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### RESEARCH ARTICLE

#### TRADE LIBERALIZATION AND ECONOMIC GROWTH IN NIGERIA.

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#### Abstract

This study examined trade liberalization and economic growth in Nigeria. Secondary data were sourced from CBN statistical bulletin and World Bank Development indicators over a period of 28 years, 1990 – 2017. The study proxied Trade Liberalization by Degree of Openness (DOP), Exchange Rate (EXR), Balance of Payment (BOP), Inflation rate (INF), Foreign Direct Investment (FDI), Balance of Trade (BOT) and Net Exports (NEXP) as the independent variables, while Gross Domestic Product (GDP) was proxied for Economic Growth in Nigeria as the dependent variable. The study applied E – view 7.0 version and used Ordinary Least Square (OLS) for the estimation of the result. The results/findings revealed that the independent variables: DOP, INF, FDI, BOT and NEXP have positive significant impact on GDP while EXR and BOP shows a negative impact. The coefficient of R-squared which is 0.9896 shows that all the independent variables have 99% positive impact on GDP while the coefficient of Adjusted R-squared, 0.9858 suggests that 98% of all independent variables could be explained by the changes in GDP. The study concludes that trade is an engine for growth and economic integration and therefore contributes heavily to the economic growth of a nation. Thus, it was recommended that government should formulate policies that will enhance both domestic and foreign trade to foster global integration and competition since it has been established that there is a relationship between degree of openness and volume of trade, competitiveness and integration.

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#### Introduction:-

Openness of trade by nations and countries brings about sustained growth and prosperity. By liberalizing trade and concentrating on areas of comparative advantage or by focusing on what they do best, countries benefit economically. Liberalized trade enables resources to be channelled to where the return is highest and diversifies risk (OECD, 2016). It leads to cost effectiveness for importers and exporters, lower production costs and ultimately lowers consumers cost.

Trade liberalization can be a threat to developing nations and economies due to inability to effectively compete with more established economies which can lead to the crumble of new industries in a particular nation (Investopedia, 2016). Domestic industries complain of unfair competition and dumping from world markets. Dumping is when a

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firm sells a good in a foreign market at a price below that for which the same goods in the domestic market sells. This increases the consumption of such items and increases imports of such items. Domestic industries are harmed as lower priced imports reduce sales by domestic firms and dictates lower prices. Since 1986, after the adaption of Structural Adjustment Program (SAP) of the World Bank, Nigeria economy has been more open due to the policy measures that were implemented during this period. In 1995, Nigeria became a member of the World Trade Organization (WTO) which led to removal of some trade restrictions. This removal led to the increase in the volume of international trade as reflected in GDP growth (CBN, 2004).

The World Trade Organization and the World Bank discourages the banning of imports since it does not conform to the idea of globalization. Globalization involves the removal of restrictions on across the border trade and investments. In recent years, World Bank group experts help countries compete in international markets. Trade growth is focused on establishing an environment conducive for the emergence of firms that are competitive in both exports and domestic markets and an industry remain competitive only if its prices are kept in line with the markets. According to World Bank Brief (2014), competitiveness is central to Job creation and ultimately to the World Banks goal of eliminating poverty and increasing incomes through better paid jobs. A nations' level of competitiveness reflects the extent to which it is able to provide rising prosperity to its citizens. More competitive economies tend to be able to produce higher levels of income for their citizens. However, while the economy recorded remarkable progress in improving trade relations with other countries as reflected by the increasing rate of total trade to GDP, the rate of economic growth has remained slow (Saibu, 2004).

### **Statement of the Problem**

Embracing globalization and economic integration has led to improving trade relations with other Countries by way of trade liberalization and openness of trade which brought Nigerians heavy reliance on foreign items. This has led to negative impacts on home industries and also to a huge demand on foreign exchange and a depreciation of the naira over the years.

The country's domestic manufacturing is contracting and unable to meet the rising demand of the country's large and expanding population. This contraction is mainly due to the high cost and unreliability of electricity, poor infrastructure, increase in cost of procuring raw materials, increase in cost of capital, multiplied taxation, governments inconsistent policies etc. All these have brought about a greater reliance on imports.

The influx of foreign made goods into Nigeria is most alarming and a threat to local firms. Cheaper and low quality goods flood the market due to relaxed safety checks. The population of Nigeria makes it a big market for multinationals and the global market. There is limited access to FOREX. This makes import difficult especially for industries that require key imported raw materials. The discovery of oil in the 70s also brought about neglect of other sectors which affected availability and the quality of locally produced items as compared to the higher quality and availability of foreign items at cheaper prices. There are also individuals who in search for distinctiveness, exclusiveness and egotism seek foreign products for image boosting purposes.

### **Review of Related Literature**

According to Peter (1998), the cumulative effect of the proliferation of genius technology and the abandonment of economically insular policies by the third world has brought about a more integrated, sophisticated and differentiated market place than ever. Developing countries are being integrated into the global economy creating benefits for both the first world and the third world. Reduction in trade barrier has facilitated increased trade, especially in the area of intermediate goods. Emerging markets governments lures overseas investors with direct incentives like free trade zones, lenient rules, attractive treatments for joint ventures etc in an effort to stimulate economic and labour growth as well as to attract technology and capital to accelerate modernization. Developing world uses cheap labour; their primary comparative advantage and an essential first step towards economic modernization and development, to attract investment and general capital and a process of industrialization. Multinational, one of the many catalysts of increased globalization are hereby presented with new opportunities for cutting costs and increasing profits. Differentiation of the world economy and the slicing up of production both stimulate and are stimulated by international trade. As young nations become industrialized, their disposable incomes increase and consumption increases. The multinational companies take advantage of this. The developing world reaches out to all commercially through multinationals and the trend should only accelerate. Age distribution in first world countries reduces domestic demands for consumer goods, while half the population in emerging markets are under thirties, this makes them good market for MNCs for sales growth.

Justine (2014) in his book, *International Business*; in studying the impact of removal of quantitative restrictions on imports in India on the fast moving consumer Goods (FMCGs) and chemical sectors, analyzed every product and the impact of quantitative restrictions (QR) removal on the products in the FMCG sector and competition between imported items and domestic items, he was of the opinion that quality conscious urban consumers will make a shift to foreign brands even if sold for the same prices as that of domestic brands, hence the necessity of a tariff on imports and also, the mere removal of QR will not mark the demise of domestic industry, though it is likely to affect the consumer goods and small scale industries. Most imports are carried out by big retail outlets which basically cater to the upper segment of the market and the other segment may not be aware of the availability of the product. It will take a great promotional effort to lure customers away from certain product categories like food and beverages where the Indian consumer is very sceptical and particular about hygiene.

### **Tariffs /Custom Duties**

Custom duties and tariff rates are duty rates or taxes collected on imports and some exports by the customs authority of a country. It is also referred to as import/export tax and import/export tariff. A tariff is to raise the cost of imported products. It is a trade barrier. It is usually based on the value of the goods that are imported (Investopedia,2016). Import taxes are designed specifically to offset the competitive advantage provided by trading partners export subsidies. These rates serves as a protection mechanism to a nations home industries, as a means of checking the standard and content of goods going in and out of a country and also as a source of revenue to the government of a country. By lowering costs, import quotas benefits domestic producers by limiting import competition but result in higher prices, which hurts consumers who are also denied access to possible superior foreign product. The government uses these rate to protect infant industries and also in helping domestic firms gain first mover advantages in global industries where economies of scales are important and to overcome barrier to entry by domestic firms.

### **Institutions of Trade Liberalization**

The economic liberalization doctrine spread very rapidly in the 70s and 80s to the third world largely through the Bretton Wood Institutions (International Monetary Fund (IMF) and World Bank) stabilization and Structural Adjustment Programmes (SAP). The doctrine advocates free markets, contends that economic welfare will be improved by freeing all types of control that a government imposes on economic and business activities. The IMF and World Bank, along with the World Trade Organization (WTO) have actively promoted the principles of liberalization (Obadan, 2003). To the World Bank, raising the growth rate of an economy and sustaining that growth requires more than a high rate of investment. It requires unleashing markets so that competition can help improve the allocation of economic resources. They argued that factors of production, goods and services are optimally priced and allocated when their prices are freely determined in competitive environments (World Bank, 2005).

The grandfather of the multilateral multi-year free trade pacts was the 1947 General Agreement on Tariffs and Trades (GATTs). 23 nations pledged to reduce trade barriers and give all GATT nations equal access to their domestic markets. 117 nations signed the 1994 pact. As a result of these pacts, average tariff rates in developed countries fell from 40% in 1948 to less than 4% today (Schiller, 2003) .Series of rounds of trade negotiations were held under the GATT which eventually led to the creation of the WTO in 1995. GATT as a multilateral agreement main objective regulating international trade has its as a substantial reduction of tariffs and other trade barriers and the elimination of preferences on a reciprocal and mutually advantageous basis (Todara & Smith, 2011).

### **Trade Reforms in Nigeria**

The current trend in International relationship the world over, is for countries with geographical affinity to come together in the form of economic cooperation with a view to achieving amongst other objectives free trade between citizens, companies and governments in the area, dismantling of all economic barriers like import duties, travelling and payment restrictions, so as to encourage mobility of skilled labour and cross border investments. Ude & Agodi, 2015).

Nigeria have tried two trade policy regimes, which is protection and trade openness. Trade openness through the adoption and implementation of various schemes and programmes and affiliating with some international bodies, organizations and countries for economic Integration. Trade openness through the adoption of National Economic Empowerment and Development Strategy (NEEDS) is aimed at monitoring the growth of the economy. The ECOWAS trade liberalization scheme was introduced on 1st January, 1990 as part of the efforts of a free trade zone and the adoption of a common tariff. The scheme is designed to; banish trade barriers in the form of tariff, non-tariff barriers like multiplicity of road blocks and checkpoints on highways and payment of tools by transmitters, simplify

cumbersome customs procedures and strictures, life tariffs on industrial goods, mount a common external tariff, promote trade fairs amongst members state and allow the goods for the purpose, easy passage without customs duties. Difficulties associated with economic integration especially in the ECOWAS sub-region includes loose of national independence, high inflation rate in some countries could easily permeate other countries, although series of protocols including the free movement of persons and goods have been signed, it is a known fact that there is no free movement between the member states and even within some countries. Nigerians, for instance cannot claim to be ignorant of the numerous security checkpoint that impede traffic flows in the border routes and even within the cities.

Under Structural Adjustment Programmes (SAP), governments are made to embrace lesser regulation and participation in economic activities, greater participation of the private sector in the management of economic activities and reliance on market forces. Thus liberalization and private enterprise are considered most efficient for the creation of value added and growth and development. But then even with SAP, African economies have remained relatively weak with low economic growth, wide spread poverty, macro-economic instability civil strife amongst others. Even though figures show that imports and exports has been on the rise since the introduction of SAP. (Obadan & Okojie, 2010).

In Nigeria, government authorities have also implemented various import substitution strategies. These include the 1972 Indigenization decree, backward integration policy for cement. These policies helped the development of petrochemical plants, Iron, Steel, textiles, breweries, agriculture and cottage industries and the establishment of assembly plants that used imported processed materials in the automobile and cement industries, with the cement industry being the most successful. Nigeria cement industry not only meets with the local demands of the citizens but also export to other African countries. Available data showed that Nigeria has attained self-sufficiency in cement production (Nkwocha, 2012).

The global economic crisis had impact on different economic of the world, since the world has become a global village with deep inter-dependence. Economics of several African countries are still showing limited growth considering the volume of Africa's trade with the world. The post global economic crisis strategy crucial for growth and development of economics of African countries required regions to remain committed to trade liberalization and avoidance of trade protections measures or administrative controls. This is in spite of the weakening balance of payments (BOP) positions in African countries. Magnitude of the global impact varied considerably from country to country depending on economic peculiarities. Severely affected groups include oil exporting African countries like Nigeria. This is due to their strong linkages with the U.S.

Undoubtedly, Africa has built a strong and reliable partnership in global trade what is required to be done is to solve the trade barriers such as the low level of technological know-how and research capacity, limited access to much needed external finance, limited access to market and market information, limited government support for trade and inconsistency in trade policy which continues to pose a serious obstacle to intra-regional trade growth in Africa. The tremendous expansion in trade experienced by Africa in the past decades can be attributed to its strong partnership with china. Trade with china has provided a tremendous opportunity for the continent to check job losses and accelerate Africa's drive towards diversification of its exports away from primary commodities. African is equally benefiting from reasonably priced imports of equipment that support telecoms, power, manufacturing projects and other essential goods from china (CBN, 2010).

## **Theoretical Review**

### **Theory of Comparative Advantage**

David Ricardo in 1817 propounded this theory wherein a country benefits from international trade even if it is less efficient than other nations in the production of two commodities.

The country maybe at an absolute disadvantage with respect of both the commodities but the absolute disadvantage is lower in one commodity than another. Therefore, the country should specialize in the production and export of the commodity in which the absolute disadvantage is less than that of another commodity. In other words, the country has got a comparative advantage in terms of more production efficiency. This implies that countries also gain from trade by employing their resources for the production of goods in which they are relatively more efficient. David Ricardo developed this theory to explain why countries engage in international trade. For this to happen, he assumed

that there are only two countries, two commodities, free movement of factors of production, no import barriers, the prevailing cost of technology is constant (Mankiw, 2004).

### **Factor Endowment Theory**

Eli Heckscher (1919) and Bertil Ohlin (1933), two Swedish Economists developed this theory also known as Heckscher-Ohlin trade theory. This theory is a means of studying the general equilibrium characteristics of open economies. It explains the reasons for differences in relative commodity prices and competitive advantage between two nations. According to this theory, a nation will export the commodity whose production requires intensive use of the Nations relatively abundant and cheap factors and import the commodity whose production requires intensive use of the Nations scarce and expensive factors. Thus, a country with an abundance of cheap labour would export labour – intensive products and import capital – intensive goods and vice-versa. It suggests that the patterns of trade are determined by factor endowment rather than productivity. This implies that developing countries are labour abundant and therefore they should concentrate in the production of primary products and should import capital intensive products i.e. manufactured goods from the developed countries. The model also assures two countries, two commodities and factor inputs, and labour and capital which are assumed also to be homogenous (Pugel & Lindert, 2000).

### **Hymers' Internalization Theory**

Stephen Hymer, a Canadian economist in his PhD research in 1960; *The International Operations of National Firms*; "A study of Direct Foreign investment" focused on the activities of multinational firms and their impacts on local enterprise. Hymer's work predated most of today's existing theory on multinational enterprises and Foreign Direct Investment (FDI). Prior to Hymer's theory on FDI, all investments were seen as mere capital movement across borders considered to be determined by the differences in interest rates between the countries. Hymer established that there was a distinction between financial investment and these kinds of investments, which he named Foreign Direct Investment. He said FDI gives the firm control over the business activities in other countries whereas portfolio investments do not. Hymer postulated that FDI can only succeed when there are market imperfections that can create advantages and conflicts. He considered multinational firms to be better institutions than actual international markets in the process of stimulating business, information transmitting as well as price fixing. He said differences in interest rates cause portfolio investment, but not direct investment, that the industrial distribution of FDI is not significantly different from one country to another. He concluded that direct investments are capital associated to international operations of firms whose goal is to keep control of production (Vintila, 2010).

### **Empirical Review**

Various studies have been carried out to test and show the impact of trade liberalization and a nation's economy. Many of these studies used cross country approach while others used time series data and various econometric tools. These studies have identified various positive and negative ways trade liberalization and international trade has impacted on economic growth in Nigeria testing different types of variables that are relevant to the study topic as the determining factors.

Echekoba, Okonkwo, & Adigwe (2015), in their study on "Trade liberalization and Economic growth; The Nigerian Experience: analyzed data for the period of 1971-2012 using Gross domestic product, imports, exports, exchange rate, Foreign direct investment and inflation rate, with the help of ordinary least Square (OLS) regression techniques to determine the effect of international trading activities on economic growth. The result of the regression showed that imports, exports and Foreign Direct Investment (FDI) have significant relationship with GDP, while exchange rate and inflation do not have significant relationship with GDP. Thus the study concluded that trade liberalization is good for the Nigeria economy but should be applied carefully as it also has some negative effects.

Ude & Agodi (2015), in their study: *Does Trade Openness Make Sense? Investigation of Nigeria Trade Policy* using Real gross domestic product, exchange rate, interest rate and trade openness, it further empirically examined whether trade openness make sense using Nigeria trade Policy as a yardstick using secondary data from the period under investigation ranged from when Nigeria adopted unrestricted trade policies, that is 1984-2013. The study employed Auto-regressive conditional Heteroscedasticity (ARCH), Generalized Auto-regression Conditional Heteroscedasticity (GARCH) and Pairwise-Granger causality methodology. Results shows that trade openness have a significant impact on economic growth. The control variables (Interest rate and exchange rate) have significant positive effect on economic growth in Nigeria. The Pairwise Granger causality test shows that there is a unidirectional causality between economic growth and trade openness at lag one only.

Kingu (2014) investigated the impact of trade liberalization and export performance in Tanzanian cashew nuts, employing a time series data from 1970 – 2010 using both econometrics and non parametric techniques for the estimation which are: co-integration technique, error correction modelling approach and trend analysis. To estimate this impact the study used the cashew units export earnings (X cashew nuts) as the dependent variable while the independent variables are world price (WP) and real exchange rates (RER) as measures of competitiveness. The empirical results suggest that world price and real exchange rate are significant determinants of cashew nuts exports earnings in Tanzania, however real exchange as a measure of export competitiveness is found to be insignificant both in the short and long-run. This implies that the Tanzania government should not rely on real exchange rates in promoting cashew nuts export performance. World price has a big influence is a cashew nuts export earnings than domestic prices. While the trend analysis revealed that cashew nut exports has a positive trend. The study concluded that trade liberalization improved cashew nuts export earnings tremendously.

Manwa (2015) investigated the impact of trade liberalization on economic growth on five (5) Southern African customs Union (SACU) countries using 32 annual observation. Over the period of 1980 – 2011, the variables used are GDP as the dependent variable while independent variables are capital stock (k), labour (L), Human capital (HC) and Trade liberalization (LIB). The Auto Regressive distributive lag (ARDL) bounds test was used as the primary estimation method. Vector Error Correction model (VECM) was used. The findings showed that the coefficients of labour and Human Capital were negative which suggests that majority of the countries growth arise from mining and capital intensive manufacturing with limited employment opportunities. Short term results under the ARDL bound test showed that non of the trade liberalization variables had any impact on economic growth. Apartheid did influence economic growth. Trade policy cannot be used as a short term stimulant of economic growth but should be viewed and used as a long term strategic tool. The study demonstrated that trade liberalization occurring through incidence and outcomes based measures has had an impact on eco growth in a small country such as Southern African.

Mathew (2013), investigated the impact of trade liberalization and institutions on economic growth in thirty (3) selected sub-Saharan African developing countries. The scope of the study covered the period of 1985 – 2012. The study focused on economic, political and cultural institutions. Selection of countries was based on world banks (2007) classification of countries into moderately outward oriented (MOO), moderately inward oriented (MIO) and strongly inward oriented (SIO) countries. Variables used were independent variables: Gross fixed capital formation (G kap), labour (Lab), Institutional variables (INST), and Trade liberalization (TLIB). While the dependent variable is growth rate of gross domestic product (GRGDP). The statistical measure used is the pooled ordinary least square, while the estimation methods are least square Dummy variables (LSDV) and the Generalised methods of moment's technique (GMM). The findings/results shows that the impact of trade liberalization, economic and political institutions on growth were more visible in central Africa while cultural institutions impacted more on growth in East and Southern Africa. International trade seem to be affected more by strong political and cultural institution than strong economic institutions. The study therefore concludes that trade liberalization and institutions have significant impacts on economic growth, in order for the countries under study to harness maximum gains from international trade, there has to be the presence of strong institutions.

### Methodology:-

This study assessed the impact of trade liberalization on the growth of the Nigeria economy for a period of Twenty-eight (28) years, which is 1990 – 2017. Data was sourced from the World Bank data base, various editions of the National Bureau of Statistics, various editions of Central Bank of Nigeria Statistical bulletin.

The dependent/explained variable used for this study is the Gross Domestic Product (GDP) while the independent/explanatory variables are: degree of openness (DOP), exchange rate (EXR), balance of payment (BOP), inflation rate (INF), foreign direct investment (FDI), balance of trade (BOT) and net exports (NEXP). The multiple linear regression, using the E-view version 7.0 was used for measuring the above variables.

### Model Specification

Mathematically, the model is presented as:

$$Y = F(X_1, X_2, X_3, X_4, X_5, X_6, X_7)$$

$$GDP = f(DOP, EXR, BOP, INFR, FDI, BOT, NEXP) \dots\dots\dots (1)$$

Thus, the econometric model is:

$$Y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + a_5x_5 + a_6x_6 + a_7x_7 + U_t \dots\dots\dots (2)$$

Where:

- Y = Dependent variable
- $a_0$  = Intercept Term
- $a_1 - a_7$  = The coefficient/slope of the independent variables
- $x_1 - x_7$  = Independent variables
- $U_t$  = Error term or stochastic term

The functional form of the model is represented as:

$$GDP = a_0 + a_1DOP + a_2EXR + a_3BOP + a_4INF + a_5FDI + a_6 BOT + a_7NEXP + U_t, \dots (3)$$

Where:

- GDP = Gross Domestic Product
- DOP = Degree of Openness
- EXR = Exchange Rate
- BOP = Balance of Payment
- INF = Inflation Rate
- FDI = Foreign Direct Investment
- BOT = Balance of Trade
- NEXP = Net Exports

In the case of log transformation for econometric problem, we rewrite the equation as:

$$\ln GDP = a_0 + a_1 \ln DOP + a_2 \ln EXR + a_3 \ln BOP + a_4 \ln INF + a_5 \ln FDI + a_6 \ln BOT + a_7 \ln NEX + U_t, \dots (4)$$

**Apriori Expectation**

The apriori, expected that all the variables will be positively related to Gross Domestic Product (GDP). i.e. degree of openness (DOP) exchange rate (EXR), balance of payment (BOP), inflation rate (INF), foreign direct investment (FDI) balance of trade (BOT) and net export (NEX) will all have a positive impact on GDP. Therefore:  $a_1, a_2, a_3, a_4, a_5, a_6, a_7 > 0$

**Results and Discussions:-**

**Ordinary Least Square (OLS) Result**

Dependent Variable: GDP				
Method: Least Squares				
Date: 09/01/18 Time: 14:24				
Sample: 1990- 2017				
Included observations: 27				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10832.46	873.9944	12.39420	0.0000
DOP	31534.22	11789.17	2.674846	0.0150
EXR	-34.31814	19.00028	-1.806192	0.0868
BOP	0.456059	0.350536	1.301033	0.2088
INF	183.5235	19.45393	9.433747	0.0000
FDI	54.28835	12.76975	4.251326	0.0004
BOT	-4.564752	2.531662	-1.803066	0.0473
NEXP	4.399047	2.115749	2.079191	0.0314
R-squared	0.989666	Mean dependent var		37276.75
Adjusted R-squared	0.985859	S.D. dependent var		17800.00
S.E. of regression	2116.739	Akaike info criterion		18.39434
Sum squared resid	85131074	Schwarz criterion		18.77829
Log likelihood	-240.3235	Hannan-Quinn criter.		18.50850
F-statistic	259.9379	Durbin-Watson stat		2.100623
Prob(F-statistic)	0.000000			

**Estimation Command:**

LS GDP C DOP EXR BOP INF FDI BOT NEXP

**Estimation Equation:**

$$GDP = C(1) + C(2)*DOP + C(3)*EXR + C(4)*BOP + C(5)*INF + C(6)*FDI + C(7)*BOT + C(8)*NEXP$$

**Substituted Coefficients:**

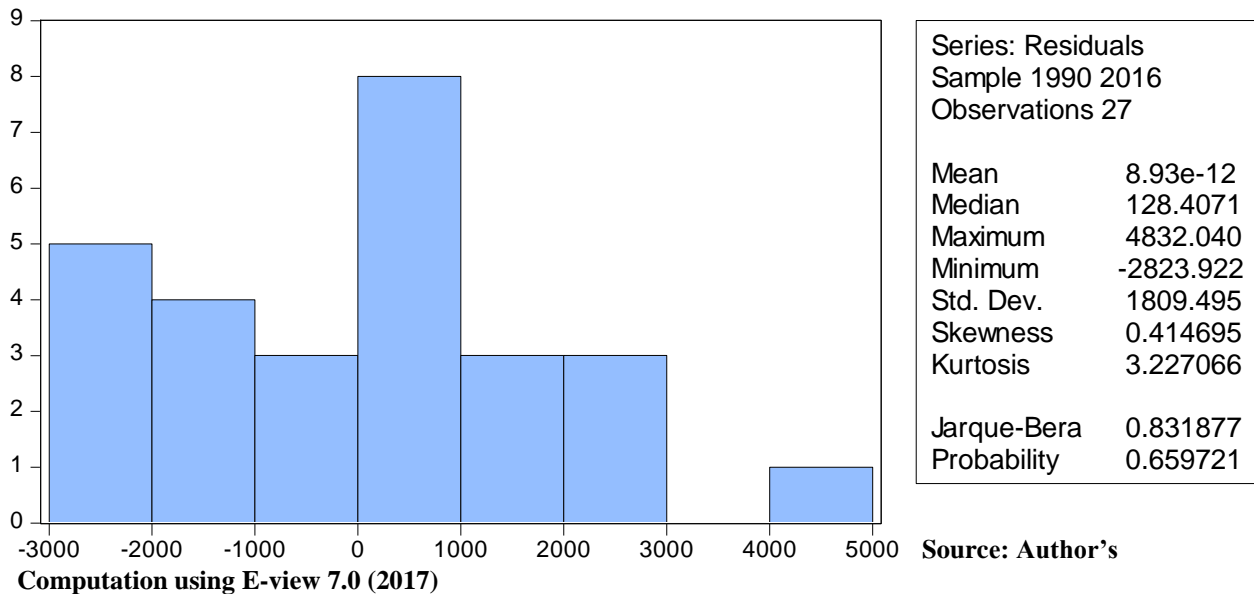
$$GDP = 10832.4582783 + 31534.2150127*DOP - 34.3181423236*EXR + 0.456059396346*BOP + 183.523488272*INF + 54.2883505185*FDI - 4.56475178802*BOT + 4.39904663294*NEXP$$

**Source: Author’s Computation using E-view 7.0 (2017)**

The table shows the result for ordinary least square. Degree of openness (DOP) is positive in the coefficient column which connotes that a unit increase in degree of openness can lead to 31534 increases in Gross domestic product (GDP) which will foster economic growth. Exchange rate (EXR) is negative in the coefficient column and signifies that a unit increase in exchange rate can lead to -34.21% decreases in economic growth. Balance of payment (BOP), inflation (INF), foreign direct investment (FDI) and net export (NEXP) are positive which signifies that a unit increase in them can lead to 0.45, 183.52, 54.28 and 4.49 percentage increases in economic growth of Nigeria respectively. Balance of trade (BOT) is negative; a unit increase in balance of trade can lead to -4.56% decreases in economic growth.

All the independent variables have significant impact on Nigeria’s growth except exchange rate and balance of payment.

**Diagnostic Test  
Normality test**



The series distribution is normal as the p-value associated with JB- JarqueBera statistics is 0.659 which is greater than the critical value of 0.05.

**Serial Correlation Test**

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	2.048659	Prob. F(2,17)	0.1595
Obs*R-squared	5.243680	Prob. Chi-Square(2)	0.0727

**Source: Author’s Computation using E-view 7.0 (2017)**

The p-value of the f-statistics is 0.159 which is greater than the critical value of 5%, we conclude by accepting H<sub>0</sub> that there is no presence of serial correlation.



**Heteroskedasticity Test**

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.659830	Prob. F(7,19)	0.7026
Obs*R-squared	5.280025	Prob. Chi-Square(7)	0.6258
Scaled explained SS	2.911513	Prob. Chi-Square(7)	0.8931

**Source: Author's Computation using E-view 7.0 (2017)**

The p-value of the observed R-squared is 0.625 which is greater than the critical value of 5%, meaning that we accept null hypothesis that the residuals are non heteroscedastic in nature.

**Stability Test**

Ramsey Reset Test			
Equation: UNTITLED			
Omitted Variables: Squares of fitted values			
	Value	Df	Probability
t-statistic	2.888037	18	0.0098
F-statistic	8.340760	(1, 18)	0.0098
Likelihood ratio	10.28014	1	0.0013

**Source: Author's Computation using E-view 7.0 (2017)**

The p-value of the f-stat of Ramsey reset test is 0.009 which is less than critical value of 5%, we conclude by reject  $H_0$  and conclude that that the series are not in functional form and it is not structurally stable.

Diagnostic test confirms the assumptions of OLS test. Based on this, unit root test as pre-test was not needed. Also the results of the diagnostic test ascertained confirmed that the assumption of OLS was not violated and this justified the application of OLS, granger causality and co-integration test for estimation.

**Granger Causality Test**

Diagnostic Check	F-stat	Prob.	Conclusion
DOP and GDP	10.1294	0.0009	DOP granger cause GDP
GDP and DOP	7.62524	0.0035	GDP granger cause DOP
EXR and GDP	1.00644	0.3833	EXR does not granger cause GDP
GDP and EXR	3.96914	0.0353	GDP granger cause EXR
BOP and GDP	3.72420	0.0422	BOP granger cause GDP
GDP and BOP	0.39372	0.6797	GDP does not granger cause BOP
INF and GDP	0.81969	0.4548	INF does not granger cause GDP
GDP and INF	8.85650	0.0018	GDP granger cause INF
FDI and GDP	0.63600	0.5398	FDI does not granger cause GDP
GDP and FDI	1.99297	0.1625	GDP does not granger cause FDI
BOT and GDP	6.63804	0.0062	BOT granger cause GDP
GDP and BOT	2.95789	0.0749	GDP does not granger cause BOT
NEXP and GDP	6.63545	0.0062	NEXP does not granger cause GDP
GDP and NEXP	3.52919	0.0487	GDP granger cause NEXP

Probability Value < 0.05, Significant at 5% for granger causality test, vice versa.

**Source: Author's Computation using E-view 7.0 (2017)**

Granger causality test was carried out to ascertain which of the variable impacted on the other. From the result presented, it was seen that dual causality exist between DOP and GDP, BOT and GDP, NEXP and GDP while in EXR and GDP, BOP and GDP, INF and GDP, FDI and GDP there exist bi-causality.

**Johansen Co integration**

Date: 09/01/18 Time: 14:52				
Sample (adjusted): 1991- 2017				
Included observations: 26 after adjustments				
Trend assumption: Linear deterministic trend				
Series: GDP DOP EXR BOP INF FDI BOT NEXP				
Lags interval (in first differences):				
Unrestricted Co-integration Rank Test (Trace)				
Hypothesized		Trace		0.05
No. of CE(s)	Eigen value	Statistic	Critical Value	Prob.**
None *	0.966247	242.6938	159.5297	0.0000
At most 1 *	0.904693	154.5882	125.6154	0.0003
At most 2	0.688527	93.47121	95.75366	0.0711
At most 3	0.592247	63.14369	69.81889	0.1518
At most 4	0.444352	39.81928	47.85613	0.2290
At most 5	0.351096	24.54115	29.79707	0.1785
At most 6	0.268590	13.29694	15.49471	0.1044
At most 7 *	0.180154	5.164623	3.841466	0.0230

Trace test indicates 2 co-integrating eqn(s) at the 0.05 level

denotes rejection of the hypothesis at the 0.05 level

MacKinnon-Haug-Michelis (1999) p-values

**Source: Author's Computation using E-view 7.0 (2017)**

The co integration result of the trace statistics shows that co-integration exists for GDP (None \*), degree of openness (At most 1\*) and NEXP (At most 7\*) as the results are greater than 5% critical value, while the trace statistics of exchange rate (At most 2), balance of payment (At most 3), inflation rate (At most 4), foreign direct investment (At most 5) and balance of trade (At most 6) are less than 5% critical value.

**Discussion of findings**

The findings of the results of the tested hypotheses revealed that of all variables, Degree of Openness (DOP), Inflation Rate (INF), Foreign Direct Investment (FDI), Balance of Trade (BOT) and Net Exports (NEXP) have significant impact on economic growth in Nigeria due to their p – values all less than 5% significant level. This is in line with apriori expectations and theoretical believes. These independent variables explained very well, the behaviour of the dependent variable. The OLS results revealed that a unit increase in DOP can lead to 31534 units increase in GDP. This affirms there is a relationship between protection and volume of trade. Theory of comparative advantage explains why countries engage in international trade. This theory and other economic theories say openness brings growth, development, global competitiveness and integration.

A unit increase in inflation rate leads to 183.5 units increase in economic growth. Mild inflation is an incentive and opportunity for capital formation. Interest rates are normally high during times of inflation and these high interest rates encourages and increases investors' confidence.

A unit increase in FDI leads to a 54.28 percentage increase in economic growth. Inward FDI brings inflow of income and capital, new technologies, management and marketing expertise, creation of job opportunities and reducing unemployment. Domestic industries crave to improve standard because of this competition. According to Internalisation theory, FDI gives a Firm control over the business production and activities in other countries.

BOT has a negative coefficient of -4.56, due to its probability value of less than 5% significant level it has a significant impact on economic growth. A unit increase in BOT decreases growth by -4.56 %. An improved term of trade makes a country to be able to afford more imports because a unit value of import becomes cheaper than a unit

value of exports. Trade balances depends both on physical volume of imports and exports and on the prices which they are traded. More imports leads to a deficit and to borrowing. This gives credence to the mercantilist theory which aims at the accumulation of wealth by nations through creating trade surpluses.

A unit increase in NEXP leads to a 4.5% increase in economic growth. Foreign demand of domestic goods and services heightens production level, shows a country's high participation in the global market, increases the demand for the domestic currency and brings in income and revenue. Revenue from oil has been the major boost for the economy of Nigeria.

Exchange rate and balance of payments were not seen to have significant impact on economic growth of Nigeria due to their p-values greater than 5% significant level. This does not conform to a priori expectation.

Exchange rate has a negative coefficient of -34.21 which connotes that a unit increase in exchange rate can lead to a 34.21% decrease in economic growth. Factor endowment economic theory encourages nations to export their cheap and abundant factors and import scarce and expensive factors. Nigeria is a mono economy. The major abundant factor/export is crude oil which she does not have the full capacity to refine. This makes her imports to be far higher than exports. Exchange rate determines quantity demanded and a country's economic growth is constrained by the desire to generate foreign exchange. Excess demand for foreign currency weakens the domestic currency, imports are now more expensive and returns on investments are low.

Balance of payment also revealed not to have significant impact on economic growth of Nigeria. A unit increase in balance of payments only led to 0.4 percentage increase in economic growth. BOP problems compel a country to use restrictive measures which is detrimental to global competitiveness and global integration and contrary to World Bank and IMF doctrines.

The coefficients of the R-squared (0.9896) and Adjusted-R (0.9858) show that the model fits the data and explains all the variable variation of the regression model. The R-squared and the adjusted-R provides an estimate of the measure of the strength of the relationship between the regression model and the variables while the adjusted-R overcome specific problems by providing additional information by which the regression models explanatory power is evaluated.

### **Conclusion and Recommendation:-**

Based on the discussion of findings, the following are the conclusion:

The Ordinary least square test conclude that only degree of openness (DOP), inflation rate (INF), foreign direct investment (FDI), balance of trade (BOT) and net export (NEXP) have significant impact on economic growth in Nigeria, while exchange rate (EXR) and balance of payment (BOP) does not have significant impact on economic growth in Nigeria. We accept the alternate hypothesis  $H_A$  and conclude that trade liberalization have significant impact on the economic growth in Nigeria.

The diagnostic test suggests we accept  $H_0$  that the series distribution is normal, which is desirable. For serial correlation test, we accept  $H_0$  that the residuals are not serially correlated and it connotes that each of the observation are independent of one another. In Heteroskedasticity test the study accept the null hypothesis  $H_0$  that the residuals are homoskedastic which signify that they are of equal variance and desirable

There exist a dual causality relationship between DOP and GDP and NEXP and GDP while a uni-directional granger causality relationship exist among EXR and GDP, BOP and GDP, INF and GDP, BOT and GDP. In light of the above, it was also concluded that trade is an engine for growth and economic integration and therefore contributes heavily to the economic growth of a nation.

The study thus recommended that trade policy makers in Nigeria should not only be so much occupied with formulating trade policies but should also consider whether the Nigeria environment is conducive for such policy to thrive. Also, government should formulate policies that will enhance both domestic and foreign trade to foster global integration and competition since it has been established that there is a relationship between degree of openness and volume of trade, competitiveness and integration.

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