

Revenue Sources and Economic Growth in Nigeria: An Appraisal

Joseph Okwori Abubakar Sule
Department of Economics, Benue State University (BSU), Makurdi

Abstract

This paper appraises revenue sources in Nigeria; oil revenue, non-oil revenue and public debt decomposed into domestic and external debt with respect to its effect on economic growth in Nigeria. This analysis is contemporaneously imperative in the face of the global fall in oil prices and the impending danger of collapse of the Nigerian government's ability to sustainably finance the economy due to over dependence on oil revenue. The Co-integration Test and granger causality test was conducted to appraise the long-run relationship between revenue sources and to examine direction of relationship between revenue sources and economic growth in Nigeria. Results shows that increase in OIL by one per cent increases GDP by 0.21%; same goes for NOIL increase by 0.25%; ED by 0.07% respectively except for DD by -0.26%. Then causation between revenue source and GDP portray that there is unidirectional relationship between GDP and OIL; bidirectional between NOIL and GDP; unidirectional relationship between GDP and DD and no causality between ED and GDP. To this effect, the paper recommends a review of revenue collection machinery, especially taxation, to ensure effectiveness and improved revenue remittances to government coffers. As a follow up, there is an urgent need to formulate economic policy to guarantee both domestic and external loans utilized in productive ventures for increased productivity.

Keywords: Oil Revenue, Non-oil Revenue, Domestic Debt, External Debt and Economic Growth

1.1 Introduction

Policy makers and researchers have long been interested in how prospective changes to the revenue sources impact on the overall economic growth. According to Kiabel and Nwokah (2009), within the last decade, the issue of domestic resource mobilization has attracted considerable attention in many developing countries due to debt difficulties coupled with domestic and external financial imbalances. An understanding of this relationship is critical in the formulation of a sound or excellent fiscal policy to prevent or reduce unsustainable fiscal deficit (Eita and Mbazima, 2008). It is also highly consequential in evaluating government's role in the distribution of resources (Chang, 2009). Revenue generated through tax is a major source of government revenue all over the world. A critical challenge of tax administration in the 21st century is how to advance the frontiers of professionalism, accountability and awareness of the general public on the imperatives and benefits of taxation in our personal and business lives which include: promoting economic activity; facilitating savings and investment; and generating strategic competitive advantage (Kiabel and Nwokah, 2009). Government use tax proceeds to render their traditional functions, such as the provision of public goods, maintenance of law and order, defense against external aggression, regulation of trade and business to ensure social and economic maintenance (Azubike, 2009).

Nigeria has been one of the most backward developing countries in terms of harnessing revenue owing to weak standard of good governance. In recent years, the most worrisome about Nigeria's economy is that corruption and mismanagement prevented the strait of the country's resources from taxation and other sources into lasting improvements in self-sustaining economy. Thus despite increasing revenue generation that supposedly have been plough into productive ventures, the economy is still characterized with high rate of unemployment of 21.4% and 23.9%, high rate of inflation of 11.8%, and 10.3%, high interest rate of 22.51% and 22.42%, low capacity utilization of oil industry of 24.33% and 24%, in 2010 and 2011 respectively (CBN, 2012). There also exist low investment, high level of corruption, weak institutions, low per capita income, poor infrastructure, deteriorating economic activities, accumulated debt, still prevail. It is with a great dismay that the poor indices stated above is lack of provision of public goods as enshrined in theory of public goods popularized by Samuelson in 1954. As stated by Sanni (2007), Nigeria's fiscal operations over the years have resulted in varying degrees of deficit; financing of which has had tremendous implications for the economy. Hence the country is faced with increasing budget deficits year in year out creating an ever increasing gap between public expenditure and the revenue generated. Deficit financing remains high at ₦ 117.2 billion, ₦ 47.4 billion and ₦ 810.0 billion in 2007, 2008, and 2009 respectively (CBN, 2010). Statistics shows that Nigeria's oil GDP growth rate stood at 7.84% between 1986-1993, fell to 0.51% between 1994-1999, 4.75% between 2000-2002, and rose to 6.40% between 2003-2008 while non-oil GDP growth rate within the same period stood at 5.77%, 3.00%, 3.55% and 8.80% respectively with corresponding total GDP growth rate between 1986-1993 stood at 6.23%, 1994-1999 at rate of 2.33%, 2000-2002 at 4.75% and 2003-2008 at 6.40%. It is pertinent to note that, total oil revenue generated between 2000 and 2009 amounted to N34.2 trillion while non-oil was N7.3 trillion, representing 82.36% and 17.64% respectively (CBN Statistical Bulletin, 2009). This is a clear indication that our

revenue generation potential is solely dependent on oil revenue even in the midst of several adjustment and implementation of various forms of tax revenue laws. This is an indication of high level of inefficiency in the tax administration in Nigeria, which is contrary to the tax-and-spend hypothesis put forward by Friedman (1978) which states that changes in government revenue bring about changes in government expenditure with sole aim of bringing growth in the economy. Besides, Naiyeju (1996) asserted that, the success or failure of any tax system depends on the extent to which it is properly managed; the extent to which the tax law is properly interpreted and implemented. Dickson and Presley (2013) further attribute this shortcoming to high rate of tax evasion, misguided tax exemptions and corruption in the administration of the tax system. Despite the tremendous growth recorded in the oil revenue, there are still reoccurring question as to whether government have fully utilized this revenue for the overall improvement of the economic activities. To this end, Storey (1953) wrote that “before independence, there have been cases of official misuse of resources for personal enrichment”. With this persistent variance one may not be wrong to question the outlook of the revenue generation base - the Gross Domestic Product (GDP) and its attendant growth rate in the light of the 2008 global economic recession and recently the fluctuation of crude oil price at the international market with its devastating effect on revenue base where Nigeria government is seeking external loans worth \$5.7bn (N2.97tn) from World Bank, African Development Bank, Islamic Development Bank and China Export-Import Bank to finance 2015 budget (Iweala, 2015) in midst of existing debt profile of about N712billion recorded in 2014 and currently stand at N943billion as at January 2015. Excellent fiscal policy – as noted by Eita and Mbazima (2008), Wolde-Rufael (2008), and Fasano and Wang (2002) – is essential in bring about improved revenue generation sources and sustainable economic growth. It is also suggested (Wicken and Uctum, 1990) that the sustainability of a fiscal deficit profile is essential if it must stimulate growth. Most times when expected revenue exceeds expenditure, it is expected to stimulate growth but in Nigeria, it is the opposite giving excessive and over bloated cost of governance. To this end, Ariyo (1993) expressed the view that given the current trend, Nigeria may not be able to sustain the level of her fiscal deficit in the long-run.

Given the above scenario described above, the main objective of this paper is to investigate the contribution of revenue sources to economic growth in Nigeria. Specific objectives are: (i) to appraise revenue sources and its effect on economic growth in Nigeria and (ii) examine causal/direction of relationship between revenue sources and economic growth in Nigeria. The hypothesis to be tested in this study is: H_0 : revenue sources has no significant effect on economic growth in Nigeria. The theoretical underpinning of this study is the revenue productivity theory, and the Cointegration Test and Granger Causality Test is used as method of analysis. This paper is organized into five sections. Section one is the introduction while Section two covers the literature review. Sections three deals with research methodology while data analysis and major findings and discussions is done in section four. Conclusion and recommendations are done in section five.

2.1 Conceptual Framework

2.1.1 Revenue

Revenue is defined as all amounts of money received by a government from external sources for example those originating from “outside the government” net of refunds and other correcting transactions, proceeds from issuance of debt, the sale of investments, agency or private trust transactions, and intra-governmental transfers ((Ahmed, 2010). Financial resources of government constitute the bulk of its revenue and this relate to monies mobilized or generated in the economy (Obiechina, 2010).

The working definition of this study is in line with Asher (2001), Soyode and Kajola (2006) assertions that options are available to governments for raising fund for bidding resources away from the other sectors of the economy and from other claimants to undertake their activities. Thus, revenue sources are not only limited to oil and non-oil sources but other means available to government in raising fund to financing their activities. Hence, the study also captured public debt.

Public revenue consists of taxes, revenue from administrative activities like fines, fees, gifts and grants. Public revenue can be classified into two types including: tax and non-tax revenue (Illyas and Siddiqi, 2010). Taxes are the first and foremost sources of public revenue. Taxes are compulsory payments to government without expecting direct benefit or return by the tax payer. The government collects tax revenue by way of direct & indirect taxes. Direct taxes includes; Corporate tax; personal income tax capital gain tax and wealth tax. Indirect taxes include custom duty, central excise duty, Value Added Tax (VAT) and service tax (Chaudhry and Munir, 2010). Non-tax revenue refers to the revenue obtained by the government from sources other than tax. These include fees, fines and penalties, surplus from public enterprises, special assessment of betterment levy, grants and gifts and deficit financing.

However, according to Ihendinihu, Ebieri and Amaps Ibanichuka, (2014), two main sources of federal government revenue exist namely; oil and non-oil revenue. Oil revenue is the most important source of revenue to the federal account. Oil revenue are revenue from crude oil and gas exports, receipts from petroleum profits tax and royalties and, revenue from domestic crude oil sales while non oil revenue: This is the second category

of revenue to the federal account. This include revenue that are not derived from or associated with oil. They include; companies income tax (CIT), Custom and Excise Duties, (CED), Valued Added Tax, Education Tax, Personal Income Tax (PIT), Levies, public debt, grants, aids amongst others..

Public debt are domestic and foreign borrowing including loans from domestic financial institution and multilateral institutions and foreign grants. According to Oyejide (1985), debt is the resource or money in use in an organization, which is not contributed by its owner and does not in any other way belong to them. Debt can also be referred to as liability represented by a financial instrument or other formal equivalents. When a government borrows, the debt is a public debt. Public debts can be either internal or external.

Domestic debts are debts instrument issues by the federal government and denominated in local currency Onyeiwu (2012). Nigeria's domestic borrowing (debt) is aimed at escaping the dangers associated with external borrowings occasioned by rising government expenditures vis-à-vis falling government revenues, supplement the internal savings for productive activities through infrastructural development as well as management of other macroeconomic conditions of the country (Gbosi, 1998; Ajayi, 1989; Adofu and Abula, 2010). Arnone *et al* (2005) defines external debt as that portion of a country's debt that is acquired from foreign sources such as foreign corporations, government or financial institutions.

2.1.2 Economic Growth

According to Anyanwu and Oaikhenan (1995) stated that economic growth, simply defined, refers to the increase, over time, of a country's or an economic capacity to produce those goods and services needed to improve the well-being of the citizens in increasing numbers and diversity.

The International Monetary Fund (2009) and CBN (2010) agree that economic growth is the increase in the amount of goods and services produced in an economy over time. It is conventionally measured as the percent rate of increase in Real Gross Domestic Product (RGDP). Growth is usually calculated in real terms, that is, inflation- adjusted terms, in order to net out the effect of inflation on the price of the goods and services produced. The growth of the real Gross Domestic Product, RGDP, between 2004 and 2008 was driven mainly by the non-oil sector as reflected in the non-oil GDP and that the Industrial output however fell by 2.2 percent due mainly to the poor performance of the oil sector CBN (2008). The major theories on economic growth are hinged on the growth being a function of the productivity of factors of production as their basic theme. Adam Smith (1776) states that economic growth depends on the amount of factors of production viz; land, labour and capital. He argued that economic growth (output) depends on the amount of these factors of production which are the inputs that are determined by the population growth, increase in investment and land, and total growth in labour productivity. While Harrod-Domar model stated that rate of growth of GDP is equal to Savings ratio/Capital-Output ratio, Kaldor model of distribution noted that the process of growth is a function of savings-income ratio. Other models like the Pasinetti model of profit and growth, the Meade's Neo-classical model, the Solow model of long run growth all used the factors of production as their basic theme.

2.2 Theoretical Framework

The theoretical framework for this study is hinged on Revenue Productivity Theory (United Nations Summit, 2002). Anyanwu and Oaikhenan (1995) stated that economic growth, refers to the increase, over time, of a country's or an economic capacity to produce those goods and services needed to improve the well-being of the citizens in increasing numbers and diversity. This is the reason why government of many nations, Nigeria inclusive has place more emphasis on ways of boosting their revenue sources given the high expectations from their citizens. Ndekwa (1991) noted that, more than ever before, there is now a great demand for the optimization of revenue from various tax sources in Nigeria. Scholars like David Ricardo and J.S Mills emphasized this distinction by putting revenue first in their division of public finance into three namely; "revenue, expenditure and public debt". Public Finance Expert based their arguments principally on Revenue Productivity as important criteria for judging a good tax system. This theory lays emphasis on having a large tax base to cover minimum cost through efficient tax administration. The taxes introduced should be appropriate and sufficient to finance the expenditure needs of the government over time. Well-designed tax systems would encourage competitive growth across various sectors of the economy with high prospect of tax revenue. An effective tax system and efficient use of public debt will encourage an efficient economy and provide an environment conducive for business, thereby reducing costs. When taxes and other revenue sources fund the essential 'public goods' like public security and the 'rule of law' on which oil and non oil depends. It also promotes revenue productivity.

2.3 Empirical Issues

Egwaikhide (1988) analyzed the structural shift of government revenue in Nigeria from 1960-1982 linked direct government revenue to the level of economic development using growth in GDP as a proxy for economic growth. He used two sets of regression equation by breaking sample period into two, 1961-1971, and 1972-1982. First regression analysis indicated that a positive relationship exist between the variables. The second regression result

indicates also rose from 81 % to 82%. He concluded that result of the regression analysis indicates that external fund has been the single most important sources of government revenue. The study also found that economic development has a significant impact on direct government revenue. Contrary to Egwaikhide (1988), Omoruyi (1983) carried out a similar study for about the same time from 1960-1979 and breaking the sample period into two and adopting the same measures. He found out that the result differs from Egwaikhide (1988) where the coefficient of elasticity obtained by Omoruyi (1983) for the first sample period 1960 – 1969 was 1.09 while that of Egwaikhide was 0.08 for the period of 1961 – 1971. The result premised on assumption of absence of any other significant change in the marginal values of direct tax in the period 1960-1971. Again the elasticity of coefficient obtained by Omoruyi 1970-1974 stood at 1.64 while that of Egwaikhide was 0.15. At this point one can conclude that the inference cannot be actually drawn between the two conflicting results because of certain statistical parameter use to facilitate observation.

Nsebot (2004) studied the effects of revenue fluctuation on economic growth in Nigeria from 1970-1999 using multiple regression model of OLS and found that total federally collected revenue has a significant impacts on economic growth and the standard deviation of total federally collected yields a positive influence in economic growth as against the a priori expectation. The result further indicates that tax base could be change to raise more revenue without altering the rate since the coefficient of tax to revenue is elastic.

Anastassiou and Dritsaki (2005) examined the relationship between tax revenue and rate of economic growth in Greece from 1956-2002 using annual time series data and applying the multivariate VAR model and testing for granger causality among the variables. The result shows that there exist a causal relationship between tax revenue and economic growth in Greece.

Oechslin (2009) examines Government Revenues and Economic Growth in Weakly Institutionalized States. The findings reveals that even well-funded governments often fail to provide crucial public goods such as an adequate infrastructure or reliable law enforcement. We argue that this failure is — in part — the result of a political instability effect: More resources in the hands of a self-interested government fuel power struggles among competing elites — and decrease the incumbent regime's time horizon in office. But with a shorter time horizon, it is less attractive to finance growth-promoting institutions whose returns only accrue in the future. The model further predicts the instability effect to be stronger in places with low levels of human or physical capital or in remote countries where technology adoption is more expensive.

Illyas and Siddiqi (2010) studied the impact of revenue gap on economic growth using a case study of Pakistan over the period of 1980-2008. The under investigating variables had mix order of integration. The results reveal that revenue gap is significant and negatively related with economic growth. The econometric results suggest that if the gap between targeted revenue and actual collected revenue is high, it affects economic growth negatively and significantly (in case of Pakistan, most of the times collected revenue is less than targeted revenue). This gap can be reduced by doing away with exemptions and special treatments. The real increase in revenue can take place effectively only when the collective benefits of all stakeholders are upheld fairly and equitably. This, in turn, with greater public spending in areas of both development and non-development, will bring about a more equitable distribution of income and allocation of this enlarged pie. It can generate greater macroeconomic stability and balance. More sustained economic development would be possible by the availability of enhanced and, hitherto, untapped sources of public revenue. This will help the economy achieve greater self-reliance and avoid large public debts to minimize budget deficits. Without imposing high tariff and tax rates, government tax revenue collection can be increased by just broadening the tax network, setting the right priorities and by tightening and improving the tax administration in the Pakistan.

Medee and Nenbee (2011) carried an econometric analysis of the impact of fiscal policy variables on Nigeria's economic growth (1970-2009) using Vector Autoregression and Error correction mechanism techniques and claimed that tax revenue have effects on the gross domestic product both at the short and long run, meaning that tax revenue positively impact on the economic growth in Nigeria.

Gacanja (2012) did an empirical case study of Kenya on tax revenue and economic growth. According to Gacanja, the relationship between economic growth and tax revenues is a debate that has existed for a long time in the living history. He adopt classical linear regression model based on the OLS estimation method, co-integration test and granger causality test on all the variables. The results of the study revealed a positive relationship between economic growth and tax revenues. All the tax variables; income tax, import duties, excise duties and sales tax/VAT showed a positive effect on GDP with income tax posing the highest effect followed by sale tax/VAT, then excise duties and finally import duties showing the least effect. The co-integration revealed that there is at most one co integrating equation while the Granger Causality test indicated a bi-directional relationship between economic growth and excise duties; a unidirectional relationship between income tax and economic growth, and economic growth and sales tax VAT; however, there existed no causation between economic growth and import duties.

Abiola and Asiweh (2012) studied the impact of tax administration on government revenue in a developing economy using a case of Nigeria. In conclusion, the study concluded that diversification of revenue

sources for economic development is very important if Nigeria must rank among equals in the improvement of the lives of her citizens. The focus on revenue from oil and gas amounts to putting all her eggs in one basket. In this modern days the speedy technological development will in no distance time render obsolete the use of such mineral resources like oil and gas and possibly replace same with solar energy which is more environmental friendly.

Worlu and Nkoro (2012), examines the impact of tax revenue on the economic growth of Nigeria covering the period of 1980 to 2007 using secondary data from Central Bank of Nigeria, Federal Inland Revenue Service. The data collected were analysed using the three stage least square estimation technique. The results show that tax revenue stimulates economic growth through infrastructural development. That is the channels through which tax revenue impacts on economic growth in Nigeria.

Okafor (2012) used multiple correlation and regression methods to evaluate the relationship between tax revenue generation and economic development of Nigeria (1981-2007) and concluded that there exists a strong significant relationship between tax revenue and Gross Domestic Product (GDP).

Muriithi (2013) examines the relationship between government revenue and economic growth in Kenya. The study adopted a descriptive research design. The study used secondary data collected from the Central Bank of Kenya, KNBS, KIPPRA, and Ministry of Finance, Public libraries and National Budget and other Government records including import duty, excise duty, income tax and Value Added Tax (VAT) which comprised the tax revenue. In addition, the study collected data on non tax revenue. The study concludes as import duty increases the economic growth declines and vice versa. With regard to excise duty, this study concludes that as increase in excise duty slows reduces the rate of economic growth. On Income tax, the study concludes that established Income Tax leads to continuous increase in revenue obtained by government. The study further concludes that there is a direct relationship between Income tax and economic growth. The study concludes that increase in VAT leads to positive effects on the rate of economic growth. The study concludes that there is a relationship between government revenue and economic growth but at a slow pace.

Ude, and Agodi, (2014) this study investigated the time series role of non-oil revenue variables on economic growth in Nigeria. This study thus extends the literature in this area by employing cointegration methodology alongside error correction mechanism to investigate the impact of non-oil revenue on economic growth in Nigeria. The study employed annual observations from 1980 to 2013. The non-oil revenue variables analyzed are: agricultural revenue and manufacturing revenue. Results show that agricultural revenue, manufacturing revenue and interest rate have significant impact on economic growth in Nigeria. Results also show the existence of long-run equilibrium relationship and short run dynamic adjustment with speed of about 52% to restore equilibrium.

From the empirical works above, it was evident that a limited number of studies looked at an appraisal of the major revenue sources and their effect on economic growth in Nigeria and this is the essence of this study. The few existing literatures examined the effect of individual taxes handles on economic growth. This appraisal will capture most of the major sources of revenue in Nigeria. We also update the analysis by covering the period between 1986-2013.

3.0 Materials and Methods

3.1 Types and Sources of Data

The study source for time – series data from Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics, Annual Abstract of Statistics and Federal Inland Revenue Service statistical publication (FIRS) covering the period 1986 to 2013. This includes:

Gross Domestic Product; Total Oil Revenue; Total Non-Oil Revenue; Total Domestic Debt; Total External Debt.

3.2 Model Estimation Techniques

The study employed analytical method which adopts the Co-integration Test in analyzing the time series data that were collected and granger causality test to augment the analysis. The first step is a diagnostic test of each of the variables for stationarity. The ADF test was employed to check the stationarity properties of the series. The data were estimated using the E-views 7.0.

3.3 Model Specification

To appraise the various revenue sources and their effect on economic growth in Nigeria, this study took a cue from Okafor (2012), Nsebot (2004), Egwaikhide (1988), Worlu and Nkoro (2012) and Ihendinihu, Ebieri & Amaps Ibanichuka (2014). However, in this study, the models are modified to fit the stated objectives. The dependent variable in the model is Gross Domestic Product. The explanatory variables are revenue sources, which is oil revenue, non oil revenue (just to cover direct and indirect taxes). Although there are other government sources of revenue which affect economic growth which can also be considered such variable

include Public Debt decompose into domestic and external debt. The scope of the study is from 1986-2013 (the period of deregulation of the economy). The implicit form of the model shall be;

$$GDP = f(OIL, NOIL, DD, ED) \quad \text{---(1)}$$

The explicit form of the model shall be

$$GDP = b_0 + b_1 OIL + b_2 NOIL + b_3 DD + b_4 ED + U \quad \text{---(2)}$$

GDP = Gross Domestic Product; OIL = Oil Revenue; NOIL = Non-Oil Revenue;

DD = Domestic Debt; ED = External Debt; U = Random Variable; b_0, b_1, b_2, b_3, b_4 = Parameters

A priori expectation: $b_1, b_2, b_3, b_4 > 0$. Increased revenue, that is, increase in variables associated with revenue sources – OIL, NOIL, and public debt decompose into DD and ED which serve as government source of funding, – are expected to increased Gross Domestic Product.

4.0 Presentation and Analysis of Results

The ADF test was employed to check the stationarity properties of the series and table 1 shows the results and this is also the prerequisite to the Cointegration Test. The result of the stationarity test is presented below:

Table 1: Stationarity Test

Variable	ADF Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	Prob.	Order of Integration
GDP	-3.83	-3.71	-2.98	-2.63	0.0075	I(1)
OIL	-4.69	-3.72	-2.99	-2.63	0.0010	I(1)
NOIL	-6.84	-3.71	-2.98	-2.63	0.0000	I(1)
DD	-3.88	-3.71	-2.98	-2.63	0.0067	I(1)
ED	-3.84	-3.71	-2.98	-2.63	0.0075	I(1)

Source: Authors' Computation from E-views 7.0.

The result of the unit root test shows that all the variables are stationary at first difference; the ADF test statistic is greater (using absolute values) than the critical values at all significant levels

4.1 Co-integration Result

The Johansen hypothesized co-integration was carried out to determine the number of stationary long-run relationship among the variables included in the study. It offers two tests, the trace test and the Max-Eigen value test, with a view to identifying the number of co-integrating relationships. The results are shown in table2 below:

Table 2: Cointegration Test

Null Hypothesis	Trace Statistic	0.05 Critical Value	Null Hypothesis	Max-Eigen Statistic	0.05 Critical Value
$r = 0^*$	72.13	69.82	$r = 0^*$	35.80	33.88
$r \leq 1$	36.33	47.85	$r \leq 1$	15.63	27.58
$r \leq 2$	20.69	29.79	$r \leq 2$	10.56	21.13
$r \leq 3$	10.13	15.49	$r \leq 3$	8.13	14.26
$r \leq 4$	2.01	3.84	$r \leq 4$	2.01	3.84

Source: Authors' Computation from E-views 7.0

*Note: r represents number of co-integrating vectors. Trace statistic and Max-Eigen statistic indicates 1 co-integrating equations each. * denotes rejection of the hypothesis at the 0.05 level*

Table 2 revealed that there is co-integration among the variables. This is because the Trace and Max-Eigen Statistic of 72.13 and 35.80 is greater than the critical values of 69.82 and 33.88 at 5% level of significance respectively. Accordingly, Trace and Max-Eigen statistic test indicates 1 co-integrating equation at 5 percent level of significance.

The Long Run Model

The long run relationship existing between the variables is shown in the model below:

$$GDP = 1.00 + 0.21OIL + 0.25NOIL - 0.26DD + 0.07ED$$

(0.04) (0.03) (0.04) (0.01)

Source: Author's extract from E-views 7.0 results

Note: The standard errors are stated in parenthesis.

The coefficient of OIL is positively signed and statistically significant. This is in agreement with Medee and Nenbee (2011) and Ogbonna and Appah (2012). The result indicates that for every 1% percent increase in Oil revenue, GDP increases by 21% of that increase. This has rarely translated to improvement in the provision of the much need public goods and the general wellbeing of the citizen due to pervasive corruption and administrative lapses in the administration of revenue in Nigeria. In fact evidence of Dutch disease has been identified in the country. This result further confirms the findings of Iwayemi (2001) that when government received oil revenue it encourages consumption and reduces private savings and investment which ordinarily

would have translated into growth and development.

The coefficient of NOIL is directly related to Gross Domestic Product (GDP) by 0.25% in Nigeria. That is, for every 1% increase in NONOIL revenue, GDP increases by 25% of that increase. This agrees with Okafor (2012) and Ude, and Agodi, (2014). The sign conforms to apriori expectation. The coefficient exerts some appreciable level of contribution to GDP, this may be due the export and investment promotions measures, tax amendment laws to strengthen the institutions charged with the responsibility of collecting tax revenue as enshrined in the various government policies like the adoption of the new National Tax Policy (2010). However, there is still room for improvement.

The coefficient of DD is negatively signed though statistically significant. This means that a unit increase in DD will lead to a decrease of (0.26) of the unit change in GDP. This clearly portends that, although borrowing may be a viable source of government revenue, its impact in Nigeria for the period of the study is adverse, this may be due to mismanagement of the funds borrowed, expenditure in short term recurrent expenditure and most importantly there may be the issue of crowding out of private investment as the borrowing is from the domestic economy which will have further adverse effect on GDP.

Coefficient of ED positively signed and statistically significant which is in line with a priori expectation. This means that a unit increase in external debt will lead to an increase of 7% of that unit change in GDP. Interestingly, this result differs from that of DD, but is in agreement with Egwaikhide (1988), he asserted in his study that external fund is an important source of government revenue. On the whole, the low impact on GDP can be traced to the same issues affecting DD, especially when viewed in the context of the proportion of the amounts involved and the fact that the conditions attached to ED are sometimes very stringent.

Table 3: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
OIL does not Granger Cause GDP	26	0.51174	0.6067
GDP does not Granger Cause OIL		9.49637	0.0012
NOIL does not Granger Cause GDP	26	3.84927	0.0377
GDP does not Granger Cause NOIL		5.24108	0.0142
DD does not Granger Cause GDP	26	0.05187	0.9496
GDP does not Granger Cause DD		5.04497	0.0162
ED does not Granger Cause GDP	26	0.34640	0.7112
GDP does not Granger Cause ED		0.05022	0.9511

Source: Author's computation from E-views 7.0

Table 3 presents the results of the Granger Causality tests between the components of revenue sources and economic growth. The test is carried out to capture the direction of the causation between revenue source and economic growth. In other words, it is meant to show which out of the four variables drives the other and in which direction. The results show that OIL do not granger cause economic growth rather GDP does, Whereas a bidirectional relationship exist between NOIL and GDP; GDP and DD show unidirectional relationship while ED and GDP does not granger cause each other.

Furtherance to the Co-integration Test result obtained above on the coefficient of oil, non oil revenue, domestic debt and external debt, there is a clear prove as to magnitude and statistical significance of variables given the result of granger causality test result.

4.2 Major Findings and Discussions

From the result above, OIL revenue is positively signed and statistically significant. However, it suffices to state the coefficient obtained seems inadequate given the enormous potential in this revenue source. Nigeria has recorded quite significant amount from oil revenue for decades now, but the issue of Oil theft, Oil bunkering, corruption and insecurity in the Oil producing areas is worrisome, and the country losses about 400,000 barrels per day of crude oil daily in this region, adversely affecting revenue, foreign exchange, external reserves, investment and domestic consumer prices.. To this end, there is need to focus our search light on various ways of safeguarding this source of revenue by being accountable and transparent to bring to the barest minimum leakages that negates remittances to government coffer.

The coefficient of NOIL revenue exerts a positive sign and statistical significance in the model with an appreciable magnitude, probably due to recent measures put in place by various revenue administrators to enhance and optimize revenue. This is in agreement with Hinrich (1966) and Musgrave (1969) and Oriakhi and

Osemwengie (2013) who identified that low tax revenue to GDP ratio can be obtained. It is worthy to note that, US which had been the major importer of Nigerian oil has started exporting oil from its reserves to other nations, also there are new reserves discovered in other African countries who are now in the league of oil producing nations. These are signals for Nigeria to urgently find ways of diversifying her revenue sources and maximize returns from existing sources.

DD however has a negative effect with statistical significance. The statistical significance suggest that even if the government resorts to borrowing within the economy, the principal and interest on the loans are paid back, it will serve as a crowd-in-effect which in turn further accelerates economic activities. As at December 2014, Nigeria's total debt stood at ₦11.24 trillion, up 11.54% from 2013 (Meristem, 2015). The 2015 budget shows a continuance of this structure and trend, with deficit of ₦756 billion (based on US\$65pb oil price benchmark), signifying government sourcing for alternative capital to finance the 2015 budget expenditure.

Result of External Debt (ED) as source of government fund exert positive relationship on economic growth in Nigeria and it is statistically significant. The magnitude further implies that ED has contributed to economic growth within the study period, even though viewed as inadequate. It becomes paramount for government to rechanneled external fund to social-economic sectors that will drive sustainable growth.

5.1 Conclusion and Recommendations

The study appraises the effect of major revenue sources on economic growth in Nigeria; it applied the Co-integration test and granger causality technique on time series data on the revenue components of OIL and NOIL revenue, domestic debt, external debt and Gross Domestic Product. OIL exerts a positive effect on economic growth in Nigeria, same with NOIL revenue. External Debt (ED) shows positive sign and statistical significance. However, all the variables included in the model are adequate giving their statistical significance and their positive signs based on a-priori expectation, except domestic debt (DD) even though it was found to have significant effect on GDP.

From the foregoing, it is clear that deliberate action has to be taken to improve the revenue collection technology and mechanism for effective utilization of government resources.. This can be achieved by improving the quantity and quality of resources available to the government through strategic programs to diversify the Nigerian economy rather than remain a mono-economy.

Government should review revenue collection machinery – especially the tax systems - to ensure improved revenue remittance to government coffers and also there is urgent need to formulate policies that will guarantee better utilization of both domestic and foreign investment with the aim of increased productivity.

Government should adopt more effective and efficient measures for tax administration in Nigeria to further emphasize the issues of transparency and accountability in the government's performance of its fiscal responsibilities to the people. This will improve tax compliance.

Borrowing should be a last resort by the government to improve the economy, and if need be, the loans should be ploughed into productive venture so as to accelerate economic activities in the country.

References

- Abiola, J. and Asiweh, M. (2012). Impact of tax administration on government revenue in a developing economy *International Journal of Business and Social Science*, 3 (8) 45-92
- Adofu, I and Abula, M. (2010) Domestic Debt and the Economy, *Current Research Journal of Economic Theory* 2(1):22-26
- Ahmed, Q.M. (2010). Determinants of Tax Buoyancy: Empirical Evidence from Developing Countries. *European Journal of Social Sciences*. 13(3), 408-414
- Ajayi, E.A. (1989) Nigerian Debt Management Experience, Central Bank of Nigeria, 13 (2)
- Anastassiou, T. and Dritsaki, C. (2005): Tax Revenue and Economic Growth: An Empirical Investigation in Greece *Journal of Social Sciences* 1 (2): 99-140
- Anyanwu, J. and H. Oaikhenan, (1995): *Modern Macroeconomics: Theory and Application in Nigeria*. Onitsha: Joanee Educational Publishers Ltd.
- Anyanwu, J.C. (1997): *Nigeria Public Finance*. Onitsha: Joanee Educational Publishers Ltd.
- Ariyo, A. (1993). An assessment of the sustainability of Nigeria's fiscal deficit: 1970-1990. *Journal of African Economie*, 2 (2), 263-282.
- Arnold, J.M. (2011). Tax Policy for Economic Recovery and Growth. *Econ. J.*, 121:59-80.
- Arnone, M. Bandiera, L. and Presbitero, A. (2005). *External Debt Sustainability: Theory and Empirical Evidence*. Retrieved from <http://www3.unicatt.it/dipartimenti/DISES/allegati/ArnoneBandieraPresbitero.pdf>
- Asher, M. (2001) "Globalization and Fiscal Policy: Rationale for Reform in Southeast Asia" in M. Asher, D. Newman and T. Synder (eds). *Public Policy in Asia: Implication for Business and Government*, Westport: Quorum Books, forthcoming.

- Azubike, J.U.B. (2009). Challenges of Tax Authorities, Tax Payers in the Management of Tax Reform Processes. *Nigeria Account*, 42(2); 36-42.
- Central Bank of Nigeria, (2008, 2009, 2010, 2012): *Annual Statistical Bulletin*. Lagos: CBN Press.
- Central Bank of Nigeria, (2015): *Economic and Financial Reviews*. Lagos: CBN Press.
- Chang, T. (2009): 'Revisiting the Government Revenue-Expenditure Nexus: Evidence from 15 OECD Countries Based on the Panel Data Approach'. *Czech Journal of Economics and Finance*, 59 (2), 165-172
- Chaudhry, S. I. and Munir, F. (2010). Determinants of Low Tax Revenue in Pakistan. *Pakistan, Journal of Social Sciences*, 30(2), 439-452
- Dickson and Presley (2013): Tax Incentives and Revenue Productivity of the Nigerian Tax System. *International Journal of Development and Economic Sustainability* Vol. 1 No. 1 PP 33-44.
- Egwakhide, F.O. 1988. "Analysis of Structural Shifts of Government Revenue in Nigeria". *The Nigerian Journal of Economic and Social Studies*, vol. 30, no. 2.
- Eita, J.H. and Mbazima, D. (2008): The Causal Relationship between Government Revenue and Expenditure in Namibia, Munich Personal Repec Archive (MPRA) Paper No. 9154
- Engen, Eric M., and Jonathan Skinner. (1996). "Taxation and Economic Growth." *National Tax Journal* 49 (4): 617-42
- Fasano, U. and Wang, Q (2002): Testing the Relationship between Government Spending and Revenue: Evidence from GCC countries. IMF Working Paper WP/02/201.
- Friedman, M. (1978): The Limitations of Tax Limitation. *Policy Review*, 5(78), 7-14.
- Gacanja, E. W. (2012). Tax revenue and economic growth: an empirical case study of Kenya. Unpublished MBA Project, University of Nairobi.
- Gbosi, A.N. (1998) The Impact of Nigeria's Domestic Debt on Macroeconomic Environment. *First Bank Review Journal*.
- Hinrichs, F.A. (1966): A General Theory of Tax Structure Change During Economic Development. Cambridge, Mass: Harvard Law School.
- Ihendinihu, J.U, Ebieri J., and Amaps Ibanichuka, E. (2014): Assessment of the Long-Run Equilibrium Relationship between Tax Revenue and Economic Growth in Nigeria: 1986 to 2012. *The SIJ Transactions on Industrial, Financial & Business Management (IFBM)*, Vol. 2, No. 2, March-April 2014.
- Illyas, M. and Siddiqi, M. W (2010). The Impact of Revenue Gap on Economic Growth: A Case Study of Pakistan. *International Journal of Human and Social Sciences*, 5:11
- International Monetary Fund (2009), "Deflation, Economic Growth, BOP", *Celebrating the Spirit of Small Enterprise*, Pp. 1-2
- Iwayemi, A. (2001): Nigeria Fractured Development. *The Every Correction: An Inaugural Lecture (2000-2001)*, University of Ibadan.
- Iweala, N.O (2015) Nigeria Government is Seeking External Loans Worth \$5.7bn (N2.97tn). Available from: <http://www.businessnew.org/> Accessed 29/02/2015
- Kiabel B. D. and Nwokah N. G. (2009). Boosting Revenue Generation by State Governments in Nigeria: The Tax Consultants Option Revisited. *European Journal of Social Sciences*, 8(4)
- Medee, P.N. and S.G. Nenbee (2011), "Econometric Analysis of the Impact of Fiscal Policy Variables on Nigeria's Economic Growth (1970-2009)", *International Journal of Economic Development, Research and Investment*, Vol. 2, No. 1, Pp. 171-183.
- Menachem, K et al. (2004). *Lifting the Oil Curse: Improving Petroleum Revenue Management in Sub-Saharan Africa*, IMF, Washington D.C.
- Meristem, W. (2015) "Economic Commentary." March 2015 available online at www.meristemng.com
- Musgrave, R.A. (1969): *Fiscal System* (New Haven): Yale.
- Muriithi (2013) The Relationship Between Government Revenue and Economic Growth in Kenya. *International Journal of Social Sciences and Project Planning Management*. Vol 1, Issue 1.
- Naiyeju, J.K. (1996): "Improving the Nigeria Tax System From Canadian Experience". *Wordsmith Printing and Packaging Ltd*, Pages 101-104.
- Ndekwa, E. (1991): "An Analytical Review of Nigeria's Tax System and Administration", *A Paper Presented at the National Workshop on Tax Structure and Administration* Lagos.
- Nsebot, M.O. (2004): The Effects of Revenue Fluctuation on Economic Growth in Nigeria. M.Sc. Thesis Unpublished University of Calabar-Calabar.
- Obiechina, M.E. (2010) Analysis of Revenue Generation as a Tool for Socio-Economic and Infrastructural Development in Nigeria. *Bullion Publication of Central Bank of Nigeria* Vol. 34 No. 4
- Oechslin, M (2009) Government Revenues and Economic Growth in Weakly Institutionalized States.
- Ogbonna G.N, and Appah E (2012), Impact of Petroleum Revenue and the Economy of Nigeria. *Current Research Journal of Economic Theory* 4(2): 11-17, 2012

- Okafor, R. G. (2012) Tax Revenue Generation and Nigerian Economic Development. *European Journal of Business and Management* . Vol 4, No.19, 2012
- Omoruyi, S.E. (1983). Growth and Flexibility of Federal Government Tax Revenue: 1960-1979. *Economic and Financial Review*, 21(1), 11–19.
- Onyeiwu C. (2012) Domestic Debt and the Growth of Nigerian Economy. *Research Journal of Finance and Accounting*. Vol. 3, No. 5.
- Oriakhi and Osemwengie (2013), “Tax Incentives and Revenue Productivity of the Nigerian Tax System”, *International Journal of Development and Economic Sustainability*, Vol. 1, No. 1, Pp. 31–44.
- Oyejide, A. (1985). *Nigeria and the IMF*. Ibadan: Heineman Educational Books Limited.
- Presidential Committee on National Tax Policy (2008): “Draft Document on the National Tax Policy”. Available from: <http://www.scribd.com/doc/10063735/National-Tax-Policy-Draft-Updated>. Accessed 05/07/10
- Samuelson, P. A. (1954): The Pure Theory of Public Expenditure, in: *Review of Economics and Statistics*, 36, 387-389.
- Sanni, A.U (2007): “Tax Reform in the Capital Market”: A Welcome Development. Seminar Paper Ogun State Internal Revenue Service Seminar.
- Smith, A. (1776), “Wealth of Nations”, *W Strahan and T Cadell*, London.
- Soyode, L. and Kajola, S.O. (2006) “Taxation: Principles and Practice in Nigeria”: 1st Edition: Silicon, Ibadan
- Storey, B. (1953). *Report of the Commission of Inquiry into the Administration of Lagos Town Council*. Lagos: Government Printer.
- Tosun, M.S. and S. Abizadeh, (2005). Economic growth and tax components: An analysis of tax change in *OECD*. *Appl. Econ.*, 37, 2251-2263.
- Ude, D.K and Agodi, J.E. (2014) Investigation of the Impact of Non-Oil Revenue on Economic Growth in Nigeria. *International Journal of Science and Research (IJSR)* ISSN (Online): 2319-7064 . Volume 3 Issue 11, November 2014
- United Nations Public Financing for Development Summit in Monterrey (2002).
- Wickens, M. R., and Uctum, M. (1990). National insolvency: A test of the us inter- temporal budget constraint. *Centre for Economic Policy Research*. Discussion Paper Series, No. 437, August.
- Wolde-Rufael, Y. (2008): The Revenue-Expenditure Nexus: The Experience of 13 African Countries. *African Development Review*, 20(2), 273-283.
- Worlu, C.N and Nkoro E. (2012): Tax Revenue and Economic Development in Nigeria: A Macroeconomic Approach. *A Academic Journal of Interdisciplinary Studies*. Published by MCSER-CEMAS-Sapienza University of Rome, Vol. 1 No. 2

APPENDIX 1
DATA ON VARIABLES

YEAR	GDP	OIL	NOIL	DD	ED
1986	257.8	8107.30	4488.50	28.4	41.5
1987	256	19027.00	6353.60	36.8	100.8
1988	275.4	19831.70	7765.00	47	134
1989	295.1	39130.50	14739.90	47	240.4
1990	328.6	71887.10	26215.30	84.1	298.6
1991	328.6	82666.40	18325.20	116.2	328.5
1992	337.3	164078.10	26375.10	178	544.3
1993	342.5	162102.40	30667.00	273.8	633.1
1994	345.2	160192.40	41718.40	407.6	648.8
1995	352.6	324547.60	135439.70	477.7	716.9
1996	367.2	408783.00	114814.00	420	617.3
1997	377.8	416811.10	166000.00	501.8	595.9
1998	388.5	324311.20	139297.60	560.8	633
1999	393.1	724422.50	224765.40	794.8	2577.4
2000	412.3	1591675.80	314483.90	898.3	3097.4
2001	431.8	1707562.80	903462.30	1017	3176.3
2002	451.8	1230851.20	500986.30	1166	3932.9
2003	495	2074280.60	500815.30	1329.7	4478.3
2004	527.6	3354800.00	565700.00	1370.3	4890.3
2005	561.9	4762400.00	785100.00	1525.9	2695.1
2006	595.8	5287566.90	677535.00	1753.3	451.5
2007	634.3	4462910.00	1200800.00	2169.6	438.9
2008	672.2	6530630.10	1335960.00	2320.3	523.3
2009	719	3191937.98	1652654.37	3228	590.4
2010	776.3	5396091.05	1907580.50	4551.8	689.8
2011	834	8848615.00	1139014.00	5622.8	896.8
2012	888.9	9479531.9	1806458.66	6537.5	1026.9
2013	950.1	9942303.8	1954846.18	7119	1387.3

Source: *Central Bank of Nigeria Statistical Bulletin (2013),
National Bureau of Statistics (2012)*

Note: *GDP, OIL, NOIL, DD and ED, are expressed in ₦'billion*

****** *GDP figures are based on 1990 constant prices*