and HC_t captured physical capital and human capital, respectively. However, in order to determine the relationship existing between international trade and economic

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 growth in Nigeria, the model used by the Elias, Agu and Eze (2018) in the examination of impact of international trade on economic growth in Nigeria is adopted. The researchers stated that:

$$GDP = f(exports, imports) \quad 2$$

This model is modified by disaggregating exports into oil exports and non-oil exports while imports is as well disaggregated into oil imports and non-oil imports; and equally bringing in exchange rate which has direct effect on the economy. Thus, our model is specified implicitly as thus:

$$GDP = f(OEX, NOEX, OIM, NOIM, EXR, TOP) \quad 3$$

Where: GDP represents gross domestic product, OEX is oil exports, NOEX is non-oil exports, OIM is oil imports, NOIM is non-oil imports, EXR is exchange rate and TOP is trade openness. In linear function, the relationship is specified thus:

$$GDP_t = \beta_0 + \beta_1 OEX_t + \beta_2 NOEX_t + \beta_3 OIM_t + \beta_4 NOIM_t + \beta_5 EXR_t + \beta_6 TOP_t + U_t \quad 4$$

The log function of Equation 3 is:

$$LGDP_t = \beta_0 + \beta_1 LOEX_t + \beta_2 LNOEX_t + \beta_3 LOIM_t + \beta_4 LNOIM_t + \beta_5 LEXR_t + \beta_6 LTOP_t + U_t \quad 5$$

Where: LGDP is the explained variable; whereas LOX, LNOX, LOM, LNOM, LEXR and TOP are the explanatory variables; U_t is error term; β_0 = constant term; L is the log function of the equations, whereas the $\beta_1 - \beta_6$ are the coefficients of the regression equation.

Standard econometric techniques were engaged in the study with the aim of estimating results on the impact of international trade on economic growth in Nigeria. These econometric methods include the unit root test through the ADF stationarity test and the method of the Auto-Regressive Distributed Lag (ARDL) model. The use of the ARDL model followed the outcome of the unit root test. The model is most appropriate in a situation in which the results of the stationarity test indicated mixed order of integration among the variables employed in the research, especially when the mixtures involve I(1) and I(0). To determine order of integrations, several models of unit roots and co-integration have been developed by scholars mainly to investigate the long-run properties of the time series engaged in the study. One of the popular models involve the ARDL model propounded by Engle and Granger (1987) who developed residual-based EG model; Johansen and Juselius (1990) maximum likelihood-based technique (JML); and Pesaran, Shin and Smith (2001), among others.

The short run dynamics (in- distributed lag form) of equation 4 can specified as:

Table 1: Augmented Dickey-Fuller Unit Root Test Results

Variables	Level			First Difference			Remarks
	t-Statistics	5% critical value	p-value	t-statistics	5%-critical value	p-value	
LGDP	-0.989345	-2.951125	0.7459	-3.257026	-2.951125	0.0252	I(1)
LOEX	-3.289262	-2.957110	0.0239	-----	-----	-----	I(0)
LNOEX	-1.643260	-2.948404	0.4505	-7.374630	-2.951125	0.0000	I(1)
LOIM	-2.792403	-2.948404	0.0696	-6.917014	-2.951125	0.0000	I(1)
LNOIM	-3.137067	-2.951125	0.0331	-----	-----	-----	I(0)
LEXR	-2.620183	-2.948404	0.0986	-5.930449	-2.951125	0.0009	I(1)
TOP	-3.720419	-2.948404	0.0080	-----	-----	-----	I(0)

Sources: Researcher's computation from E-view 9

Table 2: Phillips Perron Unit Root Test Results

Variables	Level			First Difference			Remarks
	t-Statistics	5% critical value	p-value	t-statistics	5%-critical value	p-value	
LGDP	-0.555850	-2.948404	0.8678	-3.257026	-2.951125	0.0252	I(1)
LOEX	-8.356691	-2.948404	0.0000	-----	-----	-----	I(0)
LNOEX	-2.233221	-2.948404	0.1987	-7.69748	-2.951125	0.0000	I(1)
LOIM	-2.080405	-3.948404	0.0674	-6.827159	-2.951125	0.0000	I(1)
LNOIM	-7.820065	-2.948404	0.0000	-----	-----	-----	I(0)
LEXR	-2.091766	-3.948404	0.0664	-5.938851	-2.951125	0.0000	I(1)
TOP	-3.668451	-2.948404	0.0091	-----	-----	-----	I(0)

Sources: Researcher's computation from E-view 9

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The Augmented Dickey Fuller (ADF) and Phillips Perron (PP) unit root test presented in table 1 and 2 above, revealed that the oil export, non-oil import and trade openness were stationary at level whereas gross domestic product, non-oil export, oil import and exchange rate were stationary at first difference. This unit root test result therefore revealed the existence of a mixed order of integration among the variables of the study. The mixed order of integration from the unit root test results implies the possibility of long-run relationship among the variables of the study, though further investigations using ARDL – Bound test result will reveal if actually long run relationship exist among the variables of the study.

ARDL Bounds Test

The bound test is used to examine whether the variables are co integrated. The variables are said to be co integrated if the F-statistics is greater than the upper bound critical values and otherwise if it is less. The result of Bounds test is presented in the Table 2 as follows:

Table 3: ARDL Bounds Test

Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	4.538269	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

Sources: Researcher's computation from E-view 9

From the results in table 2, it is evident that that a long-run relationship exists between international trade and economic growth in Nigeria within the period of the study. The result also disclosed that the computed *F*-statistic exceeds the upper critical value at 5% level of significance, which implies that international trade and economic growth in Nigeria are co integrated in the long run at 5% level of significance. This is as a result of the fact that the value of the *F*-statistic as presented in table 2 above which has the value of 4.538269 is greater than the value of the upper bound boundary of 3.61 at 5% level of significance. To this end, the hypothesis of no long-run relationship existing between international trade and economic growth is rejected at a 5% level of significance.

ARDL Short-Run Results

The evidence of equilibrium long-run relationship revealed by ADRL bound test among the variables; prompted the investigation of the coefficients of the short-run and long-run of the variables employed in the study using the ARDL short-run and long-run coefficients test with the objective of ascertaining the elasticity or magnitude of the parameters. The results as estimated are indicated in tables 3 and 4 of chapter four below.

Table 3: ARDL Short-run Coefficients Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP(-1))	0.245796	0.114967	2.137963	0.0429
D(LOEX)	0.089224	0.020645	4.321868	0.0002
D(LNOEX)	0.047308	0.010808	4.376998	0.0002
D(LOIM)	-0.019464	0.015211	-1.279660	0.2129
D(LNOIM)	-0.021838	0.018295	-1.193694	0.2443
D(LEXR)	-0.001815	0.013009	-0.139503	0.8902
D(TOP)	-0.004069	0.001173	-3.468591	0.0020
CointEq(-1)	-0.237004	0.040253	-5.887846	0.0000

$R^2 = 0.989009$; F-stat = 2687.100; Prob(F-stat) = 0.000000; DW stat = 2.133674

Sources: Researcher's computation from E-view 9

Table 3 illustrates the short-run coefficients test results of the ARDL model. The results indicated that both oil export (LOEX) and non-oil export (LNOEX) have positive and significant effect on gross domestic product (LGDP) in Nigeria in the short-run. Conversely, the results indicated that oil import (LOIM) and non-oil import (LNOIM) have negative and insignificant effect on gross domestic product in the short-run in Nigeria.

The estimation results also indicated that exchange rate (EXR), has a negative and insignificant impact on gross domestic product (LGDP), whereas trade openness (TOP) has a negative and significant on gross domestic product in Nigeria in the short-run. Evidence of these claims is supported by the p-values and the coefficients of the variables estimated in the regression equation. From the estimation results, the coefficients of LOEX, LNOEX, LOIM, LNOIM, LEXR and TOP 0.089224, 0.047308, -0.019464, -0.021838, -0.001815 and -0.004069 respectively; whereas their associated p-values are 0.0002, 0.0002, 0.2129, 0.2443, 0.8902 and 0.0020 respectively. The results also indicated ECT value of -0.237004 and p-value of 0.0000, which is significant at 5 percent critical value. The ECT result depicts speed of adjustment which is in tandem with the granger representative theorem in which it upholds that a negative and statistically speed of adjustment is a required condition for a significant long-run association while the negative sign of the coefficient satisfies the second-order condition, and the significant status of the ECT satisfies other condition necessary for the utilization of econometric packages in the research.

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The above result shows that the R^2 is 0.989, which implies that the model explains about 98.9% of the total variations in gross domestic product (GDP) are explained by the independent variables (oil exports, non-oil exports, oil imports, non-oil imports, exchange rate and trade openness) during the period of the study. While the remaining 1.010991 percent variations are as a result of other explanatory variables that are not captured in the model. The Prob (F-statistic) being 0.000000, implies that the joint influence of the explanatory variables is statistically significant as it is less than 0.05 at 5% level of significance. Again, Durbin Watson statistic being 2.133674 which is approximately 2, shows the absence of serial auto correlation in the model.

Long Run Results

The long run relationship between international trade and economic growth in Nigeria is accessed by the lower part of the result of Autoregressive Distributed Lagged (ARDL). The result is presented as following in the Table 4:

Table 4: ARDL Long-run Coefficients Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOEX	0.376466	0.075844	4.963670	0.0000
LNOEX	0.199610	0.046219	4.318742	0.0002
LOIM	-0.216555	0.062437	-3.468398	0.0020
LNOIM	-0.092143	0.084809	-1.086469	0.2881
LEXR	-0.007657	0.054434	-0.140665	0.8893
TOP	-0.017168	0.003488	-4.922415	0.0001
C	7.393950	0.455186	16.243788	0.0000

Sources: Researcher's computation from E-view 9

Table 4 above reveals the long-run coefficients test results of the ARDL model for which the variables under consideration were estimated. From the results, both oil export and non-oil export have positive and significant impact on gross domestic product. However, oil import and trade openness have negative and significant impact on gross domestic product; while non- oil import and exchange rate exerted negative effect on gross domestic product and statistically not significant in the long-run in the economy of Nigeria.

In the same vein, these claims are supported by the p-values and coefficients of the variables estimated from the ARDL long-run coefficients test. From the results, the coefficients of LOEX, LNOEX, LOIM, LNOIM, LEXR and TOP are 0.376466, 0.199610, -0.216555, -0.092143, -0.007657 and -0.017168 respectively and their p-values include 0.0000, 0.0002, 0.0020, 0.2881, 0.8893 and 0.0001 respectively.

DISCUSSION OF FINDINGS

The study evaluated the effect of international trade on economic growth in Nigeria from 1986 to 2022, using the ARDL model. From the results, oil export has a positive and significant effect on gross domestic product both in the short-run and the long-run. Hence, it is estimated on the average that ₦1 rise in oil export brought about ₦0.089 increase in gross domestic product in the short-run and ₦0.376 rise in gross domestic product in the long-run. In the same vein, the results showed that non-oil export exerts positive and significant impact on gross domestic product in the in both short-run and the long-run. Similarly, the study averagely estimated that ₦1 increase in non-oil export brought about ₦0.047 increase in gross domestic product of Nigeria in the short-run and ₦0.1996 approximately in the long-run in Nigeria.

More so, the estimation results indicated that oil import has an insignificant and negative effect on gross domestic product in the short-run; and negative and significant effect on gross domestic product in the long-run. Thus, the research estimated averagely that ₦1 increase in non-oil import resulted ₦0. 019 decrease in gross domestic product in the short-run and decrease gross domestic product by ₦0. 217 in the long-run in Nigeria. In the same vein, the results showed that non-oil import exerts negative and insignificant impact on gross domestic product in both the short-run and the long-run. Similarly, the study averagely estimated that ₦1 increase in non-oil import brought about ₦0. 0218 decrease in gross domestic product of Nigeria in the short-run and ₦0. 092 approximately in the long-run in Nigeria. The results also indicated that exchange rate has a negative and insignificant effect on gross domestic product in both the short-run and long-run in the Nigeria. Therefore, it is averagely estimated that ₦1 increase in exchange rate resulted to decrease in gross domestic product of Nigeria by ₦0. 00018 in the short-run and by ₦0. 0077 decrease in gross domestic product in the long-run in Nigeria. Finally, the results equally indicated that trade openness has a negative and significant effect on gross domestic product in both the short-run and long-run in the Nigeria. Therefore, it is averagely estimated that ₦1 increase in trade openness resulted to decrease in gross domestic product of Nigeria by ₦0. 0041 in the short-run and by ₦0. 0172 decrease in gross domestic product in the long-run in Nigeria.

CONCLUSION AND RECOMMENDATIONS

The study examined the effect of international trade on economic growth in Nigeria for the period 1986-2022. Autoregressive distributed lag (ARDL) model is the method of analysis utilized in the investigation. The variables modeled in the research include gross domestic product, oil exports, non-oil exports, oil imports, non-oil imports, exchange rate and trade openness. The employed variables have different order of integration ranging from zero and one, which led to the application of ARDL. The results of the ARDL bound test revealed the presence of equilibrium long-run

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relationship among the variables used in the. The results estimated indicated that both oil exports and non-oil exports have positive and significant effect on gross domestic product both in the short-run and the long-run. The results also showed that oil imports exerted insignificant and negative impact on gross domestic product in the short-run; while in the long-run, oil imports exerted significant and negative impact on gross domestic product in Nigeria. Similarly, non-oil imports impacted negatively and insignificantly on gross domestic product in Nigeria. Based on the results of the study highlighted above, the study concludes that economic policy in Nigeria should focus on diversification of the Nigerian economy through other non-oil exports but productive in nature. Again, the capacity of local refineries should be improved to meet home demand for oil products in the country.

Since the study discovered that oil exports have significant positive impact on economic growth in Nigeria in both the short and long run periods, there is need for government of Nigeria to make judicious use of proceeds from oil exports to expand and strengthen other productive sectors of the economy so as to accelerate the economy. As the analysis revealed that non-oil exports exert significant positive influence on economic growth in Nigeria both in the short run and in the long run, the government should encourage industrial and the services sectors activities so as to enhance non-oil exports because it brings huge immediate and future benefits to the Nigerian economy. Having unraveled that oil imports impact negatively and insignificantly on the economic growth in Nigeria in the short run but negatively and significantly impacted on economic growth in the long run in Nigeria, Nigerian government should take necessary measures to restrain oil imports into the country in order to mitigate the negative outcomes of oil imports in the economy. Hence, the capacity of local refineries should be improved to meet home demand for oil products in the country. In a similar way, since the research found out that non-oil imports have negative and insignificant impact on economic growth in Nigeria whether in the short run or in the long run, the government of Nigeria should tighten import restriction measures in order to restrain non-oil imports more, specially manufactured goods that have no gain in the economy.

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