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# NIGERIA BEYOND OIL: PROBLEM AND PROSPECTS

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**Abstract**

This study examined the growth potentials of Nigerian economy beyond the current practice of over-dependence on the oil sector using time series data on gross domestic product, oil revenue, non-oil revenue and government expenditure over the period 1987 and 2016. While the variables oil revenue, non-oil revenue government expenditure served as explanatory variables, gross domestic product was used as the dependent variable. The result (carried out using ordinary least square method) indicated that all the variables except government expenditure are positively related to the dependent variable (GDP) when combined together while the coefficient of multiple determinations of 90% showed that the model is of high good fit.

Besides, government expenditure is statically insignificant at 5% level. Thus, the study, therefore concluded by recommending diversification of the Nigerian economy, that is paying more attention to other sectors of the economy as a necessary step towards reducing the susceptibility of the Nigerian economy to external shock given the elastic nature of oil prices in the international market. To achieve this, the agricultural and industrial sectors of the economy should be developed with the government providing the necessary basic infrastructure as well as enabling environment for the sectors to thrive without sacrificing any corrupt public officials however highly placed the person maybe.

**Keywords**

Export, Government Expenditure, Non-Oil Revenue, Oil Revenue, Gross Domestic Product

## INTRODUCTION

Nigeria is the largest oil exporting country in Africa and has a rapidly growing economy. The country follows a resource based growth strategy driven by the production and exporting of oil. With the volatility of global oil prices and often volatile growth of Nigerian's economy, the country has wasted, much of her opportunities to break away from under-development despite her massiveness natural and human resources endowments. It has dwelled only on its huge crude oil resources as major source of revenue, driving a monolithic economy for years in spite of the enormous developmental challenges it faces (Suberu, *et al.,* 2015).

Regrettably, the oil resources are being mismanaged and a substantial part of it has gone on rent seeking and red-tapism common in Nigerian bureaucracy. For more than a decade now, Nigeria has been enjoying high levels of economic growth, human development and relative political stability. As it continues along the path of economic progress, it is imperative that the country finds ways to diversify its economy by boosting non-traditional sectors, expanding its range of products for exports and engaging new economic and trade partners (Suberu, *et al.,* 2015).

The economic nerve centre of Africa shifted northward when Nigeria took South Africa's long-held position as the country with the continent's largest Gross Domestic Product (GDP). While GDP neither reflects the wealth distribution nor accounts for the size of the population, it is a significant indication of Nigeria's emerging economic power. If these growing resources are invested intelligently, the country can benefit and exceed the International Money Fund's estimated GDP growth of seven percent. As a matter of priority, Nigeria government must encourage the diversification of Nigeria's economy as it is the only viable way to survive the current environment of global economic uncertainty with the volatility of oil price. It is crucial that government does not believe that oil provides an endless source of revenue (Suberu, *et al.,* 2015).

At the advent of democracy in 1999, Obasanjo's first full national budget in 2000 was under ~600bn but now we have as much as 800% increase over this, yet we can only see little development but surplus of rest like Newton's first law of thermodynamics. We say unequivocally that resource looting and wastage is much concentrated at the state levels, because most of our Governors are not just most wanting but problematic and the very impediment to development (Suberu, *et al.,* 2015).

However, economist opinion tilt towards diversification as the most competitive and strategic option for Nigeria in light of her developmental challenges and given her background. Diversification has a lot of benefits for Nigeria to maximally utilize her abundant resource-base to rebuild the economy and enjoy the benefits of all the linkages, synergy, economies of scale, grow national technology and foreign investment profile, build human capital, exploit new opportunities, lessen averagely operational costs, increase national competitiveness and grow the standard of living and confidence of the citizens for national renaissance (Suberu, *et al.,* 2015).

It is no longer news that Nigeria, since the 70s has been a mono-cultural economy relying heavily on oil as its major income earner, the implication of which the dynamics of the economy is at the whims and caprices of the price of oil, which for the most part, has been volatile (Enoma and Mustafa, 2011). The major fallout of this fragile structure of the Nigerian economy is a situation where the economy has been growing without creating jobs and reducing poverty (Onodugo, 2013). The on-hand explanation to this economic paradox is that the oil sector that produces about 90% of export earnings are in the hands of less than one percent of the Nigerian population dominated by expatriates and members of the political class who control production and the proceeds respectively. Worse still, the sector is disconnected from other tiers and sectors of the economy and thus offers little or no linkage and multiplier effect to the economy as a whole.

### Statement of the problem

Despite abundant natural and human resources, Nigeria remains a poor country. Up to the end of the 1960s, the country was self-sufficient in food production and even a net exporter of agricultural produce. Since the early 1970s however, as oil became a major foreign exchange earner and contributor to GDP, other sectors of the economy especially agriculture and manufacturing, have been relegated to the background. The result is that the non-oil sector of the economy has been stagnated, while crude revenues have not been managed effectively to stimulate desired growth levels and sustainable economic development.

In order to address the problems inherent in the economy, a number of programmes have been put in place by various governments. Notable among these is the Structural Adjustment Programme (SAP) of 1986. One of the objectives of SAP was to "restructure and diversify the productive base of the economy". With a view to reducing dependence on the oil sector and imports. However, although Nigeria has made some efforts towards achieving economic recovery, the full-anticipated benefits are far from being realized. Various studies such as those by Onoh (1973), Iniodu (1995) and Olakitan (1998) unanimously point to the deviation away from the non-oil sector of the economy to a mono-economy largely dominated by oil, as responsible for the despicable performance recorded by the Nigerian economy over the years.

The near total dependence on a mono product (oil), which operates on a quota system, has rendered the Nigerian economy vulnerable to fluctuations in world prices of petroleum and its products (Iniodu, 1995). The diversion of attention from agriculture-which was once the mainstay of the economy, came because of the favorable oil shocks of 1970s. This ushered in the era of "oil boom". As submitted by Adubi (2004), this popular Dutch disease syndrome made agricultural products less competitive and led to importation of cheap agricultural food and capital items. The overdependence on oil has not only promoted corruption, economic wastage, management of scarce resources but also make the Nigerian economy susceptible to external shock. No wander, the current fall in the crude oil prices in the international market has plunged the economy into recession which would have been avoided or reduced to the barest minimum if the economy has been diversified. As at date, none of the thirty-six states of the Nigerian federation except Lagos state can survive without allocation from the federation account as they are already embellished in the 'share syndrome' which discourage hard work and kill initiative of the state thereby preventing them from looking inwards by way of diversifying their sources of income. It is against this backdrop that this study intends to examine the Nigerian economy beyond its dependence on oil as a panacea to the growth and development of the Nigerian economy. Therefore, using the descriptive approach, this paper aims at filling this research gap by taking a sweep look at Nigeria beyond oil with a view to diversifying the nation's economy.

### Research Hypothesis

The following research hypotheses were formulated and tested

**$H0_1$:** Overdependence on oil revenue has more negative impact than positive impact on Nigeria's economic development.

**$H1_1$:** Overdependence on oil revenue has more positive impact than negative impact on Nigeria's economic development.

## Conceptual Review

### Historical Overview of Nigeria's Petroleum Sector

According to CBN Bulletin Vol. 3 (2001), Oil exploration started in Nigeria in the year 1908 by the German Company, Nigeria Bitumen Corporation, in the Araromi area of the present Ondo state. Their pioneering effort ended due to the outbreak of the First World War in 1914. In 1937, oil prospecting was resumed by Shell Darey (forerunner of the present Shell Petroleum Development Company of Nigeria). The company was awarded the sole concessionary right covering the whole territory of Nigeria.

As it was in the beginning, their activities were again interrupted by the Second World War for resumed in 1947. It was only in 1956, however that oil discovered in commercial quantities at Oloibiri in the Niger Delta

Area and in 1958, oil production and export started from this field by 1961, other companies such as Mobil, Chevron (formerly Gulf), Agip Safarap (Elf) etc had commenced exploration activities for oil in on-shore and off –shore area of Nigeria.

Consequently, the exploration rights formally granted shell alone was extended to these new comers. From an initial quantity of 5,100 barrels per day from the Oloibiri field, the quantity doubled the following year and by 1972, crude oil exports from Nigeria rose to 2.0 million barrel per day and reached a peak of 2.4million barrel per day in 1979. Consequently, Nigeria attained the status of a major oil producer, ranking sixth in the world.

In the early period, government interest in oil exploration was only limited to the collection of royalties from the companies and making rudimentary laws to regulate the activities of the oil industry. This low interest was partly due to the insignificant contribution of the commodity to Nigeria's economy before the late sixties and the relative lack of trained personnel and expertise. By 1971 however, oil had assumed a different dimension in terms of importance to the economy. To strengthen and establish government control in the industry, the Nigeria's National Oil Corporation (NNOC) was established by a Decree in 1971. Also in that year, Nigeria joined the OPEC as the 11$^{th}$ member nation.

The NNOC was accorded the responsibility for both upstream and downstream activities in the oil industry. But the regulatory functions were vested in the Ministry of Petroleum Resources. As a result of all these developments, Government had acquired a new stature and so decided to participate actively in the industry's activities. In April 1, 1977, a merger was effected between the NNOC and the Ministry of Petroleum Resources which gave birth to the Nigerian National Petroleum Corporation (NNPC). NNPC combined the commercial functions of the NNOC with the regulatory functions of Ministry of Petroleum Resources. This was to prevent unnecessary duplication of effort and possible unhealthy rivalry that could be inimical to the national economy.

Between 1970 and 1978, the nation experienced an upsurge in demand for petroleum products, averaging a yearly increase of 23.4%. Thus in 1978, the Warri refinery was officially opened with a capacity of 260,000 barrels per day while the fourth refinery was constructed near Port Harcourt. The Federal Government uses some of the products from the refineries as feedback in its petrochemical projects located at Ekpan, Port Harcourt and Kaduna. It suffices to state that in spite of the huge investments in the various refineries and their appendages, the country remained bereft of regular supply of petroleum products with queues at filling stations across the nation being the order of the day for many years, until in mid-2010 when situation began to improve .This shortfall is largely attributed to the general weakness that characterize the petroleum industry in Nigeria.

### The Negative Impact of Petroleum Sub-Sector on the Economy

According to Ikem (1979), there is one school of thought, who holds that the development of petroleum in Nigeria was more a curse than a credit to the economy; the reasons advanced by this school are based on the following:

1 **Over-dependence on Crude Oil:** This has a number of implications, neglect of non-oil sector, a monoculture economy which is vulnerable to the vagaries of international oil market, among others. Government dependence on crude oil is reflected on crude oil contribution to gross domestic product, total government revenue, total level of external reserves and foreign exchange earnings. This indicated that the economy since 1975, following the quadrupling of crude oil prices in the world markets in 1973/74, depended on the crude oil sector for more than 80% of the foreign exchange earnings and value of export, and over 60% for total revenue. In real terms, the petroleum sector has accounted for 13 to 22% of the country gross domestic product. In 1980 when crude oil price of Nigeria's Bonny light was close to $41,000 a barrel, the sector accounted for 22% of the gross domestic

product. The only sector which accounted more than the petroleum sector in Nigeria's gross domestic product in the 1980s and 1990s is the agricultural sector. Before 1970 the contribution of the petroleum sector to the gross domestic product was less than 4% less than 20% in value of exports, less than 27% in total revenue and foreign exchange earnings.

Thus, before 1970, the non-oil sector contributed more to the economy than the oil sector. The reverse is true in the 1980s and 1990s. Hence, Nigeria's overdependence on the petroleum sector for revenue for meeting expenditure needs is borne out by available statistics. According to Mcpherson (2000), he wrote that overdependence on oil causes excessive credit expansion, i.e. when oil revenue gets into the domestic banking system, they are likely to restructure "excessive credit expansion", threatening financial stability. He also noted that oil development can take resources and investment away from other sectors of the economy.

2 **Neglect of Other Sectors of the Economy:** so much has been written on the poor performance of the non-oil sectors of the economy particularly in their contribution to value of exports included in non-oil sector made up of roadside economic activities, including market activities, which are not captured in the calculation of the gross domestic product, because gains from petroleum development came from exertion of government and joint venture oil companies, there was the temptation to go for the fast tract rather than for slow process of revenue generation in the agricultural sector, compared with other sectors like manufacturing and solid minerals.

Moreover the gestation period between investment and returns on investment was quicker in the petroleum sector than other sector. Financiers of projects found the petroleum sector more promising for realizing returns on their investments than non-petroleum sector. The markets for petroleum and petroleum products were more attractive and world wide than the markets for non-petroleum products. Available statistics shows that Nigeria has proven oil reserves of up to 25 billion barrels, about 2.2% of total world crude oil reserves. it also has much gas reserves and deposits of bitumen. In addition, it has ample reserves of coal, hydropower, and renewable energy resources. Over the years, the concentration of the government has been exploitation of crude oil to the neglect of other non-oil energy resources with the exception of coal, the exploitation of which suffered neglect due to Nigerian Civil War.

Another sector that suffered serious neglect is the solid minerals. Studies carried out by the Geographical Survey Department of Ministry of Solid Minerals, the Raw Materials and Development, the Nigerian Mining Council and National Steel Council, shows that Nigeria has several mineral resources of commercial quantity and which could be exploited for export and for domestic uses. Domestic uses as a way to diversify away from the petroleum sector. However, policy focus in the past was towards crude oil until ministry solid mineral was created in 1995. Even so, due to funding constraint, not much progress has been made by the ministry to exploit the large deposited bitumen fund in four state of the federation excluding Enugu, where the exploitation was concentrated in the past.

3. **Downstream Problem:** The production of petroleum products and their distribution are the root of energy crises in Nigeria beside their erratic electricity generation and transmission. Nigeria has four refineries of combine capacity utilization of 445,000 barrels per day. But they operate below 57% capacity due to corrupt management, poor maintenance, vandalisation activities, and strikes by workers and disruption by irate youth of some communities. However, downstream is public sector dominated and riddled with insufficiency, poor funding and low commitment.

### Theoretical Review

Non-oil export products are those commodities excluding crude oil (petroleum products), which are sold in the international market for the purpose of revenue generation. According to CBN publication (2001) on the Nigerian export product guidelines, oil export and non-oil export had to be distinguished because of the great difference in terms of volume and value of export earning between the two. Oil export had taking over the lead in the economy and had over the years contributed greatly to the country's export products accounting for over 92% of total volume export and 856% of total volume of export and 86% of total earnings (CBN, 2001). There had been serious concern over the dependency of all export earnings in the development of Nigerian economy. Following this, successive government had tried to embark on diversification of the export base of the country.

Thus, there had been efforts in the past and present times, to increase the non-oil export of Nigeria both in volume and earnings (values). As Soludo (2002) noted that the easiest way to fastening over nations economic recovering and development is to broaden over export base of non-oil exports, which will invigorates the oiling sector of the economy and help place the economy on the sustainable development path. According to CBN publication (2001), non-oil export products can be broadly classified into three major groups. These include the Agricultural Commodities and Products, the Solid Mineral Export Products and the Craft, Manufactured Export Products and services sectors.

## Factors that could minimize Nigeria's Overdependence on Oil Revenue

Abayomi (2006) stated that it is necessary that a number of factors should be considered if success is to be achieved in a bid to diversify revenue away from oil and these are:

**Agriculture:** Agriculture used to be mainstay of the Nigeria economy which plays a vital role in shaping the economic and political destiny of the country. Agriculture has been the foundation of industrialization throughout the world because without agriculture, there would have been no industrial revolution in the first place. Agriculture provided the raw materials for the manufacturing industries. The industries, in turn, fuelled the expansion of agriculture to meet their raw materials needs and the food needs in industrialized nations. A report of economic survey of Nigeria conducted in 1959 at the instance of the federal government showed that we earned 95.4 million pounds from yam exports and 86.1 million pounds from the export of cassava and garri. On the other hand, only 30million pounds and 24 million pounds came from agriculture and cocoa respectively. a recent report by the Food and Agriculture Organization, FAO, of the united nations showed that in 2008, Nigeria earned N56 billion naira from yam export. Nigeria is regarded as one of the biggest poultry producer in Africa, corporate poultry as increased from 40 million birds annually to about 70 million. Agriculture is said to be a surer and more lasting source of revenue and a mighty grass root empowerment tool while our oil revenue is applied to complement agricultural and other viable sources of revenue (Isah, 2009).

**Tourism:** tourism is also a factor that can aid less reliance on oil revenue for economic development and also a source of revenue for the country. The reality on ground is that tourism has become one increasing case of travel and smoothness of movement across international boundaries, the Nigeria tourism sector boasts of being one of the worlds' biggest export earner generating enormous foreign exchange earnings and employment. it is no longer in doubt that tourism has become a catalyst for growth in Nigeria and in many countries like Australia, Cyprus, Kenya, etc, as it brings in substantial revenues for government whilst stimulating greater investments in infrastructure which ultimately contributes to improved living conditions for the people.

Nigeria and indeed Africa is well known for their more than the usual hospitality. The traditional Nigerian society dwells richly in welcoming guest, strangers and visitors using various approaches and means. Locations such as bleaches ideal for different kinds of games, unique wildlife, vast strips of unspoiled nature ranging from tropical forest, magnificent waterfalls and great artworks showcasing lifestyle and creating of Nigerian people. Some of these natural locations, sights and sounds of the people have been developed into tourist's sites widely after by local and foreign tourist. The tourist's sites which have been attracted god number of visitors include Obudu Cattle Ranch in Calabar, Mambilla Plateau in taraba state. Yankari game reserve in Bauchi state, Oguta lake in Imo state, Lagos sunburn Yatch hotel, beautiful festivals include, the osun osogbo festival, the argungun fishing festival, inc festival state, and the Iwa-Awka festivals in Imo state.

### Data Presentation

The data used for the econometric analysis in this research are stated thus:

**Tables 1: DATA PRESENTATION**

| Year | GDP | NON-OIL | OIL | GEX |
|---|---|---|---|---|
| 1986 | 69146.99 | 552.1 | 8364.4 | 16223.7 |
| 1987 | 105222.84 | 2152 | 28208.6 | 22018.7 |
| 1988 | 139085.3 | 2757.4 | 28435.4 | 27749.5 |
| 1989 | 216797.54 | 2954.4 | 55016.8 | 41028.3 |
| 1990 | 267549.99 | 3259.6 | 106626.5 | 60268.2 |
| 1991 | 312139.74 | 4677.2 | 116856.5 | 66584.4 |
| 1992 | 532613.83 | 4228.3 | 201384.8 | 92797.4 |
| 1993 | 683869.79 | 5022.3 | 213778.8 | 191228.9 |
| 1994 | 899863.22 | 5349 | 200710.2 | 160893.2 |
| 1995 | 1933211.55 | 20102.8 | 525669.6 | 248768.1 |
| 1996 | 2702719.13 | 20059.5 | 1108187.1 | 337417.6 |
| 1997 | 2801972.58 | 25629.3 | 1065502.1 | 428215.2 |
| 1998 | 2708430.86 | 31227.7 | 657843.5 | 487113.4 |
| 1999 | 3194014.97 | 19493 | 1169476.9 | 947690 |
| 2000 | 4582127.29 | 24822.9 | 1920900.4 | 701050.9 |
| 2001 | 4725086 | 28008.6 | 1973222.2 | 1017996.5 |
| 2002 | 6912381.25 | 94731.8 | 1649445.8 | 1018178.1 |
| 2003 | 8487031.57 | 94976.4 | 2993110 | 1225988.3 |
| 2004 | 11411066.91 | 113309.4 | 4489472.2 | 1384000 |
| 2005 | 14572239.12 | 105955.88 | 7140578.92 | 1743200 |
| 2006 | 18564594.73 | 133594.99 | 7191085.64 | 184587.7 |
| 2007 | 20657317.67 | 199257.94 | 8110500.38 | 2348593 |
| 2008 | 24794238.66 | 247838.99 | 9913651.13 | 2880200 |
| 2009 | 24794238.66 | 289152.57 | 8067233 | 3116985.6 |
| 2010 | 29205782.96 | 396377.16 | 8204117.2 | 3845720 |
| 2011 | 29405782.16 | 376341.14 | 8550410.35 | 3945420 |
| 2012 | 30205782.21 | 406213.17 | 8780634.27 | 4084520 |
| 2013 | 31205742.66 | 384274.46 | 9069422.33 | 4211570 |
| 2014 | *32005742.21 | 400772.23 | 9369421.42 | 4355720 |
| 2015 | *34025482.73 | 401327.10 | 9449412.31 | 4602206 |
| 2016 | *370205781.90 | 304231.13 | 9894225.30 | 4842728 |

**Source: CBN Statically Bulletin Volume 21 Dec, 2016**

* computed using three years moving average

### METHODOLOGY

The Ordinary Least Square (OLS) Regression model is used to obtain the parameter of the variables. Coefficient of determination $R^2$, T and F tests was also used to ascertain the validity of the estimated coefficient. Coefficient of determination gives the extent to which the independent variables explained the variation in the dependent variable. For the T-test and F-test, the calculated values will be compared with the tabulated values to estimate the statistical significance of explanatory variables. They will also determine the acceptability or otherwise of the hypothesis formulated and the standardize beta coefficient will be used to estimate the relative effectiveness of the explanatory variables.

### Model Specification

The primary aim of this study is to find out the growth potentials of the Nigerian economy beyond the current practice of over-dependence on the oil sector using econometric technique. In evaluating this, variable such as real gross domestic product, oil export revenue, non-oil export revenue and government expenditure are used. While the real gross domestic product (GDP) serves as a dependent variable, oil export revenue, non-oil export revenue and government expenditure served as the explanatory variables. Thus, the methodological approach for this research work will follow the specification of a model which specifies the gross domestic product as a function of oil export revenue, non-oil export revenue and government expenditure.

$GDPt = f(OIL_t, NON\text{-}OIL_t, GEX_t)$ ..............................(i)

In a linear form, the model can be specified as;

$GDP_t = \beta_0 + \beta_1 OIL_t + \beta_2 NON\text{-}OIL_t + \beta_3 GEX + U_t$ .......... (ii)

Where:

| | |
|---|---|
| $GDP_t$ | = Real Gross Domestic Product |
| $OIL_t$ | = Government Expenditure |
| $NON\text{-}OIL_t$, | =Private Investment |
| $GEX_t$ | =Inflation Rate |
| $U_t$ | = Error Term |

$\beta_0$ to $\beta_3$ are parameters

The logarithm format becomes:

$LogGDP_t = \beta_0 + In\ \beta_1 OIL_t + In\ \beta_2 NON\text{-}OIL_t + In\beta_3 GEX_t + U_t$ ....(iii)

The logarithm format above becomes necessary due to the fact that it measures the general growth rate to de-emphasize the rising trend of each of the variables used in the model. The log linear transformation equally ensured that the parameters are elasticity parameters yielding estimate of the responsiveness of the dependent variables to the parameter of the independent variable.

Other equations are stated thus:

$GDP_t = \beta_0 + \beta_1 OIL_t + \beta_2 NON\text{-}OIL_t + U_t$ ................iv

$GDP_t = \beta_0 + \beta_1 OIL_t + \beta_2 GEX + U_t$ .......................v

$GDP_t = \beta_0 + \beta_1 NON\text{-}OIL_{t\,+}\ \beta_2 GEX + U_t$ .................. vi

While equation 3 combined all the variables together, equations 4 and 5 and 6 are meant to ascertain how each of the included variables in turns affected economic growth and how their non-inclusion in the equation will affect the performance of the analysis.

### Data Types and Sources

The estimation of the model in this study is done using time series data over the periods 1986-2016. All the data used were sources from various issues of the reports/ publications of central bank of Nigeria, national bureau of statistics and other scholarly reports on the study. The data shall be analyzed using multiple regression analysis.

## Data Analysis and Interpretation of Results

### Presentation of Result

In order to estimate the influence of non-oil export on economic growth in Nigeria, the Gross Domestic Product was regressed on the explanatory variables (oil export revenue, non-oil export revenue and government expenditure) over the periods 1986 to 2016. The result in thus presented below:

**TABLE 2: Effect of Oil and Non-Oil Export on Nigeria Economic Growth**

Dependent Variables: GDP
Method: Least Squares
Sample (Adjusted): 1986-2016
Included Observation: 30

| Variables | Coefficient | Standard Error | t-Statistic | Prob. |
|---|---|---|---|---|
| Constant | 3.514299 | 0.087250 | 40.27872 | 0.0000 |
| LOG(OIL) | 0.149754 | 0.091292 | 1.640379 | 0.1117 |
| LOG(NON-OIL) | 0.077723 | 0.095918 | 0.810310 | 0.4244 |

| | |
|---|---|
| R-squared **= 0.901838** | Adjusted R-squared **= 0.895068** |
| F- statistics= 133.2149 | S.E of regression = 0.160385 |
| Durbin-Watson stat = 0.223145 | Schwarz Criterion = -0.596006 |
| Akaike info Criterion = -0.733418 | Mean Dependent Var = 4.677927 |

GDP = 3.514299 + 0.149754OIL + 0.077723NON-OIL

In this model, oil export revenue and non-oil export revenue served as explanatory variables while the real gross domestic product is the dependent variable. The result of the model as indicated in table 2 showed that oil export revenue and non-oil export revenue are positively related to the dependent variable (GDP). The coefficient of multiple determination shows that the model is of high good fit with approximately 90% of gross domestic product being explained by the variables included in the model, while the remaining 10% are factors influencing economic growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.223145 suggests that there is presence of serial correlation. The F-statistics indicates the joint significance of the explanatory variables and high degree to which variations in the RGDP are explained by variations in the explanatory variables.

**Table 3: Effect of Oil Revenue and Government Expenditure on Nigeria Economic Growth**

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1986-2016

Included Observations : 30

| Variables | Coefficient | Standard Error | t-Statistic | Prob. |
|---|---|---|---|---|
| Constant | 0.459428 | 0.143759 | 24.06413 | 0.0000 |
| LOG(OIL) | 0.223227 | 0.013915 | 16.04236 | 0.0000 |
| LOG(GEX) | s 0.008098 | 0.040254 | 0.201180 | 0.8420 |

| | |
|---|---|
| R-squared **= 0.899755** | Adjusted R-squared **= 0.892842** |
| F- statistics= 130.1461 | S.E of regression = 0.162078 |
| Durbin-Watson stat = 0.225076 | Schwarz Criterion = -0.575011 |
| Akaike info Criterion = -0.712424 | Mean Dependent Var. = 4.677927 |

GDP = 0.459428 + 0.22322OIL + 0.008098GEX

In this model, oil revenue and government expenditure served as explanatory variables while the GDP is the dependent variable. The result of the model as indicated in table 3 showed that oil revenue and government expenditure are positively related to dependent variable (GDP). The coefficient of multiple determination shows that the model is of high good fit with approximately 90% of gross domestic product being explained by the variables included in the model, while the remaining 10% are factors influencing growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.225076 suggests that there is presence of serial correlation. The F-statistics indicates the joint significance of the explanatory variables and the high degree to which variations in the GDP are explained by variations in the explanatory variables.

**TABLE 4: Effect of Oil Revenue and Government Expenditure on Nigeria Economic Growth**

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1986-2016

Included Observations : 30

| **Variables** | **Coefficient** | **Standard Error** | **t-Statistic** | **Prob.** |
|---|---|---|---|---|
| Constant | 3.557331 | 0.1444913 | 24.54800 | 0.0000 |
| LOG(NON-OIL) | 0.012303 | 0.041613 | 0.295661 | 0.7696 |
| LOG(GEX) | 0.233850 | 0.015114 | 15.47289 | 0.0000 |

R-squared **= 0.893052**
F- statistics= 121.0800
Durbin-Watson stat = 0.283446
Akaike info Criterion = -0.647696

Adjusted R-squared **= 0.885676**
S.E of regression = 0.167409
Schwarz Criterion = -0.510283
Mean Dependent Var. = 4.677927

GDP = 3.557331 + 0.012303NON-OIL + 0.233859GEX

In this model, non-oil revenue and government expenditure served as explanatory variables while the gross domestic product is the dependent variable. Oil revenue and government expenditure are positively related to the dependent variable (GDP). The coefficient of multiple determination shows that the model is of high good fit with approximately 89% of gross domestic product being explained by the variables included in the model, while the remaining 11% are factors influencing growth but were not captured in model. Similarly, the low Durbin-Watson value of 0.283446 suggested that there is presence of serial correlation. The F-statistics indicates the joint significance of the explanatory variables and the high degree to which variations in the GDP are explained by variations in the explanatory variables and high degree to which variations in the GDP are explained by variations in the explanatory variables.

**TABLE 5: Effect of Oil Revenue, Non-Oil Revenue and Government on Nigeria Economic Growth**

Dependent Variable: GDP

Method: Least Squares

Sample (Adjusted): 1986-2016

Included Observations: 30

| Variables | Coefficient | Standard Error | t-Statistic | Prob. |
|---|---|---|---|---|
| Constant | 3.485310 | 0.148115 | 23.53114 | 0.0000 |
| LOG(OIL) | 0.148920 | 0.092872 | 1.603488 | 0.1200 |
| LOG(NON-OIL) | 0.009912 | 0.040557 | 0.244391 | 0.8087 |
| LOG(GEX) | -0.079042 | 0.097661 | 0.809350 | 0.0251 |

| | |
|---|---|
| R-squared **= 0.902047** | Adjusted R-squared **= 0.891552** |
| F- statistics= 85.95035 | S.E of regression = 0.1603050 |
| Durbin-Watson stat = 0.226603 | Schwarz Criterion = -0.489832 |
| Akaike info Criterion = -0.673049 | Mean Dependent Var = 4.677927 |

GDP = 3.485310 + 0.148920OIL + 0.009912NON-OIL – 0.079042GEX

In this model, oil revenue, non-oil revenue and government expenditure served as explanatory served as explanatory variables while gross domestic product is the dependent variable. The result of the model as indicated in table 5 showed that all variables rate are positively related to the dependent variable (GDP) when combined together which is in conformity with the a prior expectation. The coefficient of multiple determination shows that the model is of high god fit with approximately 90% of gross domestic product being explained by the variables included in the model, while the remaining 10% are factors growth but were not captured in the model. Similarly, the low Durbin-Watson value of 0.226603 suggests that there is presence of serial correlation.

The effect of oil revenue on gross domestic product is not significant (P-value, 0.12 > α). This could be largely due to misappropriation of public funds and corruption that have resulted in channeling huge oil revenue generated to non-productive areas rather than investing in productive ventures, (such as infrastructure and other growth promoting activities). Billions of dollars could not be accounted for but claimed to have been spent on security and the power sector in Nigeria without any significant improvement in power generation and national security. The proportion of public funds channeled to investment in infrastructure is usually less than those spent on consumption expenditure. The co-efficient is positive (0.148920) which conforms to a prior expectation. This shows that if the quality of government expenditure is improved upon by directing it to productive channels, it would, ceteris paribus, stimulate economic growth as posited by Aregbeyen (2007) in his study of forty African countries, including Nigeria.

In addition, the effect of non-oil revenue on gross domestic product is not significant (p-value, 0.8087 > α). This may be due to the fact that Nigerian economy is one that is heavily dependent on oil, the price of which fluctuates in the world market being a primary product. The negative coefficient (0.079042) of government expenditure agrees with a priori expectation which may be due to economic mismanagement on the part of the government and insecurity in the country which does not provide an enabling environment for domestic and foreign investors.

## Policy Implications

Finding from the analysis reveal that the main variable of interest (i.e. non-oil export) is statistically significant and positive, but infinitesimal in the level of its contribution in stimulating Nigerian economic growth within the period under study. A unit increase in non-oil export stimulates growth of the Nigerian economy by 0.009 percent. This outcome reveals the grossly underdeveloped state of the non-oil sector of the Nigerian economy. It therefore implies that for non-oil export to be able to stimulate and influence the rate of desired change in the growth of Nigerian economy, the sector has to be energized and made and made a fast growing one through appropriate government policies.

# CONCLUSION

This research work attempted to analyze the growth potentials of the Nigerian economy beyond the current practice of over-dependence on the oil sector using time series data on gross domestic product, oil revenue, non-oil revenue and government expenditure. From the results of the analysis and findings, the authors conclude that considering the inroads made during the non-oil era and Nigeria's current circumstance, the study proposed diversification of the economy that is, paying more attention to other sectors of the economy as a necessary first step towards reducing the susceptibility of the Nigerian economy to external shock given the elastic nature of oil prices in the international market. To achieve this, the agricultural and industrial sectors of the economy as well as tax reform should be developed with government providing the necessary basic infrastructure as well as enabling environment for the sectors to thrive without sacrificing any corrupt public officials however highly placed the person may be.

## Policy Recommendation

Based on the findings of the study and in order to improve the contribution of non-oil exports to Nigerian GDP, the following recommendations were made;

1 The Nigerian government should focus on the need for diversification into other sources of revenue in order not to be affected by fall of oil price in the international market.

2 The government should develop other sectors of the economy such as agricultural sector, and industrial sector by providing incentives such as tax concession; provision of facilities needed by these sectors in order to boost production create more jobs and ultimately increasing the gross domestic product.

3 The government should tackle the issue of corruption headlong such that limited scarce resources generated from oil can be utilized judiciously to develop the non-oil sector of the economy. In order to achieve this, government should gear efforts towards the reduction if not complete eradication of the spate at which public funds are diverted into private pockets in the name of embezzlement.

4 Emphasis should be placed on the development of basic infrastructure (for example, transportation, energy and communication) as this form the pedestal through which investment in the agricultural and industrial sectors can be enhanced.

5 Since fraud and public funds embezzlement (among other factors) have become the bane of Nigeria's economic growth and development over the years, public funds embezzlement should attract a more severe penalty as a disincentive to those who see public office as a springboard to leap fast to a height of wealth and self-actualization at the expense of the impoverished majority. The Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices and other related offenses Commission (ICPC) should be more proactive in their fight against corruption and bring to justice anyone found guilty of the mismanagement of the nations' resources however highly placed the person may be.

6 Tax reform policy should be enhanced to improve revenue generation in the economy.

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