Impact of tax revenue on economic growth in Nigeria (1981-2017)

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Abstract

The main objective of this research is to assess empirically the impact of tax revenue on economic growth in Nigeria, spanning from 1981 to 2017. It employs, time series data obtained from the CBN statistical bulletins, FIRS annual publications and National Bureau of Statistics (NBS) portal. To achieve the objectives of the study, OLS and ARDL techniques were employed to estimate the relationships and the dynamics and long-run effects of independent variables on dependent variable. ARDL bound test revealed that the variables are co-integrated while ARDL long-run estimation indicated that petroleum profit, value added tax and government domestic debt are significant and positively related to GDP. In addition, company income tax and customs and excise duties came out significant but have negative impact on economic growth. Accordingly, the research recommends that, the government should intensify efforts towards increasing the collection of tax revenue, as low contribution of tax revenue to GDP was discovered over the period of the study. This can be done through blocking all loopholes in our tax laws as well as bringing more prospective tax payers into the tax net especially the informal sector.

1.0 Introduction

Effective tax administration is an issue as old as taxation itself. The balancing act between maximizing tax revenues and minimizing the impact on the populace in which the state must engage, was evident as early as 2350 BC. The responsibility shouldered by the government of any nation, particularly the developing nations, is enormous. The need to fulfil these responsibilities largely depends on the amount of revenue generated by the government through various means.

Taxation is one of the oldest means by which the cost of providing essential services for the generality of people living in a given geographical area is funded. Globally, governments are saddled with the responsibility of providing some basic infrastructures for their citizens. Taxation is a major source of government revenue all over the world and governments use tax proceeds to render their traditional functions, such as: the provision of roads, maintenance of law and order, defence against external aggression, regulation of trade and business to ensure social and economic stability (Appah & Eze, 2013).

The structure of Nigerian tax administration is in line with the system of government in operation. These include the three-tier system comprising the local government, state government and federal government structures. Each of these tiers of government is constitutionally saddled with administration of specific taxes, while the joint tax board oversees the whole system and resolve disputes (Akintoye and Dada, 2013). The Board of Inland Revenue administers the federally collected taxes through the Federal Inland Revenue Service (FIRS), while the board of State Internal Revenue Service administers the taxes collectible by the state government and the revenue committee administers taxes and levies collectible by the local governments (James and Moses, 2012).

Some of the challenges of Nigerian tax administration as highlighted by McPherson (2004) are; paucity of tax statistics, unethical practices (corruption), non-prioritization of tax efforts, poor administrative processes, multiplicity of taxes, economic structural problems which hinders effective implementation of taxes and the challenge of underground economy. This study is therefore intended to examine the impact of tax revenue on the growth of Nigerian economy.

The revenue accruing to the federal government of Nigeria from taxation over the years has remained grossly insufficient to meet the expanding social and public spending requirements in the country. In the opinion of Ayuba (1996), the tax system is grossly inefficient as it is characterized by tax evasion, avoidance and record falsifications, which have led to consistent low tax revenue inflow. Gross inefficiency and leakages have hampered the amount of revenue realized from tax sources over the years, which has been affecting the economy negatively. The inability of the Federal Inland Revenue Service Board to ensure total compliance with tax rules by companies and bring all operational companies into the tax net has significantly limited the contribution of tax revenue to economic growth.

According to James and Moses (2012), the prevalence of tax evasion in the Nigerian tax system, has curtailed the amount of revenue collected from tax income, this in no doubt has effect on the government expenditure and inflation in the economy. Moreover, the revenue generation capacity of the nation's present tax administrative system is hampered by challenges such as paucity of data, inefficient monitoring and enforcement system, and corrupt practices (Leyira, Chukwuma, and Asian, 2012). These challenges have impeded the economic growth in Nigeria and accentuated by the resultant effect of companies closing down, hence, reducing the tax revenue of the Government.

Likewise, the problem associated with corruption and corrupt practices have eaten deep into this nation; therefore, the Nigerian tax justice is tainted with lack of transparency, unaccountability and inefficient administrative system, which on the other hand has a negative effect on the economic growth. Globally, a tax contribution of 20% to a nation's GDP is acceptable, however in Nigeria, tax contribution to GDP is about 0.7% (Iweala, 2013).

In this case, this research is designed to unravel the problem of low tax yield to Nigeria's economy and proffer immediate solutions. The problem of poor economic growth due to insufficient revenue collection from the non-oil tax sector and inefficient administrative framework by Federal Government of Nigeria were the major issues this research investigated. The immediate and remote causes or reasons for poor/little tax revenue contribution to economic growth (below expected), in Nigeria is therefore a

fundamental problem that must be solved if the Economic Recovery and Growth Plan (ERGP) 2020 would be realized.

Consequent from the problem mentioned above, the main objective of this research is to examine the impact of tax revenue collection by Federal Government on the economic growth in Nigeria. The specific objectives are to: ascertain the influence of Petroleum Profit Tax on economic growth in Nigeria; assess the impact of companies' income tax on economic growth in Nigeria; Examine the impact of customs and excise duties on economic growth in Nigeria; determine the impact of VAT on the economic growth and; to assess the impact of government domestic debt on economic growth in Nigeria.

The result of this study provides empirical evidence and contributes to the body of existing literature. Also, it would assist the government to block revenue leakages, harness greater revenue sources, and evolve an effective policy framework, which would guarantee quality tax administration and foster economic prosperity. It would guide the government on how to generate more income from tax so as to be less dependent on income from the volatile oil sector.

2.0   Review of Related Literature
2.1.   Conceptual Issues
2.1.1. Concept of Taxation

According to World Bank (2000), taxes are compulsory transfer of resources to the government from the rest of the economy; it was also made known that no single tax structure can possibly meet the requirements of every country. The best system for any country should be determined taking into account its economic structure, its capacity to administer taxes, its public service needs, and many other factors. Nonetheless, one way to get an idea of what matters in tax policy is to look at what taxes exist around the world. This is with a view to meeting or providing the common goods; taxation is required to finance public expenditure, as noted by (Miller and Oats 2006).

2.1.2. Concept of Revenue

The income of government through taxation is known as public revenue or public income. Public revenue can be defined in two ways viz: Narrow sense and Broader sense. In the narrow sense, public revenue includes income from taxes, price of goods and services, supplied by public sector undertakings, revenue from administrative activities such as fees, fines etc. In the broader sense public revenue includes all the income of the government during a given period of time, including public borrowing from individuals and banks. Income from public enterprises is known as public receipts (Stigliz, 1999).

2.1.3. Concept of Economic Growth

Economic growth can be seen as the increase in the size of an economy between two time periods measured by the Gross Domestic Product (GDP). GDP is defined as the final value of all finished goods and services produced within a country's borders during a specific time period. It is calculated as the sum of private consumption, government expenditures, private capital investment and net exports at market prices in an open economy. The equation for GDP is shown below (Hanafi, 2016).

$$Y = C + I + G + NX$$

Where; Yis the total output (GDP), C represents private consumption, I represent investment expenditure, while G is the sum of government spending and NX is the total net exports which can be negative or positive depending on the balance of trade position, Economic growth is the basis of future standard of living and prosperity among different nations (Hanafi, 2016)

2.1.4. Nigerian Tax System

The Nigerian political environment embraces the federal system of governance; hence her fiscal operations adhere to the same principle, which has severe consequences on the tax management system in the country (Odusola, 2006). Government's fiscal policy is based on the three-tiered tax structure i.e. the Federal, State and Local Governments, each of which has different tax jurisdictions. They further state that in 2002, almost 40 different taxes and levies are distributed among all three levels of government (Enahoro and Olabisi 2012).

Odusola (2006) opined that avoidable complexity; distortion and largely inequitable tax laws that have limited application in the informal sector that dominates the economy characterize tax system in Nigeria.   The Nigerian tax system has experienced remarkable variations in recent times. The Nigerian tax system is of multi activities, which include tax administration, tax laws, and tax policies (Adesola, 2004). Under current Nigerian law, the three tiers of Government enforce taxation, that is. Federal Government, State Government, and Local Government with each tier of government having its sphere clearly writing out in the Taxes and Levies (approved list for Collection) Act, 1998 (Abubakar, 2008).

2.2. Theoretical Framework

The economists have put forward many theories or principles of taxation at different times to guide the state as to how justice or equity in taxation can be achieved. The main theories or principles are as follows:

2.2.1. Socio Political Theory of Taxation

Ogbonna and Appah (2012) affirmed this reasoning and justify the imposition of taxes for financing state activities and for the provision of a basis for apportioning the tax burden between members of the society. They advocated that, for a tax system, which is not designed to serve individuals but one that cures the ills of the society as a whole. The society is made up of individuals but is more than the sum total of its individual members; consequently, the tax system should be directed towards the health of the society as a whole, since individuals are integral part of the broader society (Chigbu, Ogbonna and Appah,2012).

2.2.2. Benefits Theory

This assumes an exchange or contractual relationship between the state and the tax-payers, certain goods and services are provided by the state and the cost of such goods and services are contributed in the proportion of the received benefits, thus, the benefits received present the basis for distributing the tax burden in specific manner. This theory overlooks the possible use of the tax policy for bringing about economic growth or stabilization. The cost of service theory is very similar to the benefits-received theory. The theory emphasizes on semi commercial relationships between the state and the citizens to a greater extent. The implication according to Chigbu, et. al, (2012) was that, the citizens are not entitled to any benefits from the state and if they do, they must pay the cost thereof. In this theory, the costs of services are scrupulously recovered unlike the benefits-received theory where a balanced budget is implied (Chigbuet al, 2012).

This study therefore focuses on the socio-political and benefit theories which enables us to assess the extent to which the Nigerian tax system conforms to this scenario where the link between tax liability and economic benefits are linked. If applicable, such will enhance accurate tax

revenue projection and targeting of specific tax revenue sources given an ascertained profile of economic development. It will also assist in estimating a sustainable revenue profile there by facilitating effective management of a country's fiscal policy among others.

2.3. Empirical Literature

In achieving sustainable growth and development in the social and economic sectors of a country, the government must consider the trade-off involved in attracting Foreign Direct Investment (FDI) in terms of giving incentives and the impact of these on the country's sustainable growth or development. Tax is a fiscal instrument used to encourage or discourage specific production or consumption behaviors that affect the economic, environmental or social sustain ability. The tax policies of a nation determine whether foreign direct investment would be attracted or not. If investors are brought into a country, it means that the investors will bring their stable and free capital, their technology, efficiency and contribution to nation's capital accumulation and job/wealth creation. Taxation also fosters a fair relationship between developed and developing countries so as to ensure that developing countries get a fair allocation of tax base and tax room in emerging trade relations (Adeyemi, 2012).

Haq-Padda and Akram (2011) used panel data from 3 South-Asian countries during the period of 1973 to 2008 and applying Multiple regression method to examine the impact of tax policies on economic growth using data from 3 South-Asian economies and discovered that tax policies adopted by developing countries have no evidence that taxes permanently affect the rate of economic growth. The results of the study suggest that the neo-classical growth models best describe the relationship between output and the tax rate because a higher tax rate permanently reduces the level of output but has no permanent effect on the output growth rate.

In addition, Ariyo (2007) using time series data for the period of 1970 - 1990 and applying Ordinary Least Square (OLS) to evaluate the productivity of the Nigerian tax system has given the negative impact of persistent unsustainable fiscal deficits on the Nigerian economy for the period 1970-1990 to devise a reasonably accurate estimation of Nigeria's sustainable revenue profile. The results of his study showed a satisfactory level of productivity of the Nigerian tax system. The study therefore recommended an urgent need for the improvement of the tax information system to enhance the evaluation of the performance of the Nigerian tax system and facilitate adequate macroeconomic planning and implementation.

Furthermore, Jibrin, Blessing and Ifurueze (2012) using Ordinary Least Squares (OLS) method from the time series data to examine the impact of Petroleum Profit Tax on Economic Development in Nigeria for the period 2000- 2010. The finding revealed that Petroleum Profit Tax has a positive and significant impact on Gross

Variables	Label	Measure
Economic growth	GDP	Index of quantity of output
Companies Income Tax	CIT	The rate of profit tax of company
Petroleum Profit Tax	PPT	The rate of petroleum profit tax
Customs and Excise Duties	CED	The rate of import and local product tax
Value Added Tax (VAT)	VAT	The rate of value added tax
Government Domestic Debt	GDD	Index of internal debt

Source: Authors' computation

Domestic Product in Nigeria. The study therefore recommended that government should improve on the effectiveness and efficiency of the administration and collection of taxes with a view to increasing government revenue.

3.0. Data and Methodology

The study makes use of time series data for the period of 36 years (1981-2017) from secondary sources. The data used is drawn from Central Bank of Nigeria (CBN) statistical Bulletin, reports of Federal Inland Revenue Service (FIRS) and the National Bureau of Statistics (NBS) portal. The variables used in this study are; Gross Domestic Product (GDP), Company Income Tax (CIT), Petroleum Profit Tax (PPT), Custom and Excise Duties (CED), Value Added Tax (VAT) and Government Domestic Debt (GDD) represent dependent, independent and other control variable respectively.

The research employs quantitative analysis. This was done in four folds: first, the descriptive analysis, secondly diagnostic tests, thirdly correlation, fourthly trend analysis and lastly simple linear regression analysis was performed. A post estimation tests were also conducted to determine the reliability of the ARDL model specified and also Vector Error Correction Model VECM were also conducted.

The Igbasan (2015) model is adopted for this research. This is because its title of the relationship between tax revenue and economic growth of Nigeria (1981-2015) is similar to the research topic of this paper. However, the model adopted is with modifications. This is because Igbasan (2015) model only employed GDP as Dependent variable and CIT, PPT, CED and VATS as Independent variable without any control variable. This paper included Government Domestic Debt (GDD) as a control variable. The model specification is as follows:

$$GDP_t = \beta_0 + \beta_1 CIT_t + \beta_2 PPT_t + \beta_3 CED_t + \beta_4 VAT_t + \beta_5 GDD + \mu_t$$

Where:

GDP	=	Gross Domestic Product
CIT	=	Companies Income Tax
PPT	=	Petroleum Profit Tax
CED	=	Custom and Excise Duties
VAT	=	Value Added Tax
GDD	=	Government Domestic Debt
β_0	=	Intercept
μ	=	Error term

4.0 Results and Discussion

This section of the analysis provides an overview on the data set while attempt is also made to describe the main attributes of the data. The descriptive analysis of the time series data obtained is done in two folds, namely: descriptive analysis of the raw data obtained in million naira is shown in Table 4.1.1.

4.1. Descriptive analysis

The table 4.1.1.below shows the summary of the data for better understanding of the variables

Table 4.1.1: Descriptive analysis of the raw data of variables in Naira (₦'Million)

	GDP	PPT	CIT	CED	VAT	GDD
Mean	28218660	725879.7	243505.9	140785.6	1313475.	22834344
Median	4434231.	68574.00	33300.00	87900.00	199850.0	7940080.
Maximum	4.05E+08	3201319.	1384055.	601258.0	9723484.	1.20E+08
Minimum	94325.02	3747.000	403.0000	1616.000	7261.000	150000.0
Std. Dev.	69908304	991698.4	386254.8	162262.5	2827062.	33105975
Skewness	4.558487	1.188097	1.591963	1.487756	2.285899	1.639158
Kurtosis	24.86477	3.096137	4.294104	4.860597	6.414772	4.546923
Jarque-Bera	841.7809	8.718959	18.21031	18.98638	32.56200	20.25800
Probability	0.000000	0.012785	0.000111	0.000075	0.000000	0.000040
Sum	1.02E+09	26857548	9009718.	5209067.	31523396	8.45E+08
Sum Sq. Dev.	1.71E+17	3.54E+13	5.37E+12	9.48E+11	1.84E+14	3.95E+16
Observations	37	37	37	37	24	37

Source: Researchers' computation using E-view 9 software, 2019.

Table 4.1.1 shows the summary statistics of all the variables under study in their raw form. It shows the mean, maximum, minimum and standard deviations of all variables.

The skewness, kurtosis and Jarquebera statistics of all variables shown on Table 4.1.1 do not fully indicate the true nature of the data series since the probability value of Jarquebera statistics of all the series are shown to be less than the acceptable 0.05 for GDP, PPT, CIT, CED, VAT and GDD indicating non-normality of the series.

These average values were used in the determination of the contribution of each form of tax revenue and domestic debt to GDP. Their respective minimum and maximum values are equally shown indicating variations over the years for the respective series, this is further shown in the trends of GDP and each of the independent variables provided.

The standard deviation values indicate the dispersion or spread in the data series. The higher the value, the higher the deviation of the series from its mean and the lower the value, the lower the deviation of the series from the mean. The variable with a higher degree of dispersion from the mean is the

Table 4.2.1a. Result of the Unit Root Test

	Augmented Dickey-Fuller (ADF)			
	Level		**First difference**	
Variable	**Constant**	**Constant& Trend**	**Constant**	**Constant& Trend**
GDP	5.104618	3.149694	-0.662651	-3.920010**
PPT	-1.997112	-2.606310	-4.551081***	
CIT	-1.681409	-0.798932	-4.624966***	-4.816374
CED	-0.765298	-1.410034	-6.138460***	-6.091569
VAT	0.868839	-0.269318	-4.285855***	-5.021094
GDD	8.339228	3.666504	-0.465317	-3.777155**

***, ** and * significance at 1%, 5% and 10% respectively.

Source: Researchers' computation using E-view 9 software, 2019.

The result for unit root test of ADF shows that Petroleum Profit Tax (PPT), Companies Income Tax (CIT), Customs and Excise Duties and Value Added Tax (VAT) measured by their natural logarithm are stationary at first difference intercept, while Gross Domestic Product (GDP) measured by its natural logarithm and Government Domestic Debt (GDD) measured by its natural logarithm are stationary at first difference trend and intercept. This implies that the simple linear regression estimate is not the appropriate estimation technique as the series are in different order of integration, thus, bounds co-integration test and pair wise granger causality is performed and the results are shown in the next section.

Table 4.2.1b: Bounds Co-integration Tests Result

Since the series under review are in different order of integration as stated in the previous section, bounds co-integration test as proposed by Pesaran, Shin and Smith (2001) is conducted in this section

Table 4.2.1b allows for the bounds co-integration tests. The bounds test result on Table 4.2.1b shows that the f-statistic value of 27.98 is greater than the Critical Value Bounds for the upper bound I(1) at 10% level of significance, thus, there is co-integration as such there is long-run relationship between the dependent and independent variables

Test Statistic	Value	K
F-statistic	27.97985	5
Critical Value Bounds		
Significance	I0 Bound (lower bound)	I1 Bound (upper bound)
10%	2.08	3
5%	2.39	3.38
2.5%	2.7	3.73
1%	3.06	4.15

Source: Researchers computation using E-view 9 software, 2019.

4.2.1 Pair wise Granger Causality

To further confirm the nature and extent of relationship among the variables of the study, analysis of pair wise granger causality test was carried out using 2 lags period of each individual series.

There exist of none directional granger causality relationship between GDP and PPT, CED and VAT. This can be said that there is no causal relationship running either from CIT, VAT and GDD to GDP. Similarly, there is causal relationship that running either from PPT to CIT or from VAT to PPT, or VAT to GDD. While also GDP does granger cause CIT and GDD; implying that causality relationship is unidirectional running only from GDP to CIT and GDD but it is not running back from them to CIT and GDD. Moreover, CED does granger cause PPT and GDP.

Table 4.2.1.c: Pairwise Granger Causality Test Results

Null hypothesis	Obs	F-statistic	P. Value
⟶LGDP _____ LCIT	34	6.83693	0.0037
⟶LGDP ____ LGDD	34	3.71443	0.0366
⟶LPPT _____ LGDP	34	2.63156	0.0891
⟶LCED _____ LGDP	34	4.84542	0.0153
⟶LCED _____ LPPT	35	7.19528	0.0028

***, ** and * significance at 1%, 5% and 10% respectively.
Source: Researchers' computation using E-view 9 software, 2019.

4.2.2. The Impact of tax revenue on economic growth in Nigeria

To examine the effect of Tax revenue of Companies Income Tax (CIT), Value Added Tax (VAT), Petroleum Profit Tax (PPT), Customs and Excise duty (CED) and Government Domestic Debt (GDD) on the economic growth of Nigeria. In order to achieve the main objective of this study, two stages of analyses were performed, namely: diagnostic test and regression analysis through Auto-Regressive Distributed Lag (ARDL) model. These are discussed as follows:

4.2.3 The ARDL Model Estimation Results

In order to perform this test, Auto-Regressive Distributed Lag (ARDL) model is estimated for the model.
This is shown on Table 4.2.3. The ARDL model estimation on

Table 4.2.3: Auto-Regressive Distributed Lag (ARDL) model

Variables	Coefficient	Std Error	t-Stat.	Prob.
Constant	10.42489	2.973750	3.505639	0.0049***
LPPT	0.184507	0.070044	2.634164	0.0232**
LPPT(-1)	0.180160	0.082888	2.173535	0.0525*
LCIT	-0.632571	0.214039	-2.955398	0.0131**
LCED	-0.815726	0.222900	-3.659604	0.0038***
LCED(-1)	-0.513702	0.189838	-2.706005	0.0204**
LVAT	0.412963	0.145102	2.846022	0.0159**
LVAT(-1)	1.157711	0.201237	5.752984	0.0001***
LGDD	0.519052	0.350514	1.480833	0.1667
LGDD(-1)	0.487897	0.307560	1.586348	0.1410
CointEq(-1)	-1.660610	0.110895	-14.974556	0.0000***
Cointeq = LGDP - (0.2200*LPPT -0.3816*LCIT -0.8019*LCED + 0.9474*LVAT + 0.6074*LGDD + 6.2883)				
Fixed regressors	Constant			
Number of models evaluated	22			
Selected Model	ARDL(1, 1, 0, 1, 1, 1)			
R^2	0.996445			
Adj. R^2	0.993214			
F-Statistic	308.3644			
Prob.(F-Stat)	0.000000*			
Durbin-Watson stat	2.668316			

Dependent Variable: Log(GDP) *significance at 5%

Source: Researchers' computation using E-view 9 software, 2019.

Table 4.2.3 above shows that in the Short run, Petroleum Profit Tax has a positive and significant impact on economic growth in the current year at 5% level of significance and also positive and significant at 10% at lag -1, this implies that an increase in PPT at current year by 1 will lead to increase in GDP by 18%. CIT has a negative and significant impact on economic growth at current year at 5%, this implies that an increase in CIT at current year by 1 will lead to decrease in GDP by 63%. CED has negative and significant impact on economic growth in current year at 1%, and also was negative and significant at 5% at lag -1, this implies that an increase in CED by 1 in the current year will lead to decrease in GDP by 81% and also 51% at lag -1. VAT has a positive and significant impact on economic growth in the current year at 5%, and also have positive and significant at 1% at lag -1, this implies that an increase in VAT at current year by 1% will lead to increase in GDP by 41% and also 1.51% at lag -1. The result of GDD is not significant which means it has no impact on economic growth.

4.2.4. The speed of Adjustment

The speed of adjustment VECM met the three conditions: negative, less than one and statistical significant. The speed of adjustment is 1.66%. This implies that each year will be adjusting itself to reach long run equilibrium by 1.66%.

The long run regression estimate on Table 4.2.4a shows that Petroleum Profit Tax (PPT) measured by Log (PPT), Value Added Tax (VAT) measured by log (VAT) and Government Domestic Debt measured by log (GDD) have positive effects on Gross Domestic Product (GDP) which is measured by Log (GDP). While Companies Income Tax (CIT) measured by log (CIT) and Customs and Excise Duties (CED) measured by log (CED) have negative and significant effects on GDP

Table 4.2.4a Long Run Estimation

Variables	Coefficient	Std Error	t-Stat.	Prob.
Constant	6.288291	1.522389	4.130540	0.0017*
LPPT	0.219967	0.061433	3.580607	0.0043*
LCIT	-0.381566	0.120486	-3.166894	0.0090*
LCED	-0.801911	0.141167	-5.680567	0.0001*
LVAT	0.947430	0.133602	7.091433	0.0000*
LGDD	0.607391	0.122090	4.974962	0.0004*

Dependent Variable: Log(GDP) *significant at 5%

4.3   Discussion

In order to achieve the objective of examining the effect of tax revenue on economic growth, the analysis was done in two stages, namely: diagnostic test and regression analysis. The result for unit root test of ADF showed on table 4.2.3 indicated that Petroleum Profit Tax (PPT), Companies Income Tax (CIT), Custom Excise Duties and Value Added Tax (VAT) measured by their natural logarithm are stationary at first difference intercept, while Gross Domestic Product (GDP) measured by its natural logarithm and Government Domestic Debt (GDD) measured by its natural logarithm are stationary at first difference trend and intercept. Thus, bounds co-integration test as proposed by Pesaran, Shin and Smith (2001) was conducted by estimating Auto-Regressive distributed Lag (ARDL) model. The bounds test   result showed on table 4.2.1b indicated that the f-statistic value of 27.98 is greater than the Critical Value Bounds for the upper bound I(1) at 10% level of significance, thus, there is co-integration as such there is long-run relationship.

The result from the longrun estimation of the variables of this study is inconsistent with prior expectations as it was expected that all measures of tax revenue and domestic debt would have positive effect on GDP. Also, the coefficient of the independent variable shows that an increase in PPT, VAT and GDD by 1% will have 0.22%, 0.95% and 0.61% positive impact on the growth of Nigerian economy. An increase in revenue from CIT, CED by 1% will cause a 0.38% and 0.80% decline in GDP respectively.

Further, the R-square of the ARDL model on Table 4.2.3 showed that about 99% variations in GDP can be attributed to the proxies of tax revenue and government domestic debt, while the remaining 1% variations in GDP are caused by other factors not included in this model. This

shows a strong explanatory power of the model. This is further emphasized by the probability of the f-statistic of 0.000000, which shows that the regression result is statistically significant because this is less than 5% which is the level of significance adopted by the study.

The result shows that, the variable with a higher degree of dispersion from the mean is the Gross Domestic Product (GDP), this further explains its variations over the years under study. Their respective minimum and maximum values are equally shown indicating variations over the years for the respective series, this is further shown in the trends of GDP and each of the independent variables The trend analyses further indicate that for the period under study, there has been consistent growth in the GDP and tax revenue. Specifically, there is a sharp increase in Gross Domestic Product (GDP) in 2009 following the period of global economic recession in 2008 and also, in 2016. The fluctuations in the global oil prices have affected the tax revenue associated to petroleum profit tax (PPT), this is evident in 2006, 2008, and 2014 showing indications of sharp decline in PPT in Million Naira. Also, Custom and Excise Duties (CED) declined in 2005 and 2007 due the federal government waiver policy for Dangote Nigeria plc.

Therefore, long run was estimated for the model which shows that Petroleum Profit Tax (PPT), Value Added Tax (VAT) and Government Domestic Debt (GDD) have positive effects on Gross Domestic Product (GDP)), while Companies Income Tax (CIT) and Customs and Excise Duties (CED) have negative effects on GDP. It has been observed that the result of multiple regression analysis indicates that some sources of tax revenue have a negative effect on GDP, although this is not the result of their simple linear regression estimates. For instance, Companies Income Tax (CIT) and Custom and Excise Duties (CED) have negative effects on GDP when combined with other sources of tax revenue, this is in line with the result of

Chigbu and Njoku (2015); Ebiringa and Emeh (2012); Ibadin and Oladipupo (2015); Okoli, Njoku, and Kaka (2012). This implies that some sources of tax revenue in Nigeria such as CIT and CED have not contributed positively to economic growth of this nation over the period of study.

5.0   Conclusions and Policy Recommendation

Findings from this study provide insight into the impact of tax revenue on economic growth. It further provided an insight as to the extent to which each of the independent variables affects the dependent variable. There is evidence of co-integration among the variables. Petroleum Profit Tax, Value Added Tax and Government Domestic Debt have positive and significant impact on economic growth, this implies that increase in the proceeds from these taxes will boost economic growth. While Company Income Tax and Customs and Excise Duties have negative and significant impact on economic growth. This implies that increase in tax from these two sources will result to a fall in the level of economic growth in Nigeria

Based on the findings and conclusions of this study, the following recommendations are made:

1.   Efforts should be intensified by the government towards increased collection of PPT and VAT; this is due to the contribution of both PPT and VAT revenue to GDP over the period of study. This can be done through blocking all loopholes in our tax laws as well as bringing more prospective tax payers into the tax net.

2.   There should be stringent penalty imposed on any individual or corporate body who indulges in any form of tax malpractices irrespective of states, if the positive correlation between tax revenue and economic growth should be maintained.

3.   Government through Federal Inland

Revenue Service should create an effective and reliable data base for every citizen to minimize (if not eliminate) the incidence of tax evasion and there should be constant training and re-training of VAT administrators through seminars, conferences to keep them abreast with the modern trends in tax administration. This is because as shown in the result, in the long run VAT has a positive effect on the GDP.

4. Government should also be able to use taxpayers' monies in the provision of infrastructural facilities. This will in no doubt boost the morale of the citizenry towards tax payment.

5. Staff of Tax Authorities should be adequately motivated in order to enhance revenue generation and improve the percentage of tax revenue to GDP to march the world expected rate of 20%, insteadof 8.67% recorded in this study.

6. There should be constant review of existing tax laws just as it is done in the United State of America and other advanced economics, so as to keep the act in pace with the economic reality. As the result of this study has shown that in the long run, Companies Income Tax (CIT) and Custom Excise Duties (CED) do not contributed positively to economic growth of this nation.

7. Federal government should increase the monitoring of Nigerian Custom Service on Customs and Excise duties remitted in order to correct the negative impact that has on economic growth from this study.

8. It is important to monitor the negative impact of taxes on aggregate supply and aggregate demand if the impact on economic growth (GDP) is the focus. We are aware that taxes can used to discourage production and consumption with resultant declining impact on GDP.

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