1. **Adofu, I** and Okoroafor, O.K.D., (2016), The Relationship Between Non-Oil Export and Real Domestic Product (RGDP) in Nigeria: 1986-2015. Journal of Economics and Development Studies Vol. 4. No 1. Dept. of Econs, Kaduna State University, Kaduna.

THE RELATIONSHIP BETWEEN NON-OIL EXPORTS AND REAL GROSS DOMESTIC PRODUCT (RGDP) IN NIGERIA: 1986-2015.

[1]Adofu Ilemona (PhD) and Okoroafor O. K.David (PhD)[2]
[1]Department of Economics, Federal University Lafia, Nigeria.
[2]Department of Economics, University of Abuja,
Email:[1]ilemonaadofu@yahoo.com and okoroaforo94@yahoo.com[2]
Phone No: [1] +2347037359880 or +23480731408911
[2] +2348069809121 or +2348055905494

ABSTRACT

This study examined the relationship between non-Oil exports and economic growth in Nigeria from 1986 to 2015. Secondary data sourced from World Economic Indicators, 2015 was used in this study. A vector Autoregressive Lag model was developed and applied by the authors where the following macroeconomic variables were engaged: Real GDP used as a proxy for economic growth, Non-Oil export (NOEXP), Degree of Economic Openness (DOP), Exchange Rate (EXCH), Real Interest Rate (RIR) as well as Inflation Rate (INF). OLS technique, co-integration technique, and granger causality were employed to analyse the data and the result revealed that, Non-oil export had a positive and significant impact on economic growth in Nigeria in relation to the reviewed period. It was also discovered that there is a unidirectional relationship from real GDP and Degree of Economic Openness (DOP) to Non-oil Export meaning that, RGDP and DOP causes non- oil export but non-oil export does not cause RGDP and DOP.Hence it was recommended that Since non-oil export appeared to be positively correlated with the real gross domestic product, government and her policy makers as well as other important and relevant stake holders are advised to put all hands on deck to draw policies that would promote non-oil export in the country so as to get our export improved.

……

Key words: Export, Growth, Economic Openness, Non-oil, Development, Agriculture.

……

1.0 Introduction

Economist the world over has emphasized the relevance of export in any nation's economic growth and development. This is because export is often described as an accelerator that is necessary for the overall development of an economy (Abou-Stait, 2005). Earnings from export reduces the stress on the balance of payment position and even improve it in the long run. A rewarding export drive can turn a hitherto undeveloped economy into a prosperous economy. Exports help in increasing the horizontal surface of aggregate economic activities through its multiplier effects on the level of subject income (Usman and Salami, 2008). Income earned through exporting will help in increasing the level of demand within the economy.

Prior to the discovery of Oil in Nigeria, Agriculture was the mainstay of the economy. Among the commodities exported were; groundnut, cocoa, palm oil, sheabutter, cotton wool and coffee to list a few. Nigeria was the largest exporter of cocoa and rubber in Africa. In fact, export proceeds from agriculture accounted for over 70 percent of foreign earnings asides the strength of agriculture. Nigeria is also blessed with a large repository of minerals such as lime stone, iron ore, tin, lead and copper.

However, since independence, the discovery and commercial exploration of crude oil,further facilitated by the oil boom in the 1970s, brought fundamental changes to theNigerian economy. As such, Nigeria became a mono-cultural nation exporting more of oil-related product which invariably rendered the agricultural sector less competitive in the world market place. Other factors that contributed to the dwindling fortune of the agricultural sector include low yield, inconsistent production pattern,disease incident, pestilence attack and use of simple farm shifts.

The volatility of oil tolls at the international market creates a serious serback for oil dependent nation like Nigeria. For instance, oil price increased from $13 in 2000 to $125 in 2009 and reduced to $90 and $60.55 in 2010 and 2014 respectively. In 2015 the price went to as low as

$30 before it began to pick up to $40 in 2016. This has really affected developmental planning and project executions in Nigeria as 2/3 of the states in Nigeria, as at May, 2016 are finding it difficult to pay the salary of their civil servants and practically unable to meet other obligations to the citizenry.

In other to reposition the Nigerian economy, several policies have been introduced by the government to salvage the situation. Prominent in the lists of policies of government was the adoption of Structural Adjustment Programme (SAP) in 1986 as advocated by WorldBank and the International Monetary Fund (IMF). The result of this policy has not in any way improved the prospect of the economy but rather has compounded the problem.

The continues unimpressive performance of the non-oil sector and the vulnerability of the external sector thus dictates the urgent need for a reappraisal of the thrust and content of the exploitation policies and commitments on their implementation. Since the mid-1970s oil tax income has accounted for a very significant proportion (from 77.5% in 1975 to 82.4% in 2014) of total revenue of the Nigerian government. Consequent to the phenomenal increase in oil revenue over the years with its associated wealth, various economic projects, programs, expenditures and even the national budget have been closely tied to oil revenue (Onodugo, 2013). Also, the enormous oil wealth is expected to empower the government in the supply of stable infrastructural adroitness, building of industrial estates and even increased the ability of the government to grant tax inducement and other manufacturing/ industrial inducement which are necessity to spurring the performance of the non-oil sector.

The oil sector dominance of the country’s export basket which began in1973/74 was greatly magnified during the 1980s. The core of the job was that while oil export was growing, non-oil export were declining making the dominance much more rapid and pervasive (Osuntogun et-al

1998). Teal (1983) stated that the output of export crops grew at an abnormal annual rate per unit of 4.7% in 1950-1957 and 7.4% in 1960–1965 and then declined by 17.3% in 1970–1975. According to Oyejide (1986) the nominal non-oil export earnings fell from N363.5 billion in1973 to N203.2 million in 1982. The decline was even more dramatic in real terms. Petroleum exportation in contrast rose phenomenally, from about N2 billion to aboutN8 billion in real terms during the same period. The crusades to reverse these trends seem to be yielding very little result, as oil continues to dominate the country's export. Since the introduction of Structural Adjustment Programme (SAP), the portion of the non-oil export in the Federal Republic of Nigeria's total exports have remained under 5% for most years. The only noticeable improvements are that the decline of the non-oil sector seems to have been arrested and that a number of non-traditional exports seem to have emerged in Nigeria's export basket including horticultural ware, garments, material, furniture components and other manufactures.

Complementarily, the government sequentially put together number of policy reforms and motivations to encourage the production and exportation of non-fossil oil tradable as well as broadening Nigeria's export market. These included devaluation of nominal naira exchange rate charged per unit of other currencies, strict fiscal discipline, controlled monetary expansion and a more liberal patronage policy were initially introduced to reduce wear and tear of the real exchange rate facing exporters. These were followed by the initiation of export incentives comprising of a duty draw-back system, explicit export incentive, income retention scheme and other direct fiscal incentives. Having ensured that appropriate macroeconomic and sectoral incentives had been instituted, the government established the Nigerian Export-Import Bank (NEXIM) in 1991 to provide necessary financial and risk management support to the export sector (Osuntogun et-al 1998). But despite the enormous macroeconomic reforms, the output and

export of agricultural crops have not yet regained a straight and sustained upward trend. This suggests big challenges for non-oil export sector in Nigeria. This enquiry will identify the trend and structure of Nigeria's non-oil export since 1986 to 2015 and examine the factors responsible for the unimpressive performance of the non-oil sector of Nigeria. The remaining part of this paper is structured into four sections such as literature review, analytical methodology, data presentation and analysis, and the summary and conclusion.

2.0 Review of Literatures

2.0.1 Conceptual Clarification

The export window serves as an avenue for commodity manufactured domestically from constituent sectors to find user markets internationally. In Nigeria, the domestic sectors are categorized as crude fossil oil and non-oil sectors. The non-oil sector comprises of those groups of economic activities which are outside the petroleum and gas industry or those not directly linked to them. It consists of sectors such as manufacturing,agriculture,telecommunication, service, finance, tourism, real estate, construction and health. Some non-oil (mostly agricultural) products such as groundnuts, palmkernel, palm oil, cocoa, rubber, cotton fiber , coffee, beans, hair skin and cattle dominated Nigeria's export business deal in the 1960s (Opara, 2015). However, the discovery of crude oil in commercial quantity since the 1970s shifted emphasis from non-oil export to a "petroleum mono-cultural economy". This led to the decline of non-oil exports and facilitated the ascendance of oil export over non-oil export.

Exports of goods and armed service produced in one country is sold to another country to earn foreign exchange, which can be used to purchase goods and services (Daisi, 2011).Non-petroleum exportation is export merchandise such as agricultural/farm produce, trucking rig-manufactured and manufactured goods, and mineral exportation and services export. The Nigeria's non-oil export sector is structured into four broad constituents which are the

agricultural exports, manufactured exports, solid mineral and services exports. Each constituent is briefly profiled thus:

(i) Agriculture Export: Nigeria's non-oil exports are mostly agricultural/farm produce which are normally referred to as her traditional export commodities. These are cocoa,rubber, oil-palm, coffee, cotton, wood products, cassava, ginger, fish , shrimps and so on. It is important to mention that cocoa exports had pre-eminence as Nigeria's most exportable non-oil agricultural commodity until the oil boom(CBN and NEXIM, 1999).

(ii) Manufactured Export: The manufactured exports to the international export market comprises of agro-allied and manufactured goods. The agro-allied export products are cocoa butter, cocoa powder, cocoa cake, cocoa paste, groundnut cake and woodproducts including furniture and fixtures etc. while main manufactures are textiles, chemical products, beer and beverages, urea-ammonia, insecticides,soap and detergents, plastics and non-metallic mineral products and processed skin etc.

(iii) Solid minerals export: The solid minerals exports from Nigeria are cassiterite, coal, columbite, charcoal, asbestos, processed iron ore and marble. They had been minimal in terms of their volume and share of the exports earnings. Prior to independence, the solid minerals export were to satisfy the demand from industrial base of the British imperialism. After independence, the government avoided direct participation in the mining of solid minerals due to large capital outlay involved, reoccurring flooding of mines, high risks and intricate technology. Instead mining was left to private firms.

(iv) Services export: Service export is the export of services such as education, consultancies, nursing and tourism. There are unique benefits to service exports that do not apply to goods, such as none or low freight costs. Service exports also come withsome risks and challenges, such as limited options for securing payment and the protection of intellectual property rights (Business

Victoria, 2007). It however remains still a veritable means of generating foreign exchange for the country and facilitating economic development, which is largely untapped.

Services such as transportation, tourism, communication, construction, insurance, financial, professional and technical function are what developing countries,like Nigeria except for a few such as Egypt have not been able to export to the international market place. However, Nigeria has been making notable efforts on tourism in current times. Places like Obudu Cattle Ranch, Tinapa Business Resort, and other areas of tourist attractions are springing up to offer leisure services. Also in terms of financial and professional services, Nigeria has no services to provide here. Although Nigerian experts work in other nations and remit money, in foreign currency back home. It is more of brain-drain phenomenon. And some Nigerians serve in oversea countries under the Technical Aids Corps (TAC), it is a foreign aid and cooperation to other developing nations. This does not generate foreign exchange to the country.

2.0.2 Theoretical Literature.

Some theories are pertinent for this study and therefore there is need to review such briefly below.

2.0.2.1 Absolute Advantage Theory

This theory was propounded by Adam Smith in his 1776 publication – An Inquiry into the Nature and Causes of the Wealth of Nations. This theory uses two by two models,i.e. there are two countries involved in the trading of two commodities and using only two factors of production – labour and capital. The theory states that a country should export products in which it has absolute advantage than other countries. That is, goods for which it can produce more output per unit of input than others can, while importing those goods where it is less productive than other countries (Dunn Jr and Mutti,2004). The country’s absolute advantage may be due to the nature

of its resources or to its production skills (Onayemi and Ishola, 2009). According to Smith, each nation benefits by specializing in the production of the good that it produces at a lower cost than the other nation, while importing the goods that it produces at a higher cost. This will increase specialization,world output and the profits from deal (Carbaugh, 2004). The trade relation that develops has positive-sum game because both countries involved will benefit from the swap. Thus, a nation need not gain at the expense of other nations, as all nations could gain simultaneously (Olurankinse and Fatukasi, 2012). However, there arises the enquiry of whether or not to trade when one of the two countries trading has an absolute advantage in the production of the two commodities. Should trade still take place when one collaborator can produce both commodities more efficiently than the other partner? The theory failed to answer this question satisfactorily and that gave rise to Ricardo's theory of Comparative Advantage.

2.0.2.2 Comparative Advantage

This theory was put forward by David Ricardo in 1817 because he was dissatisfied with the looseness in Smith's theory (Carbaugh, 2004). The principle of comparative advantage states that a country should specialize in producing and exporting those goods in which it has a comparative or relative cost advantage compared with other countries and it should import those goods in which it has a comparative disadvantage.Out of such advantage, it is argued that it will accrue greater benefit for all. According to Ricardo's theory, even if a nation has an absolute cost disadvantage in the production of both goods, there still exists a basis for mutually beneficial trade. The less efficient nation should specialize in the production and exportation of the good in which it is relatively less inefficient (where its absolute disadvantage is least) while the more efficient nation should specialize in the production and exportation of the good in which it is relatively more efficient (where its absolute advantage is greatest).

The theory also assumed the level of technology to be fixed for both nations. Different nations may use different technology but all firms within each nation utilize a common production method for each commodity. It also assumed that trade is balanced and so is the flow of money between nations. The distribution of income within a nation is not affected by trade.

This hypothesis proved to be better than Smith's absolute advantage theory

because it is possible for a land not to have an absolute advantage in anything but it is not possible for country to have a comparative degree of advantage in everything and the other country to have a comparative advantage in nothing. That is because comparative advantage depends on relative costs (Carbaugh, 2004).

2.0.2.3 Hecksher-Ohlin Theory

In the early 1900s, a foreign trade theory was postulated by two Swedish economists,Eli Hecksher and Bertil Ohlin. This theory is called the Hecksher-Ohlin theory. The theory stresses that countries should produce and export goods that require resources(factors) that are abundant in home country and import goods that require resources in short supply.

This theory is quite different from the comparative advantage and absolute advantage since these theories focus on the productivity of the production process for a particular good. On the contrary, the H-O theory states that a country should specialize inproduction and export using the factors that are most abundant, and thus the cheapest.The theory suggests that the less develop country that are labor abundant should specialize in the area of primary products especially agricultural product because the Labour factor requirement of agricultural is high except in the mechanized form of farming. On the other hand, the less developed countries should import capital-intensive product mostly the manufactured goods from developed countries that are capital intensive.

The argument of David Ricardo, which is comparative advantage, is intellectually accepted and seen as the driving force of international trade, when countries move out of autarky, and embrace open economy. It is indicative of specialization and exchange. Hence this research has adopted the comparative advantage theory propounded by David Ricardo as our theoretical framework.

2.0.3 Empirical Literature

There are liturgy of empirical works bothering on the relationship between non-oil exports and aggregate economic performance of nations. Some of these empirical works are presented below.

Akeem (2008) examined export commodities in action and determinants of non-oil exports in Nigeria from 1989 to 2008. The research used multi-linear regression. The result found the major factors that affect GDP positively to be non-oil export for previous year and consumer price index. He concluded that the government has an important role to play if sustainable development is to be achieved since an insignificant non-rock fossil rock crude petroleum exportation and interchange pace would slow down the economic growth.

Enoma and Isedu (2011) studied the impact of financial sector reforms on non-oil export in Nigeria from 1986 to 2009. The study found a positive relationship between financial sector reforms and non-oil export in Nigeria. The study recommended that financial sector reforms should be improved upon and sustained by the monetary authority in order to fully optimize the gains.

Olurankinse and Fatukasi (2012) examined the impact of non-oil export on economic growth in Nigerian. The study employed an Ordinary Least Square (OLS)technique and observed that non-oil export has positive impact on the economic growth. The study recommended the need to sustain both agricultural and manufacturing sphere to ensure product availability for both local

and export purposes. The study also recommended an urgent completion of the export processing zone to promote the administration of export oriented firms that will produce solely for export market.

Ezike and Ogege (2011) examined the floor of non-petroleum manufacturing export in Nigeria that constitutes the main stay of GDP between 1970 and 2010. Analysis of the time series data was employed using statistical proficiency like multiple regression analysis of Ordinary Least Squares(OLS), co-integration and Granger causality tests. The model was estimated in the context of error correction mechanism (ECM) to captures equilibrium long-run relationship between (co-integrating) variables, and error correction mechanism of reconciling the short-run behavior of macroeconomic variables with its long-run behavior.

Ozurumba and Chigbu (2013) examined the issue of non-petroleum exportation credit rating on economic growth in Nigeria for the period of 1984 to 2009. The study used multiple linear regression. The study found that bank credits for agro-business and forestry, mining and construction, and nominal effective exchange rates have negative impact on non-oil gross domestic product in Nigeria while banks credits for merchandise export, domestic trade, public utility and domestic service impacted positively on non-oil gross domestic product.

Riman et-al (2013) examined the nexus among oil revenue shock, non-oil export and industrial production in Nigeria for the period 1970 to 2010. The study employed Vector Auto-Regressive (VAR) model,the result found that long run estimate of crude oil revenue shock and policy/regime shift had negative impact on industrial yield and non-oil export.The impulse response sub program and variance decomposition analysis suggested that the major drivers of industrial maturation in Nigeria are non-oil export, regime shift and oil revenue. The subject

recommended the diversification of the economy from crude oil export and ensuring a stable government that will endure long enough to sustain industrial and other economic policies.

Ningi (2013) examined the burden of bank financing on non-oil exportation in Nigeria using multiple linear regression. The result indicated that non-oil exports financing by banks significantly accounting for slightly 16% of variance in non-oil exports carrying into action, similarly the Beta coefficient revealed that business firm ' sensing of banks position to peril of financing non-oil exports had the highest beta value followed by price of bank finance . Also the study observed that telephone exchange rate wavering and access to credit deftnes had insignificant relationships with non-oil exports performance in Nigeria.

Raheem and Busari (2013) examined the impact of non-oil export on economicgrowth in Nigeria for the period 1970 to 2010. The study employed Simultaneous Equation Model (SEM) and a single equivalence framework. The growth par in the SEM showed that non-oil export and agricultural performance negatively impacted on economic growth, while the single equation model showed that the industrial sector performance and universe growth are good determinant of economic growth. The study recommended the need for increase in government participation and patronageas well as creating investment friendly environment for investors in the sector.

Onodugo et-al (2013) examined the impingement of non-oil exportation on economic growth in Nigeria for the period of 1981 to 2012. Employing Endogenous Outgrowth. Fashion model (EGM), the study observed a very weak and infinitestimal impact of non-oil export on economic growth in Nigeria.

Akingbola (2008) examine the contribution of Foreign Direct Investment (FDI) to the performance of non-oil export in Nigeria within the frameworkof the export-led growth (ELG) conjecture from 1980-2010. A causality analysis was undertaken in order to verify the relevance

of the ELG hypothesis. Also, the dynamic interaction among FDI, non-oil export, and economic growth was investigated using the concept of discrepancy decomposition and impulse response analysis. The result obtained from the causality analysis revealed that a unidirectional causality runs from FDI to non -oil exports. Each of the three variable quantity exhibited on the average and at the early stages of the out-of-sample prognosis period, a dormant response to one touch stone deviation shock or introduction. However, they all demonstrated significant responses after some 7 year into the out-of-sample forecast period. The results also showed that a boost of non-oil exports is necessary for an effective FDI in Nigeria.

Abogan , Akinola and Baruwa (2014), in their study investigated the impact of non-oil export on economic growth in Nigeria between 1980 and 2011.The study examines the significant role of non-oil export on economic growth which the previous studies might have ignored and the aggregate non-oil exports data used by them might bias their conclusions. In achieving the objectives of the study, Ordinary Least Square Methods involving Error correction mechanism, over-parametization and parsimonious were adopted. In testing for the time series properties, the evidence from estimated economic models suggests that all the variables examined are stationary at first difference I(Is) using the Augmented Dickey- Fuller (ADF) and Phillips- Perron. Besides, Johansen Co integration test reveals that the variables are co integrated which confirms the existence of long-run equilibrium relationship between the variables. Thus, this suggests that all the variables tend to move together in the long run. The study reveals that the impact of non-oil export on the economic growth was moderate and not all that heartening as a unit increase in non-oil export impacted positively by 26% on the productive capacity of goods and services in Nigeria during the period. This was evident in the study that the policies on non-oil sectors during the period in Nigerian do not sufficiently encourage non-oil export, thus reduce their

contributions to growth. This study therefore predicts an imminent collapse of the Nigerian non-oil sector in the nearest future if immediate remedial measures are not taken to strengthen the sector. The study among other things encourages the government to strengthen the legislative and supervisory framework of the non-oil sectors in Nigeria and diversify the economy to ensure maximum contributions from all faces of the sectors to economic growth of Nigeria.

3.0 The Analytical methodology

3.0.1 Data Sources and Method of Analysis

Data used for the study are mainly secondary data sourced from the World Bank's World Development Indicators database 2015. The data collected was analyzed using the following empirical techniques: Descriptive statistics, test of stationarity, causality test and Ordinary Least Square (OLS) regression analysis.

3.0.2 Model Specification

The model for this study is developed based on a well-researched knowledge of variables that exact influence on non-oil export. The study propose that volume of non-oil export (NOE) is affected by the following variables: exchange rate (EXR), real gross domestic product(RGDP) and inflation rate (INFR). Other variables are, degree of economic openness (OPEN), credit to non-oil sector (CNS) and prime lending rate, which may significantly influence the volume of non-oil export, are included. Based on this relationship a functional form of these variables are captured and presented thus:

RGDP = f (NOEXP, DOP, CNS, EXCH, RIR, INF)……. (1)

Similarly, equation (1) can be expressed econometrically as:

$RGDP = \beta_0+\beta_1 NOEXP+\beta_2 DOP+\beta_3 CNS+\beta_4 EXCH+\beta_5 RIR+ \beta_6 INF+\varepsilon_t$……..… (2)

Therefore, equation (2) forms the theoretical specified model for the study. Again,expressing equation (2) in log form to intensify the existing long- run relationship between explained and explanatory variables, we have:

$InRGDP = \beta_0+\beta_1InNOEXP+\beta_2InDOP+\beta_3InCNS+\beta_4InEXCH+\beta_5InRIR+\beta_6InINF+ \varepsilon_t$ ..... (3)

Where

InRGDP = Natural logarithm of Real Gross Domestic Product

InNOEXP =Natural logarithm of Non-oil Export

InDOP = Natural logarithm of Degree of economic openness

InCNS = Natural logarithm of Credit/loan to non-oil sector

InEXCH = Natural logarithm of Nominal exchange rate

InRIR= Natural logarithm of Real interest rate on loan

InINF= Natural logarithm of Inflation rate

ε_t = Error term; β_0 = Intercept of the model; β_1, β_2, β_3, β_4,β_5 and β_6 are the slopes of the explanatory variables.

4.0. Data Analysis and Interpretation of Result.

4.0.1 Unit Root Analysis.

VARIABLES	**AT LEVEL**		**AT FIRST DIFFERENCE**		**ORDER OF INTEGRATION**
	ADF statistics	**5% critical value**	**ADF statistics**	**5% critical value**	
RGDP	3.369098	-2.967767	-3.446375	-2.971853	I(1)
NOEXP	-0.817329	-2.967767	-7.647147	-2.971853	I(1)
DOP	-5.046162	-2.967767	-8.339774	-2.971853	I(0)
EXCH	0.134824	-2.971853	-4.724766	-2.976263	I(1)
INF	-2.511108	-2.967767	-4.705949	-2.971853	I(1)
RIR	-2.920835	-2.967767	-5.871616	-2.971853	I(1)

A unit root test which is meant to test the stationarity condition of the time series data in order to avoid the case of a spurious regression was conducted on all the variables captured in the model developed for this research using Augmented Dickey Fuller (ADF) unit root test. The stationarity results revealed that, Real GDP, Non -Oil Export (NOEXP), Exchange Rate (EXCH), Inflation (INF), and Real Interest Rate (RIR) all had unit root at 5% level of significance. However, taking their first order differentiation revealed that they are all stationary at the first difference. Conversely, Degree of Openness (DOP) is the only time series variable that revealed to be stationary at level and at 5% level of significance.

4.0.2 Co-Integration Analysis

This test was conducted based on the Johansen co-integration test in order to find out if there exists a long run relationship between the variables in the model of this research or not. The conducted co-integration test showed that there is a long run relationship between the variables. This is because the result of the L.R. test indicates 4 co-integrating equation(s) at 5% level of significance. The comprehensive result of this test is obtainable at APPENDIX II.as follows

4.0.3 Granger Causality Test.

A pairwise granger causality test was conducted in order to examine the line of causality that exists between Non-oil Export and economic growth in Nigeria, as well as with other variables in the models of our study. The results revealed the following: a unidirectional relationship from real GDP to Non-oil Export meaning that, RGDP causes non- oil export but non-oil export does not cause RGDP. There is also an evidence of unidirectional relationship from DOP to non-oil export and from RIR to DOP meaning that, DOP causes NOEXP but NOEXP does not cause DOP. Similarly Real Interest Rate (RIR) causes DOP but DOP does not cause RIR. The result also revealed that there is a bidirectional relationship from inflation to exchange rate and from

exchange rate to inflation meaning that, both of them granger causes each other. However, apart from the relationships mentioned so far, there are no causal relationships between the remaining variables captured in this research work as the case may be. For verification purposes, a comprehensive result of this test is found at APPENDIX III.

4.0.4 OLS Estimated Result.

As stated earlier, a multivariate econometric model is going to be used in order to estimate the regression coefficients. This cannot be done until the time series data is confirmed to be stationary in order to avoid a case of spurious regression. Having confirmed that through the unit root test, it is hence ideal to continue with the estimation of the model built in relation to this research work since the time series data used are stationary and does not violate the assumption that time series data should be stationary which otherwise leads to misleading regression . The result of the OLS estimation is shown below. Comprehensive result found at APPENDIX I.

RGDP = 3.35E+13 +3.644166**NOEXP** -1.25E+14**DOP** +1.92E+10**EXCH**-5.21E+10**RIR** + 2.39E+09**INF**

S.E **(**4.20E+12) (0.253706) (1.70E+13) (1.66E+10) (1.27E+11) (3.15E+10)

t-ratio: please indicate the t-ratios as well. Remove exponential and put the real values.

PROB. 0.0000 (0.0000) (0.0000) (0.0000) (0.2594) (0.6865)

R^2 = 0.979614 ; the adjusted R^2 = ?? **DW = 1.70**

4.0.5 Interpretation of Results

The OLS result by implication shows that, a positive and direct relationship exists between Real Domestic Product (RGDP) and Non-Oil Export (NOEXP). That one percent increase or decrease in NOEXP will induce RGDP to increase or decrease by 3.644166 respectively. It also revealed that, Exchange Rate (EXCH) and Inflation (INF) are positively related with the RGDP. That any one percent increase or decrease in EXCH and INF will induce an increase or decrease in the Level of RGDP by about 1.9200 and 2.3900 respectively. Conversely, the result further revealed that, Degree of Economic openness (DOP) and Real Interest Rate (RIR) are negatively or

indirectly related to the RGDP. Meaning that, any one percent increase or decrease in DOP and RIR will induce a decrease or increase in RGDP level by 1.2500 and 2.3900 respectively.

The t-statistics which tests the individual level of significance of the coefficients of the regression line revealed that, β_1, β_2, and β_3 are highly significant owing to the fact that their probability value is completely zero. The coefficients β_4, and β_5 are not statistically significant based on the criterion that, if the probability of t-statistics is less than 0.05, it is statistically significant and insignificant if otherwise. Similarly, the F-Statistics which measures the overall significance of the explanatory variables on the explained revealed a very high value of 221.0488 with the probability value of 0.0000 which connotes that, the effects of all the explanatory variables on the explained is highly statistically significant. The Standard Error (S.E) which measures the magnitude of modeling error revealed a value 2.4300 which vary minimally indicating that the error made by the researcher in formulating the research model can be neglected.

The $\mathbf{R^2}$ popularly known as the coefficient of determination revealed the value '0.979614' indicating that, about 97.96% variation in the real Gross Domestic Product is explained by the explanatory variables captured by the researcher in the research model. The remaining 2.04 percent is explained by the white nose error term in the model which is a proxy for error in modeling and omissions. The Durbin Watson statistics which tests for serial autocorrelation among the error terms revealed a value 1.694860 which indicates that, there is no autocorrelation. From the foregoing therefore, based on the findings of this research work, the null hypotheses ($\mathbf{H_o}$) which states that Non-oil export does not have a positive and significant impact on economic growth in Nigeria is rejected, whereas, the alternative hypothesis ($\mathbf{H_1}$) which

states that Non-oil export does have a positive and significant impact on economic growth in Nigeria is accepted.

4.0.6 Discussion of Findings.

From the foregoing therefore, a positive relationship between RGDP and NOEXP that is observed means that when NOEXP increases by any amount, RGDP will also increase by a given amount as interpreted above. This is true, because, theoretically, export in general increases the level of RGDP which ideally translates into Economic development of an economy all things being equal. Similarly, exchange rate which theoretically is negatively related to the RGDP growth revealed to be positively related to the RGDP in Nigeria with respect to the period under review. This is not a surprise because, right from the SAP period when Nigerian government devalued her currency, Nigeria has been recording or experiencing growth consistently up till date. A vivid confirmation of this result is the growth recorded in RGDP in the year 2014. In 2013, the RGDP growth rate was approximately 5.39 where the exchange rate in the same year was 157.3 naira to a dollar, and in 2014, the exchange rate rose 158.6 naira to a dollar. Yet, Nigeria recorded a growth rate of 6.31 percent in her RGDP. This means that over the years, in Nigeria, rising exchange never stopped Nigeria from recording growth in gross domestic product. Similarly, Inflation was also revealed to be positively related to RGDP which theoretically is not supposed to be so. This is also not a cause for alarm as Nigerian economy is unique and surprises economic theories as it remains unshakable to shocks in some macroeconomic variables. Over the years, inflation has always been on the increase in Nigeria, yet, Nigerian economy has been recording growth consistently. For example in 2009, inflation rate captured by consumer prices index (% annual) was 11.54 and RGDP growth was approximately 6.93%. Suddenly in 2010, the inflation rate rose to approximately 13.72 but the

growth rate in real GDP recorded was 7.84. However, the growth achieved at times is at a decreasing rate but at least growth has been recorded.

On the other hand, Degree of economic openness (DOP) appeared to be negatively associated with the RDGP. This is also not a surprise because globalization or international trade can be of advantage or disadvantage to an economy depending on the strength and ability of the economy to strike a balance between her imports and exports of merchandise. In Nigeria over the years, the volume of her imports which are mostly finished goods is substantial compared to her exports of goods and services. This accounts for the reason why Nigeria always suffers balance of payment problems. All these are attributed to economic openness. Certainly, as a matter of fact, Nigeria is in some other ways benefiting from her economic openness but the benefits are behind its cost. Similarly, Real Interest Rate has appeared to have a negative association with the RGDP which is in consonance with what economic theories in existence holds. Usually, according to John Maynard Keynes theory of interest, when interest rate is high, it discourages investment and reduces aggregate demand through translation into higher prices of consumable goods and is considerably detrimental to the growth of an economy.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.0.1 Summary of major findings.

This research was carried out in order to examine the impact of non-Oil export on economic growth in Nigeria from 1986 to 2015. Secondary data was used in relation to the variables selected to supplement the study and was sourced from World Economic Indicators, 2015. A multiple linear regression model was developed by the researchers where Real GDP used as a proxy for economic growth was regressed against Non-Oil export (NOEXP), Degree of Economic Openness (DOP), Exchange Rate (EXCH), Real Interest Rate (RIR) as well as

Inflation Rate (INF) as the explanatory variables. OLS technique, co-integration technique, and granger causality was employed by the researchers to analyses the data and the result revealed that, Non-oil export had had a positive and significant impact on economic growth in Nigeria in relation to the reviewed period. It was also discovered that there is a unidirectional relationship from real GDP and Degree of Economic Openness (DOP) to Non-oil Export meaning that, RGDP and DOP causes non- oil export but non-oil export does not cause RGDP and DOP.

5.0.2 Conclusion.

From the results and findings of this research, it can be concluded emphatically that, Non-oil export had had a positive and significant impact on economic growth in Nigeria between the period 1986-2015, which invariably is the period of economic deregulation in Nigeria. A causal relation exist between gross domestic product in real terms and non-oil export. The relationship is in such a way that Real Gross Domestic Product (RGDP) granger causes NOEXP but Non-Oil Export does not granger cause RGDP.

5.0.3 Recommendations.

Based on the findings of this research work, the researchers do make the following recommendations:

i. Since non-oil export appeared to be positively correlated with the real gross domestic product, government and her policy makers as well as other important and relevant stake holders are advised to put all hands on deck to draw policies that would promote non-oil export in the country so as to get our export improved.
ii. It is also recommended that, since the degree of economic openness has impacted negatively based on the findings of this research, it could be that the magnitude of import over the years has been greater than exports and as such, the government and policy makers should come up with sound policies that would help curtail the level of

import that will fair enough to promote the domestic production of the imported merchandize.

iii. It is also advised that sticking to flexible exchange rate policy is of immense importance to the growth of the economy, and as such, the government should rather preach the gospel of flexible interest rate the more than letting it go because it is compatible with the volatile nature of exchange rate in the world market today.

iv. Ultimately, it is also recommended that, optimal level of interest rate should be maintained in the economy because it is favorable to both investors and savers. When it is too high, it discourages investment and encourages savings, and when it is too low it discourages savings but encourages investment but there will be no enough to borrow because many people would love to hoard their money which lead to a decline in GDP at last.

REFERENCES

Abou-Stait, F., (2005). "Are Exports the Engine of Economic Growth? *AfricanDevelopment Bank, Economic Research Working Paper No 76, July.*

Akeem, U. O. (2008). Non-oil export determinant and economic growth in Nigeria. *European Journal of Business and Management, 3(3), 1-23.*

Akingbola, E. C. O. (2008). *Financing as a Catalyst to revitalizing Nigeria's non-oil Export Sector. A welcome addressed delivered at the International Conference on non-oil Exports in Nigeria, organized by CIBN/NEXIM Bank Lagos.*

Business Victoria (2007) is not included in the Reference.

Carbaugh, R. (2004). International Economics (10 ed.). Ohio: Thomson. Central Bank of Nigeria and Nigeria Export and Import Bank (1999). *Adiagnostic Study of the Nigerian Non-Oil export sector: Findings and Recommendation.*

CBN, D. R. (2010). *The Changing Structure of the Nigerian Economy (2nd ed.).* (C. N. Mordi, Englama, & B. S. Adebusuyi, Eds.)Ikeja, Lagos: Atisele Vanessa Cards Co. Retrieved August 30, 2012.

Daisi, K. (2011). *Non- Oil Export Promotion: Concepts, Issues andProspects.CBN Bullion, 25(3), 32-38.* Retrieved August 23, 2012.

Dunn, R. M.,and Mutti, J.H. (2004). *Trade and growth in InternationalEconomics (6th ed. pp.221-241).* London: Routledge.

Enoma, A., and Isedu, M. (2011). The impact of financial sector reforms on non-oil export in Nigeria. *Journal of Economics, 2(2), 115-120.*

Ezike J. E and Ogege, S (2012). *Nigerian foreign trade policy: Its impact on non-oil exports. Journal of Economics and International FinanceVol. 4(8), pp. 192 - 200.*

Ningi, S. I. (2013). An analysis of banks financing of non-oil exports in Nigeria. *American International Journal of Contemporary Research, 3(1), 85-92.*
Olurankinse, F.and Fatukasi, B. (2012). Analysis of the impact of non-oil sector on economic growth, *Canadian Social Sciences, Journal 8(4), 244-248.*
Onayemi S.O and Ishola R.A. (2009). Diversifying the productive base of Nigeria, an econometricApproach to the assessment of non-oil export promotion strategies. , Longman, London. pp. 300-309.
Onodugo, V.A (2013). Can Private Sectors Facilitate Economic Growth and Realization of MDG in Developing Countries? Evidence from Nigeria, *African Journal of Social Sciences, Vol 3,No 1, pp 83-96,*
Onodugo, V. A., Ikpe, M and Anowor, O. F. (2013). Non-oil export and economic growth in Nigeria: a time series econometric model. *International Journal of Business Management & Research (IJBMR), 3(2), 115-124.*
Okpara, B. C. (2010). Export Marketing: *Catalyst for Nigeria Economic. Research Journal of International Studies (13).76-85 March..*
Osuntogun, A., Edordu, C. C., and Oramah, B. O. (1998). *Potentials for diversifying Nigeria's non-oil exports to non-traditional markets. AERC Research Paper, No. 68, November*
Oyejide T. A (1986). The Effects of Trade and Exchange Rate Policies on Agriculture in Nigeria:Research Report 55 International Food Policy Research Institute, Washington, D.C.
Ozurumba, B. A., and Chigbu, E. E. (2013). Non-oil export financing and Nigeria's Economic Growth. *Interdisciplinary Journal of Contemporary Research in Business, 4(10), 133 48.*
Raheem, I., and Busari, A. (2013). Non-oil export and economic growth in Nigeria: Does Methodology Matter? *Journal of Asian Development Studies, 2(2), 21- 34.*
Riman, H. B., Akpan, E. S., Offiong, A. I., and Ojong, C. M. (2013). Nexus between Oil Revenue, Non-oil Export and Industrial Output in Nigeria: an application of the VAR model. *International Journal of Financial Economics, 1(2), 48- 60.*
Teal F (1983). *"The Supply of Agricultural Output in Nigeria" Journal of Development Studies, Vol. 19 (January).*
Usman O. A and Salami A. O. (2008) *"The Contribution of Nigerian Export -Import (NEXIM) Bank towards Export (non-oil) Growth in Nigeria(1990-2005)", International Business Management 2(3): 85 -90.*

APPENDIXES

APPENDIX I : OLS RESULTS

Dependent Variable: RGDP
Method: Least Squares
Date: 03/13/16 Time: 18:23
Sample (adjusted): 1986 2014
Included observations: 29 after adjustments
RGDP = C(1)+ C(2)* NOEXP + C(3)*DOP + C(4)*EXCH+ C(5)* RIR+ C(6)* INF

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	3.35E+13	4.20E+12	7.975033	0.0000
C(2)	3.644166	0.253706	14.36375	0.0000
C(3)	-1.25E+14	1.70E+13	-7.374372	0.0000
C(4)	1.92E+10	1.66E+10	1.156366	0.2594
C(5)	-5.21E+10	1.27E+11	-0.408790	0.6865
C(6)	2.39E+09	3.15E+10	0.076050	0.9400

R-squared	0.979614	Mean dependent var	3.09E+13
Adjusted R-squared	0.975183	S.D. dependent var	1.54E+13
S.E. of regression	2.43E+12	Akaike info criterion	60.05554
Sum squared resid	1.36E+26	Schwarz criterion	60.33843
Log likelihood	-864.8054	Hannan-Quinn criter.	60.14414
F-statistic	221.0488	Durbin-Watson stat	1.694860
Prob(F-statistic)	0.000000		

APPENDIX II: Co-integration test result

Date: 03/14/16 Time: 10:26
Sample (adjusted): 1988 2014
Included observations: 27 after adjustments
Trend assumption: Linear deterministic trend
Series: DOP EXCH INF NOEXP RGDP RIR
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.861751	155.3809	95.75366	0.0000
At most 1 *	0.817821	101.9561	69.81889	0.0000
At most 2 *	0.610184	55.98144	47.85613	0.0072
At most 3 *	0.538065	30.54527	29.79707	0.0409
At most 4	0.222898	9.692320	15.49471	0.3052
At most 5	0.101287	2.883358	3.841466	0.0895

Trace test indicates 4 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

APPENDIX III: Pairwise Granger Causality Tests

Pairwise Granger Causality Tests
Date: 03/14/16 Time: 10:11
Sample: 1986 2015
Lags: 3

Null Hypothesis:	Obs	F-Statistic	Prob.
EXCH does not Granger Cause DOP	26	0.77498	0.5223
DOP does not Granger Cause EXCH		0.43961	0.7273
INF does not Granger Cause DOP	27	0.32558	0.8068
DOP does not Granger Cause INF		0.02856	0.9933
NOEXP does not Granger Cause DOP	27	0.03420	0.9912
DOP does not Granger Cause NOEXP		4.11206	0.0200
RGDP does not Granger Cause DOP	27	0.45114	0.7193
DOP does not Granger Cause RGDP		0.77111	0.5237
RIR does not Granger Cause DOP	27	3.10007	0.0499
DOP does not Granger Cause RIR		1.73624	0.1918
INF does not Granger Cause EXCH	26	3.29984	0.0427
EXCH does not Granger Cause INF		3.15937	0.0485
NOEXP does not Granger Cause EXCH	26	0.81835	0.4997
EXCH does not Granger Cause NOEXP		1.64171	0.2132
RGDP does not Granger Cause EXCH	26	1.08300	0.3801
EXCH does not Granger Cause RGDP		1.62086	0.2178
RIR does not Granger Cause EXCH	26	0.24576	0.8633
EXCH does not Granger Cause RIR		1.66758	0.2076
NOEXP does not Granger Cause INF	27	0.67022	0.5802
INF does not Granger Cause NOEXP		0.42462	0.7375
RGDP does not Granger Cause INF	27	0.67854	0.5754
INF does not Granger Cause RGDP		0.21907	0.8820
RIR does not Granger Cause INF	27	2.62665	0.0785
INF does not Granger Cause RIR		1.85249	0.1702
RGDP does not Granger Cause NOEXP	27	5.53769	0.0062
NOEXP does not Granger Cause RGDP		0.21893	0.8821
RIR does not Granger Cause NOEXP	27	0.08522	0.9673
NOEXP does not Granger Cause RIR		1.04754	0.3932
RIR does not Granger Cause RGDP	27	0.46344	0.7110
RGDP does not Granger Cause RIR		1.51176	0.2421

APPENDIX IV: RESEARCH DATA

YEARS	RGDP	DOP	RIR	INF	NOEXP	EXCH
1986	1.87175E+13	0.226046	9.433333	7.435345	4.23E+12	0.893774
1987	1.70789E+13	0.225659	9.959167	5.717151	3.85E+12	1.754523
1988	1.52426E+13	0.26653	13.96167	11.29032	4.06E+12	4.016037
1989	1.63923E+13	0.255298	16.61667	54.51122	4.18E+12	4.536967
1990	1.74524E+13	0.311318	20.44167	50.46669	5.43E+12	7.364735
1991	1.96804E+13	0.263802	25.3	7.3644	5.19E+12	8.038285
1992	1.95588E+13	0.286844	20.04167	13.00697	5.61E+12	9.909492
1993	1.96436E+13	0.209868	24.75833	44.58884	4.12E+12	17.29843
1994	2.00543E+13	0.243905	31.65	57.16525	4.89E+12	22.0654
1995	2.02367E+13	0.247172	20.48333	57.03171	5E+12	21.996
1996	2.01745E+13	0.226671	20.23333	72.8355	4.57E+12	21.89526
1997	2.11819E+13	0.192406	19.83667	29.26829	4.08E+12	21.88443
1998	2.17755E+13	0.276818	17.795	8.529874	6.03E+12	21.88605
1999	2.23669E+13	0.275123	18.18417	9.996378	6.15E+12	21.886
2000	2.24729E+13	0.244381	20.29	6.618373	5.49E+12	92.3381
2001	2.36681E+13	0.262793	21.27417	6.933292	6.22E+12	101.6973
2002	2.47121E+13	0.192242	23.43833	18.87365	4.75E+12	111.2313
2003	2.56473E+13	0.20677	24.77083	12.87658	5.3E+12	120.5782
2004	2.83029E+13	0.246131	20.71417	14.03178	6.97E+12	129.2224
2005	3.78511E+13	0.182286	19.18083	14.99803	6.9E+12	132.888
2006	3.9155E+13	0.198021	17.94833	17.86349	7.75E+12	131.2743
2007	4.237E+13	0.293191	16.9	8.239527	1.24E+13	128.6517
2008	4.52632E+13	0.226005	16.93917	5.382224	1.02E+13	125.8081
2009	4.81013E+13	0.273845	15.47983	11.57798	1.32E+13	118.546
2010	5.14368E+13	0.177463	18.36167	11.53767	9.13E+12	148.9017
2011	5.54694E+13	0.25264	17.585	13.7202	1.4E+13	150.298
2012	5.81804E+13	0.302996	16.01667	10.84079	1.76E+13	153.8616
2013	6.06701E+13	0.280133	16.7925	12.21701	1.7E+13	157.4994
2014	6.39428E+13	0.20802	16.7225	8.475827	1.33E+13	158.5526
2015	6.79775E+13	0.226263	16.54833	8.057383	1.54E+13	199.5

SOURCE: World economic indicators (World Bank, 2015)