The Racketeering of International Oil Trade: A Synergy of Economic Growth in Nigeria

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Abstract- The study examined the impact of international trade on economic growth in Nigeria. The specific objectives of the study were: to investigate the impact of oil export on the economic growth in Nigeria; to investigate the impact of oil import on the economic growth in Nigeria; to investigate the impact of non-oil export on the economic growth in Nigeria; to investigate the impact of non-oil import on the economic growth in Nigeria. Secondary data collected from the statistical bulletin of the Central Bank of Nigeria was used. The unit root test result was conducted, using Augmented Dickey-Fuller technique which showed that all the variables were stationary though at different levels. The Johansen co-integration result revealed that all the variables in the model have a long run relationship. The estimated result disclosed that there is a negative and insignificant relationship between oil import and economic growth in Nigeria; positive and insignificant relationship between oil export and economic growth in Nigeria; positive and significant relationship between non-oil import and economic growth in Nigeria, positive and significant relationship between non-oil export and economic growth in Nigeria.

Keywords: import, export, non-oil export, non-oil import, and economic growth.

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I.

In a real-world situation, no country exists in autarky because very country buys goods and services from other countries and also sells its goods and services to other countries. Put differently, there is no country in the world today that is self-sufficient or is able to produce everything its people want. The basis for international trade rests on the fact that nations of the world do vary in their resource endowment, preferences, technology, the scale of production, etc. Trade enables them to consume what other countries produce. Hence, Nations, like individuals, find it economically beneficial to engage in exchange transactions (trade) amongst themselves (Abomaye-Nimenibo & Inimino, 2017).

In this light, so many countries (the developed ones) in the world have recorded sustainable growth and development through effective participation in international trade (export-led strategy). Nigeria's participation in international trade was expected to also assist Nigeria to get sustainable growth economically at the rate needed to make a visible impact in the reduction of poverty, unemployment, etc. but this has not been the case because the share of Nigeria's contribution to world trade is still very low and her exports are predominantly primary products which do not contribute much to Gross Domestic Product (GDP) when compared to trade on manufactured or finished goods of the developed countries Abomaye-Nimenibo & Inimino, 2017).

The theory of trade had been considered so vital whenever economic growth process of any country is discussed as we observed the long historical interdependence among various economies of the world. International trade theorists have always tried to explain observed patterns in national development standards in terms of their differential endowment of natural resources and production efficiency (United Nation, World Economic and Social Survey, 2013).

In this regard, Usman, (2011) argued that external trade has not helped in promoting economic growth in Nigeria, giving the reason that the Nigerian economy still records economic instability as external or international trade has turned the country into an import-
dependent economy. Experience has shown that less developed countries including Nigeria have not benefitted from trade as much as developed countries. The reason so advanced was that the less developed countries of which Nigeria is one, experiences inadequate economic growth etc. despite several years of participation in trade. This does not mean that international trade should be written off as a growth-stimulating factor as far as developing countries are concerned.

Okowa (2005) argued that Nigeria being an underdeveloped nation depends on foreign inputs of skill, capital and technology for her development.

Gbosi (2011) pointed out that through international trade; resources are transferred from the rich nations to the poor ones. However, it is international trade that enhances efficiency in the production of goods and services through the allocation of resources in line with comparative advantage. Therefore, if countries specialized according to comparative cost advantages, the least amount of resources will be utilized in the most efficient manner to increase total world output.

Nevertheless, previous researches carried out by Omoju and Adesanya (2012), Edoumiekumo and Opukri (2013) have demonstrated through their studies that international trade has a significant positive impact on economic growth in Nigeria; while Usman (2011), Oviemuno (2007), established in their studies that international trade is negatively related to real output (i.e., economic growth) of Nigeria.

From the above, it can be seen that while some studies state the positive effect of international trade on economic growth, others state the negative effect of international trade on economic growth. The divergence in view and experiential results on the impact of international trade on economic growth is a controversial issue and of serious concern, especially in developing countries like Nigeria; and this necessitates further researches.

The interaction among production, distribution and exchange across national frontiers, and their implications for economic growth form the central core of trade theory. Smith (1776) was said to be the first to point out the positive effects of trade on economic growth. Discussion on international trade was the prevailing economic idea as at then, with an exception of the relative hibernation during the marginalist revolution until World War II. After World War II, the dominating idea of free trade was truncated by the introverted and protectionist economic growth experiments especially in Latin America (Alfonso, 2011). World Trade Organization, (2013) went on to say that owing to the failure of the protectionist experiments and the observed association of quick economic growth with the opening of international trade and consequent specialization in several countries, as well as the results of many studies based on the neoclassical theories, a newly decisive role was extended to international trade as the driving force of economic growth. It is pertinent to state at this point that although the dominant theoretical postulations beginning with the classical theorists indicated a positive trade-economic growth nexus, hence, most studies concentrated only on the static effects of trade. But after a survey of the extant empirical literature, Baldwin (1984) posited that the static gains of trade were of little significance. Therefore, a series of debates in the last decades on the precise direction of trade went on and stressing its dynamic effects on economic growth. The theoretical isolation/separation of these two effects (static and dynamic) was facilitated by the models of endogenous economic growth (especially after the works of Romer (1986) and Lucas (1988). The endogenous growth models stimulated the undertaking of empirical studies which moved towards an integrated and more robust analysis of the relationships between trade and economic growth. It is apparently clear that the transmission channels through which international trade stimulate economic growth are derived from both the dynamic and dynamic gains from trade.

Trade is widely accepted as a major engine of economic development and growth. International trade has since been an area of interest to policymakers as well as economists’ world over. International trade has enabled nations to sell their locally produced goods to other countries of the world and therefore provides a platform for any nation to expand her markets for both goods and services, that may otherwise not have been available to her citizens (Adewusi, 2010). Foreign or international trade pin-points that, per capita income of a country is based on the domestic production, consumption activities and in conjunction with the foreign transaction of goods and services (Omoju and Adesanya, 2012).

Export trade having its hand in international trade is an engine of growth as is often found in the literature. According to Omoju and Adesanya (2012), export increases foreign exchange earnings, improves the balance of payments position, creates employment and development of export-oriented industries, and improves government revenue through tax revenue, levies and tariff. These benefits will eventually transform into better living conditions for the citizens of the exporting economy since foreign exchange derived from trade could contribute to meeting their importation of some essential goods and services for which they do not have a comparative advantage (Omoju and Adesanya, 2012). International trade is also said to be important for growth because it generates channels for technological diffusions since it enables less developed countries to import intermediate inputs and equipment to support their domestic production process. Thus, the literature has provided a basis for linking trade and
growth at the level of individual firms and sectors also (Stone and Shepherd, 2011).

The Nigerian economy has often been said to have been dominated by both production and consumption of local goods and services as well as foreign transactions in goods and services. Before the political independence of Nigeria in 1960, she had been an active player in the field of foreign trade. However, despite her involvement in international trade the Nigerian economy, until of recent years, had recorded dismal growth rates. This a concern to every Nigerian and in view of this, this article wants to know whether Nigeria's economic stagnation for many years can be attributed to international trade or whether her relative economic growth can be attributed to her taking part in the field of international trade, especially in the face of crude oil racketeering. In other words, how significantly has international trade in crude oil and other non-oil products contributed to Nigeria's growth?

a) Statement of the Problem

In economic history, it has always been argued that trade is an important engine of economic growth for countries at different stages of development. It is a prime argument that the share of a country in world trade depends on the properties of the goods the country produces, the articulation and pursuit of domestic economic policies, and the trading approaches so adopted. Thirwall (2000) asserted that the volume of exports of developing countries has grown slower than those of developed countries because developing countries still produce and export largely primary commodities and low-value-added manufactures with a relatively low-income elasticity of demand.

Thirwall went on to say that, the discrepancies in the rates of growth of exports have been wider in value terms because the terms of trade of developing countries such as Nigeria has deteriorated vis-à-vis those of developed counties. This resulted in a fall in developing countries' share of the total value of world trade from 30 per cent in 1960 to 20 per cent as of recent. Thus, despite the predictions of trade theory, the issue for developing countries in general, and Nigeria, in particular, is not so much as whether to trade, but in what to trade, and the terms on which to trade.

Nigeria as per her adoption of the Structural Adjustment Programme [SAP] in 1986 has experienced a structural shift in its economic structure and trade policies. By this adoption, the import-substitution industrialization strategy of the 1970s was replaced by export-oriented industrialization strategy; and in order to liberalize foreign trade, the Nigerian government abolished the field exchange rate regime, abolished the import license requirement for procuring foreign exchange and deregulated the exchange rate of the naira to all its value to align with the dictates of market forces (Ochei, Tochukwu and Areghan, 2016).

Hence, the Nigerian economy is presently more integrated into the global economy, and foreign trade has become one of the essential foreign trade elements of economic growth in the country especially during the last three decades. Thus, the issue of trade and its impact on the Nigerian economy has gained prominence since the country opened up its economy to the world economy through the implementation of liberal economic policies. The question that readily comes to mind is - If a trade is an engine of growth as postulated by Trade theorists' and finding Nigeria's economy being opened to the world economy through international trade, then how favourable has international trade impacted on her economic growth over the years?

The impact of international trade on the Nigerian economy is a well-researched topic in the literature but, there had been some grey areas in the empirical approaches adopted in most of the existing researches. Empirical studies such as the one carried out by Haq (2014) did not examine the determinants of Nigeria's international trade which should naturally be the first step in explaining the transmission channels through which the gains of trade had impacted on economic growth. Without a clear explanation of the transmission channels, many of these studies have not been able to emphatically establish the causal relationships that existed between international trade and economic growth.

Moreover, the econometric models applied in studies such as the research work by Adeleye, Adeleye and Adewuyi (2012) did not disaggregate Nigeria's international trade into the four main components of oil export, non-oil export, oil import and non-oil import. The need for disaggregation of the Nigeria economy into the four components is to trace with a certain degree of certainty which trade variables produce a greater growth impact on the Nigerian economy. Without the disaggregation, two problems will arise, that is, the specified model may suffer from omitted variable(s) specification which may produce spurious results of doubtful policy relevance, and secondly, the estimated results may be too generalized in nature as to provide a proper empirical platform for articulation and recommendation of specific policy measures.

This research, therefore, set out to address these two problems identified above; so as to fill the gap in the literature and also generate some fresh insights into the theoretical discussion of the nexus between international trade and economic growth at least within the context of the Nigerian economy.

b) Objectives of the study

The broad objective of this study is to empirically examine the impact of international trade in oil and non-oil products on the economic growth of Nigeria. The specific objectives include:
i. To investigate the impact of oil export on economic growth in Nigeria
ii. To examine the impact of non-oil export on economic growth in Nigeria
iii. To investigate the impact of oil import on economic growth in Nigeria
iv. To examine the impact of non-oil import on economic growth in Nigeria.

c) Research Hypotheses

To guide the study, the following hypotheses were formulated:

Hypothesis One
Ho: There is no significant relationship between oil export and economic growth in Nigeria.
H1: There is a significant relationship between oil export and economic growth in Nigeria.

Hypothesis Two
Ho: There is no significant relationship between non-oil export and economic growth in Nigeria.
H1: There is a significant relationship between non-oil export and economic growth in Nigeria.

Hypothesis Three
Ho: There is no significant relationship between oil import and economic growth in Nigeria.
H1: There is a significant relationship between oil import and economic growth in Nigeria.

Hypothesis Four
Ho: There is no significant relationship between non-oil import and economic growth in Nigeria.
H1: There is a significant relationship between non-oil import and economic growth in Nigeria.

d) Significance of the study

The findings of this research are significant for its policy relevance and academic contribution. Specifically, it should be of great value to:

i. The Nigerian Government in the sense that the empirical results will enable the government to know the major macroeconomic international trade variables that have a greater impact on the economy. This knowledge will help the government in its negotiation of bilateral trade agreements and deals which should provide a stronger impact on the Nigerian economy.

ii. Trade Policymakers: The findings and recommendations of this study is believed to provide trade policymakers with an analytical framework with which to formulate bi-lateral trade policies of any nation based on the empirical results and policy implications of the study, so as to give them some soft landing to articulate trade incentives and other policy measures that will ensure a greater growth impact in international trade on the economy of any nation including Nigeria.

iii. Research scholars and students will not only have this research as a rich source of reference materials on growth impact of international trade but, will also serve them well as an excellent contextual guide for any study in a related field.

e) Definition of terms

The following terms are defined in their contextual terms of usage for proper understanding:

International trade:
This is the exchange of goods and services between countries; it is the exchange of goods and services among nations of the world which gives rise to the world's economy. Also, international trade is known as the exchange of capital, goods and services across international borders or territories.

Balance of payment (B.O.P):
This is the balance of an account in international payments and it is defined as the records of all financial flows in and out of a country. Balance of payment reflects all payments and obligations to foreign countries and also payments and obligations from these foreign countries.

Import:
Import simply means bringing into a country capital, goods and services legally or goods and services including capital brought into one country from another country. It is the bringing of goods and services into a country from abroad for sale and or direct consumption and also introducing an idea from a different place.

Export:
Legally sending capital, goods and services to another country on sales; being the opposite of import.

Economic growth:
An increase in the number of goods and services produced per head of the population over a period of time.

Exchange rate:
Exchange rate of two countries is the rate at which one country's currency in exchange for another country's currency, for instance, Nigerian Naira (N) being exchanged for U.S dollar ($).

II. Literature Review and Theoretical Framework

a) Conceptual Literature

i. Definition of international trade

International trade is simply the exchange of capital, goods and services across international borders or territories. In other words, to know what happens in the course of international trade, governments have to keep track of trade transactions among nations.
ii. Importance of international trade

1. The difference in technology is a big setback in the development strides of nations but international trade bridges the gap by bringing technology from the surplus nation to those countries that lack them; hence, advantageous nature of trade occurs between countries that differ in their technological abilities to produce goods and services.

2. The difference in resource endowments has caused international trade to flourish as countries engage in bilateral trade.

3. For economic reasons, nations trade in order to get or consume products they did not produce at all or in a small quantity but needed them. Therefore, countries through international trade consumer products they did not produce or have less quantity of the products she has in few numbers etc.

iii. Problems of international trade

1. Distance: As a result of the long distance between different countries of the world that engages in trade, it is difficult to establish a quick and close trade link between traders.

2. Risks in transit: Foreign trade involves much greater risk than home trade.

3. Difficulty in transportation and communication in terms of dispatch and receipt of goods which takes a long time and involves more expenses than home trade.

iv. Relationship between International Trade and Economic Growth

Economic growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time with another. It can be measured in nominal or real terms, the latter of which is adjusted for inflation.

Traditionally, aggregate economic growth is measured in terms of gross national product (GNP) or gross domestic product (GDP).

These are two concepts that go together, because international trade contributes to the growth of a country’s economy in several ways such as; effects of import and export, specialization, increased productivity and improved infrastructure. The exportation of goods to other countries can contribute to the growth of the exporting country by increasing the foreign earnings of that country.

The national economies of some countries even depend on and sustained by their exports; such that, some oil-producing countries depend on the income from the export of crude oil and its derivatives to sustain their nations.

b) Theoretical Framework

i. Theories of International Trade

A review of major theories of international trade as propounded by leading economists over the years is presented in this section which expositions and assumptions we garner as clear insights into how trade stimulates growth in an economy. These theories are reviewed hereunder.

A. Mercantilist Trade Theory

Mercantilist Trade Theory was the economic system advocated based on the principle that a country can be wealthy and powerful if she increases her exports and keeps on collecting precious metals in return for her exports. It is the oldest theory of international trade. Usman (2011) stated that Mercantilist theory provides the earliest idea on international trade, which major concern was to make a nation-state powerful (Strong). The problem they were to tackle was how to find the means of increasing the power of the nation-state. Usman (2011) went on to say that, the most important way for a nation to be influential and rich is to reduce imports and increase exports, that is "export more, import less and collect the balance in the form of gold and silver".

The theory further states that "the earth contains a fixed quantity of riches and that to increase a country's wealth or riches; one country had to take some wealth from another through having a higher export" or "holding a country's treasure primarily in the form of gold to constitute its wealth".

The mercantilists were merchants who generated ideas which later became an economic thought known as mercantilism, which was prevalent between the 15th and the 18th centuries. The ideas were mainly about the relationship between a nation's international trade policy and its wealth which translates to power.

The major propelling forces it was the collapse of the feudal community with all its characteristics, the growth and increasing importance of cities, the growth and importance of trade (merchant capitalism) enhanced by the growth of cities and economic specialization, the discovery of gold in the Western Hemisphere and the popular use of money, the rise of nation states and the economic rivalries, led to the importance of merchant capitalists in the world of business. Therefore, the ideas of mercantilists supersede feudal concepts, to promote nationalism, give new dignity and importance of the merchant, and to justify a policy of economic and military expansion (Akpakpan, 1999).

Although there are so many men of economic thought among the mercantilist, but the major figures include Jean Bodin (1530–1596), Sir Thomas Mun (1571- 1641), Gerald Malynes (1586-1641), Edward Misselden (1608-1654), and Antonio Serra who was ‘the first to analyse and fully use the concept of the balance of trade’. These English merchants Edward Misselden and Gerard Malynes had a dispute over free trade and the desire of the then government was to regulate the
activities of businesses. For Malynes foreign exchange is beneath the control of bankers, and Misselden argued that international exchange of money and variation in the exchange rate depends on international trade. Sir James Steuart (1713–1780), Charles Davenant (1656–1714) and Philipp von Hörnigk also made their own contribution to mercantilist philosophy.

The mercantilists were practical merchantmen who were 'not given to subtle economic analysis', but their economic ideas were all based on inferences from the practical circumstances of their time. They looked at the facts of their situation and drew conclusions as to what they considered best to do (Abomaye- Nimenibo and Inimino, 2017). They also concentrated on the aspect of the economic life of the society (international economic relations) that was of immediate practical importance to them.

The Mercantilist economic policies are:

1. Strict prohibition of outflow of precious metals abroad,
2. The compulsion of export trade to pay for imports,
3. Limitation of imports of completed products from overseas,
4. Support of the establishment of factories,
5. Support the exportation of finished goods,
6. Establishment of commercial monopolies,
7. Ban on the export of some raw materials and semi-products,
8. Regulation of wages,
9. Support for population growth and immigration as well as laws of trade and navigation.

In the light of the above, it appears clear that mercantilist did not support free trade; and every exporter was considered to be a close friend of the state and every importer as an enemy.

Mercantilist economic ideas, though they were mainly concerned with the self-interest of the merchants, did make some contributions to the development of economic science such that they:

a. Drew attention to the role of an increased amount of money which reduces the rate of interest so as to stimulate business activities;

b. Showed the positive effect of a purposeful government in directing or controlling some aspect of the economy to have a possible influence on the society, and inspired such actions, especially the regulation of wages; and

c. Brought about a more favourable attitude to business which promoted the growth of business enterprises in the development of society.

Mercantilist economic ideas were particularly useful to Europe, in that these ideas promoted aggressive nationalism which characterized the approaches of most European countries to the management of their economies and societies, a feature which accounted for their success. Though, the philosophical ideas of mercantilism were criticized because of the opined accumulation of precious metals which unavoidably results in an increase in wages and prices that causes inflation. Adam Smith was one of the strong critics of mercantilism. Nevertheless, it is clear from the preceding theoretical insight, that mercantilist trade theory developed a sort of macroeconomic approach in solving problems of the society. The mercantilist emphasized the need for maximizing export not only with the idea of accumulating gold and silver but with the hope that export sector would eventually provide employment opportunity, reduce poverty, etc. showing the functionality of money. An increase in the supply of money will cause the interest rate to fall and a fall in interest rate will serve as an inducement to invest and hence stimulate economic growth.

The philosophical ideas of mercantilism were further criticized, that, nations in the course of trade could gain at the expense of other nations. The Physiocrats and Adam Smith are also strong critics of mercantilism. Based on his criticisms, Adam Smith postulated the absolute advantage theory of international trade published in his book "The wealth of nations" in 1776.

In spite of the criticisms, mercantilism is still alive today which emphasizes employment creation. Increase in exports will generate jobs domestically while imports will retract employment locally, but rather transfer employment opportunities to foreign nations.

B. Absolute advantage theory of International Trade

Discounting mercantilism (1950-1800), because it was not developed into a full-fledged theory, proponents such as Adam Smith (1723-90) advocated international trade as a tool for the growth of an economy. The Smithian trade theory is important for two main ideas; that, the trade makes it possible to overcome the reduced dimension of the internal market and, on the other hand, increasing the extension of the market through the division of labour for specialization.

International trade constitutes a dynamic force capable of intensifying the ability and skills of workers, encouraging technical innovations and the accumulations of capital, which makes it possible for overcoming technical indivisibilities and giving participating countries the possibility of enjoying economic growth.

Smith stated that increasing specialization brings the division of labour coupled with an international exchange would contribute to the raising of welfare and growth of nations. Thirwal, (2004), deduced that Smith saw international trade as a welfare-enhancing mechanism, a division of labour requires people exchanging goods and services. Higher levels of trade would imply more specialization, division of labour, leading to economic growth.
Specialization is considered by Smith both as a source of efficiency gains and continued technological development of new tools and mechanisms for undertaking the specialized tasks. Going a step further, it is cohesive to say that when specialization is promoted, new gains from the exchange in trade would be expected, as countries exploit the gains from that specialization (Van den Berg and Lewer, 2007). More specialization, induced by free trade, would reinforce the economy’s growth path.

Van den Berg and Lewer (2007) stated that international trade has a very positive effect on economic growth. A sudden shift in trade policy that opens up new trade provides an immediate gain in real per capita income, which, in turn, accelerates technological progress and increases the rate of economic growth.

Hence, international trade brings gains in per capita output and increases in the rate of economic growth. An increase in productivity, derived from the lifting of restrictions on foreign trade would generate a greater output for the given level of capital (Bakai, 1969). Smith argued further than when foreign trade takes place between two nations, they derive distinct advantages from it. It provides a mechanism that enables the surplus for which there is no local demand to be exchanged for foreign goods, thus giving value to the superfluities of both countries (Thirwall, 2000). Thus in a concise form, the Smithian theory of absolute advantages states that countries should specialize in and export those goods that they are better endowed than other countries and import goods that are less endowed from other counties (Appleyard and Field, 1988).

From the above analysis, it is also clear that a country can import a commodity she can also produce; because she cannot use all its available resources to produce a larger amount of that good. Since there is free trade, Gbosi ( ) is of the opinion that such a nation has to import such good she is less endowed from other countries.

Furthermore, as stated by Robinson (2003), the absolute advantage theory has been criticized on the grounds of:
1. Where one country has an absolute advantage in the production of both commodities the theory of absolute advantage then collapses.
2. In contrast to the assumption of the theory, labour is empirically mobile in international transactions.
3. The theory does not explain how the benefits of external trade filter to the citizens in society.

C. Comparative advantage theory of International Trade

Adam Smith stated the basis of international trade essentially along with a pattern of absolute advantage as a result of superior natural geographical endowments. Aboyade, (1983) stated that some differences may exist in the degree of production and export specialization between geographically identical countries of the world because of differential production and transportation costs. Therefore, two countries with the same geographical endowment can produce similar goods but at different prices and differences in price is the basis for trade.

The question then is - if differences in price were the basis for trade between two nations, then what is needed is comparative advantages and not a necessary advantage. Similarly, if a producer, who is capable of producing a given commodity, may decide that the prices of his goods and services be much cheaper, a nation may logically elect to import what itself can produce. With this kind of reasoning, David Ricardo (1772-1883) in about 1815 developed his principle of comparative cost advantage (Aboyade, 1983, p.163).

Ricardo stated that all that was needed as the basis for trade was a noticeable difference in the relative labour productivities of the countries concerned, even when they are perfectly capable of producing identical baskets of goods. He illustrated the principle of comparative cost advantage by using England and Portugal, where each nation is capable of producing both goods. The only difference was the cost of labour in producing each product by each country.

The graph he plotted showing the international price ratios at which trade indeed takes place, revealed the benefits accruing to the two trading partners. Before the trade, Portugal had to give AD of wine to get OA of cloth (represented by the tangent of the angle DOA). Now with trade at the international price ratio, Portugal only has to give up AC of wine to get OA of cloth represented by the tangent of the angle COA which is less than DOA, making a net gain of CD of wine in the process or alternatively saving the labour costs that the country would have incurred in producing a CD of wine. Similarly, before the trade, England got only AB of wine for OA of cloth; and now with trade, the country could get AC of wine for the same OA quantity of cloth, representing a net gain of BC of wine (Aboyade, 1983).

According to Suranovic (2009), within the Ricardian model trade welfare effects are considered from two different perspectives, whereby the first one was associated to the rise in real wages for the workers in the two countries that were engaged in trade, as compared to their situation in autarky. This situation is depicted where, if both countries specialize in their comparative advantage goods, and engages in free trade, and then both countries could experience gains from trade; while the second perspective was linked to the aggregative welfare effects of free trade, originating in increased production and consumption efficiency.

Suranovic, (2009) went on to say that, specialization and comparative advantage allow countries to achieve higher levels of aggregate utility,
implying a rise in national welfare. Trade allows consumers to reach a higher indifference curve and hence, a higher welfare level, than under autarky. Producers and Consumers benefit from free trade since it increases the ranges of choices in both countries involved. Krugman and Obstfeld, (2006) stated that World output can be augmented if each country specializes in producing the good(s) in which it has comparative advantages.

ii. John Stuart Mill Approach

John Stuart Mill was of the opinion that, it is the reciprocal demand that actually determines the prevailing terms of trade and gains obtained by a particular country. He went on to say that, import or in other words, demand must be of much more importance than export in determining the real terms of trade. Mill thus resolved the problem of how to exactly reach the rate of exchange in the international market. Although J.S. Mill analysis does not show the exact position of quantum of gains and how they are distributed; yet, the basic tenets of his theory were summarized in the following outline.

1. When a country participates in trade it first takes the status as a demander status of a trader, supplier, is just derived there from.

2. It is the relative extensibility of reciprocal demand that actually determines the real terms of trade and consequently the distribution of possible total gains from trade between two trading partners. Assuming that Indonesia has a comparative advantage in wheat production and enormous demand for an automobile while the USA has a comparative advantage in automobile production and have enormous demand for wheat.

3. The equilibrium terms of trade depend on Indonesia's demand for automobile and wheat as well as the USA demanding for these two goods at the same time also.

4. If Indonesia's demand for automobile is stronger, then the terms of trade will be close to Indonesian price ratio, and on the other hand, if the US demands for wheat is stronger, then the terms of trade will close to U.S price ratio.

5. This can be explained with the help of the offer curve. The offer curve shows the quantities of good X that country A supplies to the world market for export and the quantities of good Y that it demands from the world market as an import for all prices.

The offer curve of the Indonesian and USA is generalized and illustrated in figure 2.2 below:

![Figure 2.2: U.S.A and Indonesia Offer Curves Source](image)

Export = 50A, Import = 20W
Export = 50W, Import = 30A
OA = U.S.A. offer curve;
OP = USA Cost Ratio of Auto
OB = Indonesia Offer Curve;
OQ = India Ratio of Wheat
OT = Equilibrium Terms of Trade.

From figure 2.2 above, it is clear that the terms of trade are in favour of U.S.A. This is because whereas the U.S.A exports 50 automobiles but imports only 20 units of wheat while Indonesia exports 50 units of Wheat and imports 30 automobiles. However, as trade continues between the USA and Indonesia, the specialization will lead Indonesia to increase production and export of Wheat from 50 units to 90 units while her import of automobile will rise to 60. On the other hand, the specialization will increase USA export of automobile to go up while its import of wheat will rise from 20 to 60 units. At this point, international trade will lead to the equilibrium terms of trade between the two nations.

iii. Factor Proportion Theory: The Heckscher-Ohlin Samuelson Model

To explain the importance of resources in trade, the proportion theory (or the Heckscher-Ohlin Samuelson model) explains the interaction between the relative abundance of factors of production (such as capital, labour or land) and the relative intensity with which these factors of production are used in the production of different goods.
By the factor proportion theory, a country which is relatively abundant in labour will have a comparative advantage in the production of relatively labour intensive goods and a country which is relatively capital abundant will have a comparative advantage in the production of relatively capital intensive goods. Specifically, country A has a comparative advantage in capital intensive good relative to country B, if it’s capital-labour ratio is greater than that of country B. However, both countries stand to gain from international trade.

c) Empirical Literature

Jin (2000) investigated the effect of trade on economic growth for rapidly growing economies in East Asia in which rapid growth has been accompanied by a persistent openness to world trade. The framework of analysis was a five-variable vector autoregressive model that consists of real output, money supply, real government spending, foreign price shocks, and openness measures. The results did not strongly support the new growth theories in which increasing openness affects long-run growth. Most countries in the sample have fiscal policy shocks as well as foreign price shocks which have a greater impact on economic growth than did the openness shock. The results were generally consistent with the view that the role of the government is critical for growth among the East Asian economies.

Sinha (2000) also carried out an analysis of the effect of the growth of openness and investment on the growth of GDP for 15 Asian countries for the period 1950 to 1992. He developed a model which specified GDP growth as a function of growth rates of openness (export plus import), domestic investment and population. The Auto-Regressive Model (ARM) results showed that for China, Hong Kong, Iran, Iraq, Israel, Myanmar, Pakistan and Singapore, the coefficient of the growth of openness was positive and significantly different from zero; and whereas for China, Hong Kong, Indonesia, Israel, Japan, Jordan, Philippines, Singapore and South Korea, the coefficient of the growth of domestic investment was also positive and significantly different from zero. In some others, the coefficient of the growth of population was negative but not significantly different from zero. Thus, this study found support for the proposition that the growth rate of GDP is positively related to the growth rates of openness and domestic investment. However, the relationship between the growth rate of GDP and the growth rate of population was not clearly spelt out. This study deserves special attention because it was very audacious in the use of the Auto-Regressive Model (ARM) which is still an evolving econometric approach in the 1990s.

Wacziarg (2001) tried to distinguish international trade influences on economic growth. He hypothesized that trade effects economic growth through six potential channels:

1. Macroeconomic policy quality,
2. Government size,
3. Price distortions or black-market premium,
4. Investment share of GDP,
5. Technology, and
6. Foreign direct investment.

He used a simultaneous equation model consisting of an extended growth equation, an equation to capture the simultaneity between growth and trade, plus six channel equations in which an openness index is one of the explanatory variables.

Wacziarg's result showed that the most important channel through which trade influences economic growth was investment which accounts for 63 per cent of trade's total growth effect; the technology channel (22.5 per cent of trade's total growth effect), and stabilizing macroeconomic policy (18 per cent of trade's total growth effect), and others account for nearly all of the remainder of trade's positive influence on growth. These results reinforced Levine and Renelt's (1992) findings which states that international trade acts through investment to influence economic growth.

Giles and Stroomer (2003) developed a flexible technique for measuring the speed of output convergence between countries when such convergence may be of an unknown non-linear form. They then calculated these convergence speeds for various countries, using two-time series data-sets and half-lives regression. These calculations were based on both nonparametric ‘kernel regression’ and ‘fuzzy regression’, and the results are compared with more restrictive estimates based on the assumption of linear convergence. The calculated half-lives are regressed, again in various flexible ways, on cross-sectional data for the degree of openness to trade. They found evidence that favoured the hypothesis that says - increased trade openness is associated with a faster rate of convergence in output between countries.

In an epoch-making study, Ynikkaya (2003) estimated the effect of trade liberalization on per capita income growth for 120 countries for the period 1970 to 1997. He used two types of trade openness measures. The first openness measure was estimated by using trade volumes which include different ratios of trade variables (exports, imports, exports plus imports and trade with developed countries) and GDP. He also used another measure based on trade restrictiveness which was estimated by calculating restrictions on foreign exchange on bilateral payments and current transactions. The results of the Generalized Method of Movement (GMM) estimates showed that the first group of openness, based on trade volumes were significant and positively related with per capita growth. The result also revealed that for developing countries openness based on trade restrictions were also significant and positively related to per capita growth. He, therefore,
concluded that trade restrictions in developing countries may cause faster GDP growth.

Brummer (2003) using a dynamic panel model with panel data sets drawn from 125 countries over a thirty-three (33) years period (1960 –1992) explicitly tested the hypotheses of no long-term effects of growth on income and income growth. To address the possibility of endogeneity, Brummer constructed an instrument for trade by extending the Frankel and Romer's (1999) cross-sectional approach to the case of a panel data approach. The empirical results indicated that trade had a positive and significant effect on the level of income, but the effect on income growth through positive is non-robust to model specification.

Kim (2004) used the instrument-variable (IV) threshold regressions approach of Caner and Hansen (2004) to investigate whether the trade's contribution to standards of living and long-run economic growth varies according to the level of economic development using data on 61 countries over the 1960-1995 period, following the Frankel and Romer (1999) cross-sectional approach in using geographical variables (population, latitude and area) as the instruments to deal with simultaneity problem and reverse causation of international trade. The empirical evidence showed that greater trade openness has strong beneficial effects on growth and real income for the developed countries but significant negative effects for the developing countries. The heterogeneity in the relationships of trade with growth and income suggested that greater international trade and integration may foster uneven development and rather contribute to more diverging economies, showing that trade exerts its influence via the productivity channel for higher-income countries.

Oviemuno (2007), investigates international trade and economic growth in developing countries (1960-2003) specifically, a case study of Nigeria. The study made use of data on export, import, exchange rate and inflation sourced from CBN statistical bulletin. Furthermore, in order to achieve the overall objective of the study, the OLS econometric technique was used to analyse the data. The result shows that Nigeria's import value, export value and inflation rate do not act as an engine of growth in Nigeria.

Billmeier and Nannicini (2009) evaluated the impact of a binary treatment of trade openness or economic liberalization on the outcome changes in per capita income. Using a panel data set covering about 180 countries over the period 1960-2000, they used micro-econometric matching estimators based on the same identifying assumption as Ordinary Least Squares (OLS) conditional independence; whereby selection into treatment is fully determined by observable characteristics to make the estimation procedure more transparent, bringing glasnost to muddied waters. The paper applied a transparent econometric method to make a comparison between treated (i.e. open) and control (i.e. closed) countries while remaining within an acceptable statistical framework. They also employ the difference of (log) per capita GDP, as they are interested in the dynamic impact of trade openness over time, not only in its one-off effects on the individual income level. In doing so, they are able to identify an additional weakness of cross-country estimates: country comparisons that lie behind simple cross-sectional results which are often more than far-fetched. Cleaning the sample of countries outside the area of common support with respect to geographical areas and other important covariates, they confirm a positive and significant association between openness and growth within selected regions and that after 1970. So, using an alternative measure of trade barriers, they find instead inconclusive evidence.

Sun (2010) also investigated the role of international trade in China's economic growth. Consideration was done on the evolution of China's international trade regime and the policy that China has adopted in favour of trade sectors; with an evaluation of the effects of international trade on China's economic growth through examining of improvement in productivity. Both econometric and non-parametric approaches were applied based on a 6-year balanced panel data of 31 provinces of China from 2002 to 2007. For the econometric approach, a stochastic frontier production function is estimated and province-specific determinants of inefficiency in trade were identified. For the non-parametric approach, the Divisia index of each province/region was calculated to be used as the benchmark. The study demonstrated that increasing participation in global trade helps China reap the static and dynamic benefits, and stimulating rapid national economic growth. Both international trade volume and changes in positive effects on China's regional trade and participation in international trade. Policy implications were accordingly drawn from the empirical results.

Usman (2011) also did well to investigate the workings of international trade on Nigeria economic growth for the period, 1970 to 2005. The researcher collected time series data from CBN statistical bulletin and used the econometric method of OLS to analyse the data. The result reveals that import, exchange rate and export are all negatively related to real GDP. The study concluded that there is a need to re-examine Nigeria's trade policies and competitive products (commodities) should be produced by domestic industries.

According to Usman (2011), Egwaikhide (1999) carried out an investigation on the quantitative effects of non-oil expansion on Nigeria's economic growth from 1960 to 1983 based on the experiment of simulation; the researcher discovered that a 75 per cent rise in non-oil export-led to a 1.4 per cent increase in real GDP. Therefore, concluded that there is a need to
promote export in order to enhance GDP growth in Nigeria.

We see Iftikhar (2012) carried an empirical investigation over the causality relationship between trade liberalization and economic growth in Bangladesh by employing co-integration and Granger causality techniques of time series econometrics for the period of 1975-2010. The data collected on trade liberalization and economic growth was taken from the world development indicators. His empirical result revealed that there exist short run and long run co-integration and causality relationships among variables in the growth model; implying that trade openness policies may be feasible with sustained economic growth. Further findings revealed that causality runs from economic growth to trade liberalization. The results were therefore consistent with the growth theories and economic literature.

Ulasan (2012) revisited the empirical evidence on the relationship between trade openness and long-run economic growth over the period 1960-2000. In contrast to previous studies focusing mainly on the period 1970-1990, this study reassessed the openness-growth nexus over a much longer sample period, enabling policymakers for to better account for both trade policy stance and long-run growth dynamics. Ulasan carried out the empirical investigation by employing various openness measures suggested in the literature rather than relying on a few proxy variables. He also constructed three additional composite trade policy indexes directly measuring trade policy stance. He adopted the empirical framework of the augmented neo-classical growth model suggested by Mankiw et al (1992) for investigation openness-growth link. The empirical results indicated that many openness variables are positively and significantly correlated with long-run economic growth. However, in some cases, once fragility of the openness-growth association, the significance of openness variables disappears the moment other growth determinants, such as institutions, population heterogeneity, geography and macroeconomic stability were accounted in the study.

Alimi and Atanda (2011), and Ajayi and Atanda (2012) investigated the trade and capital flow channels of globalization on macroeconomic stability as proxy by real output growth rate in Nigeria between 1970 and 2009 in their research; using an autoregressive model which indicated that the first lag of real output growth rate had a significant positive effect on real current growth rate. Their empirical results revealed that trade and capital flow dimensions deteriorate in macroeconomic stability level in Nigeria. The existence of cointegration was established among the variables, which in the short run analysis using the error correction mechanism model established disequilibrium in the stability level but, the error correction term adjusted the disequilibrium at 97.5% divergence at the long-run.

Eravwoke and Imide (2013) equally examined international trade as an engine of growth in developing countries using Nigeria as a case study. The primary objective of the study was to test the impact of international trade on economic development in Nigeria. Data were collected mainly from the Central Bank of Nigeria (CBN) bulletin, National Bureau of Statistics, etc. as secondary sources. They used the regression analysis, specifically the unit root test, error correction model (ECM) and the co-integration analysis. The study revealed that export was statistically significant to international trade since it was significant at both levels 1 & 2 at first difference. They concluded that the government should consider exporting more goods and services in order to promote international trade which is a veritable tool for the economic growth of the Nigerian economy.

Alajekwu, Ezeabasili and Nzotta (2013) investigated the effect of trade openness on stock market development and economic growth of Nigeria. They employed annual time series data of 26 years (1986 – 2011). The ADF test revealed stationarity of the variables at the first difference. The Johansen multivariate cointegration test confirms a long-run co-integrating relationship among the variables at a 5% level of significance. In addition, the regression estimates showed that trade openness response to stock market development does not have a significant effect on economic growth. The Granger causality test indicated that there was no causal relationship between trade openness and economic growth on one hand, and trade openness and stock market development on the other hand. The study concluded that exposure to external economies (international trade) had no significant contribution to the development of the Nigerian stock market in particular and the economy in general.

Omoju (2013) examined the effect of trade on economic growth in Nigeria using data from 1980 to 2010. The econometric model is derived from a production function in which the level of a country's productivity depends on FDI, the total value of trade, exchange rate and government expenditure. The mathematical model was based on the methodology adopted by Jude and Pop- Silaghi (2008) for Romania, and that of Karbas, Mohamadi and Ghofrani (2005) for 42 developing countries with some slight adjustments based on relevance to Nigeria and availability of data. The technique of analysis was the Ordinary Least Square (OLS) regression method. The empirical results revealed that international trade exerted a significant positive effect on economic growth in Nigeria, while FDI, government expenditure and exchange rate also positively but insignificantly impacted on the economic growth of Nigeria.

Adelowokan and Maku (2013) also examined the effect of trade and financial investment openness on
economic growth in Nigeria between 1960 and 2011. The econometric model employed by Kim (2008) to investigate whether trade contributes to standards of living and long-run economic growth for selected developed and developing countries was adopted for this study. The Kim (2008) model was modified taking into consideration a single country scenario in the empirical analysis and the structure of the Nigerian economy in relation to trade flow dynamics. Estimates from the reported dynamic regression model indicated that trade openness and foreign investment exert a positive and negative effect on economic growth respectively. Also, the empirical results showed that the partial adjustment term, fiscal deficit, inflation and lending rate were growth increasing variables during the reviewed periods. Further tests carried out also indicated a long-run relationship between trade openness, foreign investment, and economic growth in Nigeria between 1960 and 2011.

Nduka (2013) was not left alone in empirically testing whether trade openness leads to economic growth in Nigeria. The Ordinary Least Squares (OLS) technique and data from 1970 – 2008 from CBN statistical bulletin were employed. GDP (Economic Growth) was the dependent variable, whereas the degree of openness, investment, government expenditure and lagged GDP were the independent variables. From the empirical results, it was revealed that the independent variables had a direct impact on the economic growth of Nigeria respectively. The results revealed that, a unit increase in the degree of openness holding other variables constant, led to about 5 per cent increase in GDP; 1 per cent increase in investment holding other variables constant, led to about 18 per cent increase in GDP; 1 per cent increase in government expenditure given other variables, led to about 9.7 per cent increase in GDP and 1 per cent increase in the previous GDP given other variables, led to about 100 per cent increase in the current GDP. It also shows adjusted R2 as 0.99 (99%). The unit root tests indicated that all the variables lagged and GDP was stationary only after first difference. The cointegration test showed that there existed a long-run equilibrium between economic growth, trade openness, investment, and government expenditure in Nigeria. The study revealed that openness impact significantly on economic growth in Nigeria.

Ulasan (2014) also examined the long-run relationship between trade openness and economic growth across countries over the period 1960-2000. Two strategies were followed in his empirical investigation. First, he extended the augmented neo-classical growth model with an openness variable and estimated it by using a battery of openness measures suggested in the literature. He also constructed three composite trade policy indexes consisting of weighted averages of tariff rates, non-tariff barriers and black market premium for the foreign exchange rate. Secondly, he implemented the Bayesian model averaging technique to deal with the model uncertainty, a fundamental problem which has been plaguing his previous work on the topic. His findings revealed that there is no robust link between trade openness and long-run economic growth.

The purpose of the study by Mogoe and Mongale (2014) was to examine the impact of foreign trade on economic growth in South Africa. The findings of this study were to determine the effects of international trade on economic growth to the policymakers. The study followed the Cointegrated vector autoregression approach which contained the following tests of Augmented Dickey-Fuller and Phillips-Perron models to test for stationarity. The model was also taken through the Johansen cointegration test and Vector error correction model. The findings of the stationarity tests indicated that all the variables had a unit root problem. The cointegration model emphasized the long run equilibrium relationship between dependent and independent variables. The empirical results of the Johansen cointegration test rejected the null hypothesis of no cointegration and suggested the presence of a long term economic relationship among all the variables. Empirical investigation revealed that inflation rate, export and exchange rates were positively related to GDP whilst import was negatively related to GDP. The conclusion drawn was that there is a correlation amongst GDP and its regressors and recommendations were postulated that, the policymakers should improve and strengthen the competitiveness of export sector with the aim of striving for a balance with the import sector.

The study by Nosakhare and Iyoha (2014) examined the nexus between foreign trade and economic growth in Nigeria using quarterly time-series data for 1981Q1 through 2001Q4. In order to fully account for feedbacks, a vector autoregressive model was utilized. The results showed that there was a stable, long-run relationship between foreign trade and economic growth. The variance decomposition results indicated that the predominant sources of Nigeria’s economic growth variation were due largely to “own shocks” and foreign trade innovations. The study, therefore, recommended the adoption of trade expansion policies as a means of accelerating economic growth in Nigeria.

Dada and Aluko (2014) examined the effect of international trade on the economic growth of Nigeria in the 21st century. The model of the study specified economic growth measured by gross domestic product as dependent on international trade proxy by imports, exports, and trade openness. Annual time series data from 2000-2012 was sourced from CBN statistical bulletin and analysed using Ordinary Least Square (OLS) multiple estimation techniques. It was evidenced by the empirical results that international trade had a
significant positive impact on economic growth. Imports, Exports, and Trade Openness had a significant effect on the economy. The study recommended that the government should reduce over-dependence on oil exports and increase as well as diversify its export base to earn more revenue.

The study by Adeleye, Adeteye and Adewuyi (2015) examined the impact of international trade on economic growth in Nigeria, using net export (i.e. total export less total import) and Balance of Payment as proxies for international trade while Gross Domestic Product represented economic growth. The study employed regression analysis as the method of analysis using co-integration and error correction modelling techniques to find the long-run relationship between economic performance and international trade. The result shows that only Total Export (TEX) remained positive and significant while others remained insignificant, thus concluding that Nigeria was running a monocultural economy where only oil acted as the sole support of the economy without tangible support from other sectors such as industrial/manufacturing and agriculture. They recommended that the government should, therefore, pursue aggressive diversification of the economy by putting in place policies and incentives that will boost non-oil export, the manufacturing sector and overall promotion of the industrial growth of Nigeria. Yakubu and Akanegbu (2015) asserted that there has been a long-held belief that there is a positive relationship between economic growth and increased levels of international trade. Therefore, their paper aimed to empirically examine the impact of international trade on economic growth in Nigeria for the period 1981 to 2012. Using a degree of openness to proxy international trade, the ordinary least squares technique was employed to estimate the impact of international trade on Gross Domestic Product using time series data extracted from World Bank data and Central Bank of Nigeria Statistical Bulletin. The result of the analysis showed that all the variables except interest rate were statistically significant. Therefore, the study recommended that policymakers should adopt policies on trade liberalization such as reduction of non-tariff barriers, reducing tariffs, reducing or eliminating quotas that will enable the economy to grow at spectacular rates. The study supported the proposition that the degree of openness has a direct robust relationship with economic growth since the proxy variable is positive and statistically significant in the model.

Abdullahi, Safiyamu and Soja (2016) studies on the effects of international trade on economic growth have varying outcomes. Thus, their study analysed the relationship between international trade and economic growth in West Africa from 1991-2011. Based on the panel data of 16 out of 17 countries in the region were analysed using multiple regression analysis. The study found that a one per cent rise in the export variable will lead to the growth of GDP by 5.11 per cent. Import, on the other hand, was positive but had an insignificant impact on GDP growth. Foreign exchange had a negative impact on GDP growth. Therefore, the study concluded that exports impact positively on the economic growth of the region and recommended that West African countries should encourage indigenous enterprise for export promotion and import substitution.

The main thrust of the study by Imougenele and Ehiikoey (2016) was to examine the impact of international trade on Nigeria economic growth. The study employed regression analysis in examining the effect of international trade variables (openness of the economy, volume of import, export, foreign direct investment and exchange rate) on Nigeria’s economic growth using time series data from 1985 to 2013. The Augmented Dickey-Fuller (ADF) test was used for the unit root test and Johansen's co-integration test was also conducted to establish short and long-run relationships between economic growth and international trade variables. The result shows two co-integrating equations which establish the existence of long-run relationship among the variables. The Ordinary Least Square statistical technique was used to assess the degree of influence which the variables have on each other. The results show that export, foreign direct investment and openness of the economy have a direct and significant impact on Nigeria's economic growth. The exchange rate has a direct but insignificant impact on the nation's economy while the volume of import has an inverse and insignificant impact on the Nigerian economy. From their findings, it was concluded that foreign trade variables of export, foreign direct investment and openness of the economy have the tendency to improve and sustain the nation's economic performance and stabilised the country's trade with other nations of the world. The study recommended among others that government should ensure that adequate macroeconomic policies that will open up the economy are put in place to encourage foreign direct investment inflow and expand Nigeria's exportation of goods and services for the established international market in view of the fact that exports are drivers of economic growth.

Abomaye-Nimenibo and Inimino (2017) carried out a study on international trade and economic growth in Nigeria from 1980 to 2014. Their broad objective was to examine the impact of international trade on economic growth in Nigeria using time series data on the gross domestic product (GDP), export (EPT) exchange rate (EXR) and Trade openness (TOP) which were sourced from CBN statistical bulletin. The econometric methods of Co-integration and Error Correction Mechanism (ECM) were employed as analytical tools. The result of the parsimonious ECM shows that the overall model is satisfactory given the coefficient of determination of 82 per cent and f-
International trade theories postulate that there is a positive relationship between international trade variables and economic growth assuming that all other things are constant. On the basis of these propositions, we expect positive signs for $C_1$, $C_2$, $C_3$, $C_4$ and $C_5$ i.e. $C_1 > 0$; $C_2 > 0$, $C_3 > 0$, $C_4 > 0$, $C_5 > 0$.

c) Model Estimation Technique

The model specified was estimated with the ordinary least squares (OLS) multiple regression techniques. This method was adopted because:
1. It is simple and intuitively appealing (Gujarati and Porter, 2008),
2. It minimizes the least squares residual which makes it an optimal technique on this criterion (Koutsouyianis, 1978),
3. It produces the best linear unbiased estimates (BLUE), and
4. There is readily available software that can be used to execute ordinary least squares regression analysis with any version of eviews.

d) Unit Root Test: Augmented Dickey-Fuller Test

Estimating regression models involving time series which may produce results that are spurious or of dubious value; which result may superficially look good but on further investigation, they look suspicious (Gujarati, 2006 and Osuala, 2015). For this reason, Gujarati (2006) stated that if we are dealing with time series data, we must make sure that the individual time series are either stationary or integrated of the same order. If this is not the case, the results may be considered spurious or just nonsense regression analysis. Gujarati and Porter (2009) stated that the problem associated with using non-stationary time series on one another yield spurious regression results which are analytically meaningless.

e) Statistical tests

The estimated model was evaluated on the criteria that:
1. $R^2$ was used to measure the goodness of fit of the estimated regression models.
2. The $t$-test was used to test the significance of the individual parameter estimates of the model.
3. The $F$ – test was to test the overall significance of all the parameter estimates of the model and the validation of the stated hypotheses.
4. Test for Autocorrelation: Durbin-Watson test statistic was used.

f) Sources of Data

Annual data covering the period 1981 to 2015 were utilized for the statistical and econometric analyses. The data were obtained from the Central Bank of Nigeria Statistical Bulletin.
IV. Data Presentation and Analysis of Results

The data used in the study is analysed and the result presented and interpreted. The analysis starts with a unit root test followed by the estimation of the regression equation.

a) Unit Root Test

Here, the variables were tested for stationarity using the Augmented Dickey-Fuller (ADF) technique.

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Statistic</th>
<th>5% Critical Level</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>-4.3163938</td>
<td>-1.9521</td>
<td>1(2)</td>
</tr>
<tr>
<td>OIMP</td>
<td>-4.246214</td>
<td>-2.9527</td>
<td>1(1)</td>
</tr>
<tr>
<td>OEXP</td>
<td>-3.174031</td>
<td>-1.9514</td>
<td>1(1)</td>
</tr>
<tr>
<td>NOEXP</td>
<td>-4.215383</td>
<td>-3.5514</td>
<td>1(1)</td>
</tr>
<tr>
<td>EXR</td>
<td>-5.268185</td>
<td>-3.5514</td>
<td>1(1)</td>
</tr>
</tbody>
</table>

The unit root test result on Table 4.1 showed that all the variables (OIMP, OEXP, NOEXP and EXR) are stationary at first difference except GDP which is stationary at the second difference. This is as a result of the various ADF statistical values that are greater than their 5 per cent critical values in absolute terms.

<table>
<thead>
<tr>
<th>Series: GDP OIMP NOIMP OEXP NOEXP EXR</th>
<th>Lag interval: 1 to 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eigen value</td>
<td>Likelihood 5 Percent</td>
</tr>
<tr>
<td>0.957698</td>
<td>226.0891</td>
</tr>
<tr>
<td>0.792199</td>
<td>121.7126</td>
</tr>
<tr>
<td>0.698104</td>
<td>69.86387</td>
</tr>
<tr>
<td>0.379211</td>
<td>30.34062</td>
</tr>
<tr>
<td>0.244327</td>
<td>14.60739</td>
</tr>
<tr>
<td>0.149985</td>
<td>5.362552</td>
</tr>
</tbody>
</table>

The LR test indicates 4 co-integrating equation at 5 per cent. This shows that all the variables in the first model (GDP, OIMP, NOIMP, OEXP, NOEXP and EXR) have a long run relationship.

<table>
<thead>
<tr>
<th>Dependent Variable: LOG(GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: Least Squares</td>
</tr>
<tr>
<td>Date: 04/18/19 Time: 21:21</td>
</tr>
<tr>
<td>Sample: 1981-2015</td>
</tr>
<tr>
<td>Included observations: 35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>3.704083</td>
<td>0.391351</td>
<td>9.464853</td>
<td>0.0000</td>
</tr>
<tr>
<td>LOG(OIMP)</td>
<td>-0.180007</td>
<td>0.102068</td>
<td>-1.763599</td>
<td>0.0883</td>
</tr>
<tr>
<td>LOG(OEXP)</td>
<td>0.104919</td>
<td>0.179971</td>
<td>0.582976</td>
<td>0.5644</td>
</tr>
<tr>
<td>LOG(NOIMP)</td>
<td>0.542911</td>
<td>0.160592</td>
<td>3.380678</td>
<td>0.0021</td>
</tr>
<tr>
<td>LOG(NOEXP)</td>
<td>0.358825</td>
<td>0.093350</td>
<td>3.843861</td>
<td>0.0006</td>
</tr>
<tr>
<td>LOG(EXR)</td>
<td>0.106501</td>
<td>0.124927</td>
<td>0.852504</td>
<td>0.4009</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.986082</td>
<td>Mean dep. var</td>
<td>8.268007</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.963682</td>
<td>S.D. dep. var</td>
<td>2.239233</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.286041</td>
<td>Akaikes info criterion</td>
<td>0.489442</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>2.372764</td>
<td>Schwarz criterinon</td>
<td>0.756073</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-2.565230</td>
<td>F-statistic</td>
<td>410.9265</td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>1.350795</td>
<td>Prob (F-statistic)</td>
<td>0.000000</td>
<td></td>
</tr>
</tbody>
</table>

The results as presented in Table 4.3 gave the R-squared value as 0.986082 which implies that about 98.61 per cent of the total variation in economic growth (GDP) within the period under-study was explained by changes in oil import (OIMP), oil export (OEXP), non-oil import (NOIMP), non-oil export (NOEXP) and exchange rate (EXR). The F-statistics of 410.9265 with the corresponding probability value of 0.0000 measured the adequacy of the regression model and the overall influence of OIMP, OEXP, NOIMP, NOEXP and EXR on GDP. Since the probability value of the F-statistics is less than 0.05, the model was a good fit and the explanatory variables jointly exerted a statistically significant effect on the dependent variable (GDP).
The Durbin-Watson statistics of 1.359075 showing that there was the presence of serial correlation among the variables. The coefficient of the constant term stood at 3.704083 implies that if all the explanatory variables (OIMP, OEXP, NOIMP, NOEXP and EXR) are held constant, GDP will remain at 3.704083. The coefficient of OIMP was -0.180007 while that of t-value is -1.763599 with the probability value of 0.0883. This shows that if all other explanatory variables in the model are held constant, a percentage increase in OIMP will cause a negative and insignificant effect on economic growth by 0.004476 percent. The coefficient of OEXP was 0.104919 with t-value of 0.582976 and probability value of 0.5644 implying that a percentage change in OEXP will cause a positive and insignificant effect on GDP by 0.104919 per cent. The coefficient of NOIMP was 0.542911 with t-value of 3.850678 and probability value of 0.0021, meaning that a percentage change in NOIMP will bring about a positive and significant change in GDP by 0.358825 per cent. The coefficient of NOEXP was 0.358825 with t-value of 3.843861 and probability value of 0.0066 showing that a percentage change in NOEXP will cause a positive and significant change in GDP by 0.358825 percent. The coefficient of the exchange rate was 0.106501 with t-value of 0.852504 and probability value of 0.358825 with t-value of 0.852504 and probability value of 0.5644 implying that a percentage change in EXR will cause a positive and insignificant effect on GDP by 0.106501 per cent.

The coefficient of EXR was 0.106501 with t-value of 0.852504 and probability value of 0.5644 implying that a percentage change in EXR will cause a positive and insignificant effect on GDP by 0.106501 per cent. The coefficient of NOIMP was 0.106501 with t-value of 0.852504 and probability value of 0.5644 implying that a percentage change in NOIMP will cause a positive and non-significant change in GDP by 0.106501 per cent. The coefficient of NOIMP was -0.180007 with t-value of 0.852504 and probability value of 0.358825 per cent. The coefficient of NOIMP was -0.180007 while that of t-value is -1.763599 with the probability value of 0.0883. This shows that if all other explanatory variables in the model are held constant, a percentage increase in OIMP will cause a negative and insignificant effect on economic growth by 0.004476 percent. The coefficient of OEXP was 0.104919 with t-value of 0.582976 and probability value of 0.5644 implying that a percentage change in OEXP will cause a positive and insignificant effect on GDP by 0.104919 per cent. The coefficient of NOIMP was 0.542911 with t-value of 3.850678 and probability value of 0.0021, meaning that a percentage change in NOIMP will bring about a positive and significant change in GDP by 0.358825 per cent. The coefficient of NOEXP was 0.358825 with t-value of 3.843861 and probability value of 0.0066 showing that a percentage change in NOEXP will cause a positive and significant change in GDP by 0.358825 percent. The coefficient of the exchange rate was 0.106501 with t-value of 0.852504 and probability value of 0.5644 implying that a percentage change in EXR will cause a positive and insignificant effect on GDP by 0.106501 per cent.

V. Summary, Conclusion and Recommendations

a) Summary of Major Findings

In the course of the study, a plethora of findings emerged. However, the major findings include:

1. Oil import has a negative and insignificant impact on the economic growth in Nigeria. This implies that an increase or decrease in oil import will have an insignificant impact on the economic growth of Nigeria at least for the period under study.

2. Oil export has a positive and insignificant impact on the economic growth of Nigeria. This implies that an increase or decrease in oil export will have an insignificant impact on the economic growth of Nigeria at least for the period under study.

3. Non-oil import has a positive and significant impact on the economic growth of Nigeria. This implies that an increase or decrease in non-oil import will have a significant impact on the economic growth of Nigeria.

4. Non-oil export has a positive and significant impact on the economic growth of Nigeria. This implies that an increase or decrease in non-oil export will have a significant impact on the economic growth of Nigeria.

5. The exchange rate has a positive and insignificant impact on economic growth in Nigeria. This implies that an increase or decrease in the exchange rate will have an insignificant impact on economic growth.

b) Conclusion

Based on the summary of our major findings, the study concludes that there is a negative and insignificant relationship between oil import and economic growth in Nigeria; positive and insignificant relationship between oil export and economic growth in Nigeria; positive and significant relationship between non-oil import and economic growth in Nigeria, positive and significant relationship between non-oil export and economic growth in Nigeria.

c) Recommendations

In view of our findings and conclusions, the following policy recommendations have been postulated:

1. All the tiers of government should embark on holistic or all-around policies and approaches that will boost non-oil exports in Nigeria, especially those that have to do with manufacturing.

2. It is also our candid recommendation that there should be some incentive packages or allowances for policies that allow access to a wider base of technological knowledge, which will make technological diffusion easier, and such appreciation will motivate research and development.

3. The use of local content in all our industries should be vigorously pursued so that our BOP should be in surplus at all times.

4. LDCs should be open up to foreign investment with more advanced technology so that increases in the rate of innovation and in the economy’s rate of growth could be recorded positively.

5. Nigeria’s dependency on import goods both at domestic and industrial production level should be discouraged and the nation should aim at embarking on import substitution approach so as to bring about the need for economic development in Nigeria.

6. The government should partner with the private sector to carry out industrialized farming by purposefully shifting away from subsistence farming to make the export of these products to earn the nation good foreign reserve.

7. That, the agricultural sector of Nigeria should be paid more attention in order to increase the agricultural output as a non-oil product which will lead to increased consumption (demand), investment, employment, export and eventually economic growth.
8. The Government of Nigeria should make concerted efforts to acquire and make available farming implements, tractors, harvesters etc. and distribute to farmers at a subsidized rate to boost the non-oil exportation possible.

9. The Government of Nigeria should increase the output of agricultural products and make them available in the local market at reduced prices in order to improve the standard of living of the populace, in the face of exportation of these products to earn foreign reserve.

10. Nigerians and indeed Africans can begin to improve the quality of their products by moving from raw resource exportation to refining and packaging of primary goods such as refined petroleum products for export, rather than the crude oil for exportation in its natural form.

11. The Nigerian Monetary Authority should re-evaluate her interest rate policies to stimulate investment in both the manufacturing and agricultural sector and increase economic growth.

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Appendixes 1

<table>
<thead>
<tr>
<th>Year</th>
<th>OIMP</th>
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<th>OEXP</th>
<th>NOEXP</th>
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<th>EXR</th>
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<td>10.7</td>
<td>0.3</td>
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<td>8</td>
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<td>7.2</td>
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Table 4.1: Unit Root Test Result

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Source: CBN Statistical Bulletin (1981-2016)
### Table 4.2: Cointegration Test Result for the Model

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</tr>
<tr>
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<td>5.362552</td>
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