IMPACT OF TAX REVENUES ON ECONOMIC GROWTH OF NIGERIA

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ABSTRACT

*This study examined the impact of tax revenues **on Economic growth of Nigeria**. The specific objective was to evaluate the impact of tax revenues on gross domestic product growth rate of Nigeria. The study uses value added tax revenue, petroleum profit tax revenue, company income tax revenue and custom and excise duty revenue as independent variable and economic growth was proxy with real gross domestic product as dependent variables. Time series data from 1970 - 2015 were collected from various issues of Central Bank of Nigeria Statistical Bulletin, Federal Inland Revenue Services and National Bureau of Statistics. The Data Collected were on Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties, and Personal Income Tax including Gross Domestic Product. The Augmented Dickey Fuller (ADF), Auto Regressive Distributed Lag (ARDL) and Vector Error Correction Model (VECM) were used to test for stationarity of data, and for long and short run equilibrium relationship of the variables respectively. The result of the study indicated that all the individual tax revenues components were significant and positively signed meaning that an increase in these variables will result to a corresponding increase in economic growth of Nigeria. The study therefore recommends that government should devote a substantial share of these tax revenues towards basic social amenities such as good road networks, steady power supply, sound health and educational system etc. So as to foster voluntary tax payment and compliance, this will inadvertently boost the economic growth of Nigeria.*

Keywords: Tax Revenues, Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties.

INTRODUCTION

The political, economic and social development of any country depends on the amount of revenue generated for the provision of infrastructure in that given country. One means of generating the amount of revenue required for providing the needed infrastructure is through a well-structured tax system (Edame and Okoi, 2014). Tax system is a major economic resource in every society which provides opportunity for government to collect vital revenue needed for discharging its obligations. A tax system offers itself as one of the most effective means of mobilizing a nation's internal resources and it lends itself to creating an environment conducive for the promotion of economic growth.

In advanced and developing economies, taxation as; an instrument of fiscal policy is used extensively in restructuring the economy. Ezejelue and Ihendinihu (2006) reports that taxation serves as an indispensable tool for satisfying collective wants through centrally pooled resources as well as a mechanism for regulating economic and social policies in a country. This explains why tax has remained the effective fiscal policy instrument in developing economies like Nigeria. In the mid-1970s and 1980s, Nigeria recorded a tremendous economic growth because of the boom in agricultural produce and Crude Oil Sales (CBN, 2010). It was at this period that taxes started losing its revenue popularity and attention in Nigeria. (Onuoha, 2000).

Odusola (2006) argues that this tax revenue structure and fiscal powers has inherent problem on the

long term economic growth and development of Nigeria. This argument attracted the sympathy of tax expertise and scholars who stated in clear terms that Nigeria tax system need to be reformed to achieve robustness and growth Also, taxes can affect economic growth in the following ways: tax can inhibit investment rate through taxes such as company income., personal income and capital gains; taxes can affect growth in labour supply; tax policy can affect productivity growth through research and development expenditure; tax can lead to a flow of resources; and high taxes on labour supply can distort the efficient use of human capital (Tosun and Abizadeb, 2005); and (Ogbonna, and Appah, 2011).

In the words of Odusola (2006), there were several attempts made to transform and diversify the revenue generation process (to focus more on non-oil revenue) in Nigeria, especially in mid 1980s, 1991 and 2003, as well as the yearly amendments in the annual estimates but none has shown any remarkable impact, especially in its structure and administration.

In the views of Ukeje (2010), Oloyede (2010) and Okafor (2012) a good tax system should have a positive impact on government revenue generation and gross domestic product (GDP) of any country. Therefore, this study aims at evaluating the impact of tax revenues on economic growth of Nigeria.

Statement of the Problem

Nigeria has been largely dependent on primary products for the generation of a high proportion of its recurrent revenue. Before the discovery of oil (pre-70s), the bulk of the public revenue came from exportation of agricultural products. Essentially, import duties, as an integral aspect of indirect tax was a relevant source of revenue, contributing on the average between 40 and 50 percent of the public generated revenue (Central Bank of Nigeria, 2010). The exportation of oil from the first quarter of the 70s shifted the revenue base in favour of oil (Odusola, 2006). Since then, oil has constituted the bulk of public generated revenue, export earnings and foreign exchange reserve (Obadan, 2003).

Since the oil boom of 1973/1974 to date, oil has dominated Nigerian revenue structure, and its share in federally collected revenue rose from 26.3% in 1970, to 81.8%, 72.6%, and 76.3% in 1979, 1989 and 1999 respectively (Odusola, 2006). Over the past two decades, oil has accounted for at least 70% of the gross federally collected revenue, thus indicating that traditional tax revenue has never assumed a strong role in the country's management of fiscal policy (Ogbonna & Appah, 2011). This structure of revenue has been a major setback for tax collection and administration, and has also posed serious concern to researchers.

Ezeabasili (2008) and CBN (2010), report that as at 1986, the Federal nominal fiscal deficit stood at 8.36% or 11.3% of GDP, the deficit/GDP ratio was 5.4 percent in 1987, 8.4 percent in 1988, 6.7 percent in 1989 and the ratio increased to 11.0 percent in 1991 and 15.5 percent in 1993 respectively. Also the ratio of deficit to GDP average 9.98 and 5.0 percent for the periods 1990-1994, 1995 to 2000, It was 2.98 in 2001 to 2005, it rose to 3.16 in 2006 to 2010. These widening fiscal deficits have threatened macro-economic stability and prospect for economic growth .due to the inability of meeting the revenue target and projections of government. The low non-oil revenue (especially tax revenue) and widening fiscal deficit have necessitated the need for over the years' assessment of the impact of these tax revenues on gross domestic product growth rate of Nigeria

Hence, the broad objective of the study is to evaluate the impact of tax revenues on gross domestic product growth rate of Nigeria while the specific objective is to determine the impact of tax revenues on gross domestic product growth rate of Nigeria.

Objective of the Study

The main objective of this study is to evaluate the impact of tax revenues on economic growth of Nigeria and the specific objective is:

1. To determine the extent of impact of personal income tax on gross domestic product growth rate of Nigeria
2. To determine the extent of impact of value added tax on gross domestic product growth rate of Nigeria
3. To determine the extent of impact of company income tax on gross domestic product growth rate of Nigeria
4. To determine the extent of impact of petroleum profit tax on gross domestic product growth rate of Nigeria
5. To determine the extent of impact of custom and excise duties on gross domestic product growth rate of Nigeria

Research Questions

1. To what extent does personal income tax relate to gross domestic product growth rate of Nigeria
2. To what extent does value added tax relate to gross domestic product growth rate of Nigeria
3. To what extent does company income tax relate to gross domestic product growth rate of Nigeria
4. To what extent does petroleum profit tax relate to gross domestic product growth rate of Nigeria
5. To what extent does custom and excise duties relate to gross domestic product growth rate of Nigeria

Research Hypotheses:

For the purpose of the study, the following null research hypotheses were tested:

H_{01} Personal income tax has no significant impact on gross domestic product growth rate of Nigeria

H_{02} Value added tax has no significant impact on gross domestic product growth rate of Nigeria

H_{03} Company income tax has no significant impact on gross domestic product growth rate of Nigeria

H_{04} Petroleum profit tax has no significant impact on gross domestic product growth rate of Nigeria

H_{05} Custom and excise duties has no significant impact on gross domestic product growth rate of Nigeria

Significant of the Study

Very importantly, this study is an empirical investigation aimed at evaluating the impact of tax revenue on economic growth of Nigeria with determining the extent of impact of tax revenues on gross domestic product growth rate of Nigeria. However, the study will benefit the management of tax authorities, tax payers, board of internal revenue and government at large

Scope of the Study

This study is cantered on the impact of tax revenues on gross domestic product growth rate of Nigeria. This study is delimited to Nigeria with issues of Central Bank of Nigeria Statistical Bulletin, Federal Inland Revenue Services and National Bureau of Statistics *from 1970 - 2015*.

Review of Related Literature

Conceptual Frame Work

Tax Revenue

There are many dimensions to the concept of taxation, however revenue generations remains at the central stage. Tax is a compulsory levy imposed on a subject or upon his property by the government to provide security, social amenities and create conditions for the economic well-being of the society (Appah, 2004; Appah and Oyandonghan, 2011). Anyafo (1996) and Anyanwu (1997) stated that tax are imposed to regulate the production of certain goods and services, protection of infant industries, control business and curb inflation, reduce income inequalities. The essence of taxation is not only derived from the need to raise revenue to finance legitimate government activities but also as a necessary tool to regulate a variety of economic and social policies. This explains why Alpheaus, Ihendinihu and Akpu (2016) identified taxation as a potent instrument for influencing the direction and level of business activities, for adjusting income inequalities, as well as the welfare and spending profits of individuals. Tax is a major source of government revenue all over the world. Government use tax proceeds to render their traditional functions, such as the provision of public goods, maintenance of law and order, defence against external aggression, regulation of trade and business to ensure social and economic maintenance (Azubike, 2009). Musgrave and Musgrave and Musgrave (2004) also stated that the economic effects of tax include micro effects on the distribution of income and efficiency of resource use as well as macro effect on the level of capacity output, employment, prices, and growth. However, the use of tax as an instrument of fiscal policy cannot be achieved because of dwindling level of revenue generated as a result of ineffectiveness of government officials.

Kiabel and Nwokah (2009) argue that the increasing cost of running government coupled with the dwindling revenue has left all tiers of government in Nigeria with formulating strategies to improve the revenue base. Tax is dynamic, so reforms are necessary to effect the required changes in the national economy (Ola, 2001).

Economic Growth

Economic growth has been defined as the sustained increased in a countries productive capacity (as measured by comparing the gross national product in a year with that of previous year) Increase in per capita national output or net national product over a long period of time which occurs when a nation possibility frontier shifts outwards. (Salami & Ojeye, 2015).

Ogbonna & Appah (2012) opine that economic growth can be determined by four important factors namely: Human resource, natural resources, capital formulation and technological development.

Taxation has both positive and negative effect on growth. Tax policy can affect growth rate in the economy through the decision of economic agents. An increase in taxation reduces the returns to investment (in both physical and human capital) and Research and Development (R&D). Lower returns mean less accumulation and innovation and hence a lower rate of growth. However, some

public expenditure can enhance productivity, such as the provision of infrastructure, public education, and health care. Taxation provides the means to finance these expenditures and indirectly can contribute to an increase in the growth rate. In other words, there exists a relationship between tax structure and the level of economic growth and development for both developed and developing economies.

Myles (2009) argues that in most developed countries the level of taxes rose steadily over the course of the twentieth century: an increase from about 5%-10% of gross domestic product (GDP) at the turn of the century to 30% - 40% at the end is typical. Such significant increases raise serious questions about the effect taxation has upon economic growth. According to him, it does not imply that it is straightforward to infer the effects of taxation from aggregate economic data. The positive and negative effects of taxation will be mutually offsetting and only the net effect (which may be very small) will be observed.

There are different channels through which taxation affects growths. Myles (2000, 2009a, 2009b, 2009c) and Johansen, Christopher, Jens, Bert and Vartial (2008) show in their theoretical models of taxation and growth that taxes can affect growth through their impacts on factor accumulation and total factor productivity. Feldstein, (2006) stated that taxes distort factor prices and induce efficiency loss in resource allocation. This adverse effect of taxes on efficiency lowers total factor productivity. Another effect of taxes on total factor productivity is through their potential effects on entrepreneurship. Entrepreneurial activities generate new ideas that can raise total factor productivity.

Similarly, Eigen and Skinner (1996) offers five possible mechanisms by which taxes can affect economic growth:

(i) investment rate can be inhibited through taxes like corporate and personal income, and capital gains taxes;
(ii) taxes can slow down growth in labour supply by distorting labour-leisure choice in favour of leisure;
(iii) tax policy can affect growth in productivity through its discouraging effects on R&D (research and development) expenditures;
(iv) taxes can lead to a flow of resources to other (lower taxed) sectors that may have lower productivity (Harberger Framework); and
(v) high taxes on labour supply can distort the efficient use of human capital by discouraging workers from jobs having high tax burdens.

Value Added Tax

This is an indirect tax on the domestic consumption of goods and services, except those that are zero rated (such as exports). It is levied at each stage in the chain of production and distribution from raw materials to the final sale based on the value (price) added at each stage. Also to obtain the actual figure of value added tax from 1970 to 1993, since there was no value added tax in that period, the sales tax levied on retail and wholesale levels coupled with private final consumption within that period was used as proxy for value added tax.

Company Income Tax:

This is tax on the profit of incorporated entities in Nigeria after deducting all allowable expenses and adding all disallowable expenses from the company's financial statement. The tax has been amended many times and is currently been administered by the Federal Inland Revenue Services.

Petroleum Profit Tax:

This is tax applicable to the downstream operations in the oil sector. It is particularly related to rents, royalties, margins and profit -sharing elements associated with oil mining, prospecting and exploration leases. It is the most important tax in Nigeria in terms of its share of total revenue and foreign exchange earnings.

Custom and Excise Duties:

This may be referred as two in one tax. Custom duties also known as import duties are taxes on imports into Nigeria charged as a percentage of the value of imports or as a fixed amount contingent on quantity. Whereas the Excise duties are *ad valorem* tax on the output of manufactured goods.

Personal Income Tax:

This is an indirect tax levied on income of a person. A person means an individual, an ordinary partnership, a non-juristic body of person and an undivided estate. Personal income tax is an important source of income.

Theoretical Framework

Socio-political theory of taxation: This theory of taxation states that social and political objectives should be the main factors in selecting taxes. The theory advocated that a tax system should not be designed to serve individuals, but should be used to satisfy the desire of the entire society (Ayuba, 2014). Hence, this theory forms the basis for this study following the Nigerian system where different collectable taxes are meant for revenue generation which ordinarily should result to economic growth and development.

Faculty theory of taxation: According to Anyanfo (1996), this theory states that one should be taxed according to the ability to pay. It is simply an attempt to maximize an explicit value judgment about the distributive effects of taxes. Bhartia (2009) argue that a citizen is to pay taxes just because he can, and his relative share in the total tax burden is to be determined by his relative paying capacity. This theory will also drive this study since all the taxes in Nigeria are assessed based on individual, partners or corporate profit or income as they case may be. The tax system or structure determines the level of economic activities and growth. It is used as a stabilization policy measures which can be expansionary in nature (Ukeje 2010).More so, there exists a relationship between tax structure and the level of economic growth and development

Empirical Review

A number of empirical studies have been carried out by scholars seeking to shed light on the nexus between tax reform and economic growth. In this regards, Ihendinihu, Jones and Ibanichuka (2014) examined the assessment of the long run equilibrium relationship between the periods of 1986 - 2012 using time series data on different types of taxes and Real Gross Domestic Product (RGDP). Bounds testing technique was used in analysing the data. The results indicate that total tax revenue has a significant effect on economic growth; explaining about 73.4% of the total variation in RGDP. Company Income Tax (CIT), Education Tax (EDT) and Other Tax Revenue (OTR) were each found to have significant influence on economic growth; sustaining long-run equilibrium relationships with RGDP. No significant causal relationships were shown to exist between PPT, VAT, and economic growth. They therefore conclude that there exist a long run equilibrium relationship between

aggregate tax revenue and economic growth, and recommend that government should encourage and sustain strong fiscal responsibility and transparency in governance to promote voluntary compliance to tax payment, fight corruption, and minimize waste in the use of tax revenue through appropriate legislative adjustments and financial discipline in governance.

Edame and Okoi (2014) examined the impact of taxation on investment and economic growth in Nigeria from 1980-2010. The ordinary least square method of multiple regression analysis was used to analyse the data. The annual data were sourced from the central bank of Nigeria statistical bulletin and NBS. The result of the analysis showed a conformity to our prior expectation because the parameter estimates of corporate income tax (CIT) and personal income tax (PIT) appears with negative signs, this means that an inverse relationship exist between taxation and investment. The economic implication of the result is that a one percent (1%) increase in CIT will result in decrease in the level of investment in Nigeria. Consequently, an increase in PIT will result in decrease in the level of investment. Finally, the result therefore showed that taxation is negatively related to the level of investment and the output of goods and services and is positively related to government expenditure in Nigeria. They also observed that taxation statistically is a significant factor influencing investment and government expenditure in Nigeria. Based on the result of our findings, they recommended that the government of Nigeria should use taxation to achieve its set target that will enhance economic growth and development.

Chigbu, Eze and Ebimobowei (2012) examined the causality between economic growth and taxation in Nigeria for the period 1970-2009. Data was collected from the Central Bank of Nigeria (CBN) Statistical Bulletin and Federal Inland Revenue Service (FIRS). The data collected from the secondary sources were analysed using relevant econometric models such as Augmented Dickey- Fuller, Diagnostic Tests, Granger Causality and Johansen Co-integration. The results from the econometric analysis reveals that taxation as an instrument of fiscal policy affects the economic growth and taxation granger cause economic growth of Nigeria. On the basis of the econometric result, the study concluded that taxation is a very important instrument of fiscal policy that contributes to economic growth of any country. On the basis of the conclusion useful recommendations were provided that will improve the generation of revenue from taxation that would stimulate the economy of Nigeria positively.

Non-compliance has been one of the major problems of the Nigerian taxes. Recently, Akintoye and Tashie (2013) examined the effect of tax compliance on economic growth and development in Nigeria. Tax compliance was proxied as willingness of the citizens to pay tax. They did a comparative analysis of the willingness to pay tax by citizens in two large States of the Federation, Lagos and Oyo State using primary data collected through the administering of questionnaires to self-employed in each senatorial district in Oyo and Lagos States. Frequencies and percentages were used to measure the demographic variables of the respondents, and also the factors that affect the willingness to pay tax, while the Chi-square technique was used to measure the difference between willingness to pay tax of citizens in Lagos and Oyo States. It was discovered that many Nigerians are complying with tax payment and that the willingness of citizens to pay tax in Lagos State is significantly higher than that of Oyo State from the list of factors that were tested for Trustworthiness of government, Provision of Infrastructural Amenities, Tax Accountability by Government, Level of government delivery, Income, Morale Ethics, Tax Knowledge, Tax Rate, and The System of Tax Payment were found to influence the willingness to pay tax. They concluded that compliance through the willingness of citizens to pay tax is very important and cannot be ignored. They suggested that government should pay attention to the factors that influence the willingness of citizens to pay tax and improve on them, thereby improving government revenue and economic growth and development of the nation generally.

Adereti, Adesina and Sanni (2011) conducted a study on the impact of Value Added Tax (VAT) on economic growth in Nigeria. Time series data on the Gross Domestic Product (GDP), VAT Revenue, Total Tax Revenue and Total (Federal Government) Revenue from 1994 to 2008 sourced from Central Bank of Nigeria (CBN) were analysed, using both simple regression analysis and descriptive statistical method. Their findings showed that the ratio of VAT Revenue to GDP averaged 1.3% compared to 4.5% in Indonesia, though VAT revenue accounts for as much as 95% significant variations in GDP in Nigeria. A positive and significant correlation exists between VAT revenue and GDP. Both economic variables fluctuated greatly over the period though VAT revenue was more stable. No causality exists between the GDP and VAT revenue, but a lag of two years exists. The study therefore recommends that all identified administrative loopholes should be plugged for VAT revenue to continue to contribute more significantly to economic growth of the country.

Worlu and Nkoro (2012) examine the impact of tax revenue on the economic growth in Nigeria. Their data were collected and analysed using the three stage least square estimation technique. The results show that tax revenue stimulates economic growth through which tax revenue impacts on economic growth in Nigeria. The study also reveals that tax revenue has no independent effect on growth through infrastructural development and foreign direct investment, but just allowing the infrastructural development and foreign direct investment to positively respond to increase in output. However, tax revenues can only materialize its full potential on the economy if government can come up with fiscal laws and legislations and strengthen the existing ones in line with macroeconomic objectives, which will check-mate tax offenders in order to minimize corruption, evasion and tax avoidance. These will bring about improvement on the tax revenue. Above all, these will increase the tax revenue base with resultant increase in growth.

Osundina and Olanrewaju (2013) assessed the welfare effects of taxation on the Nigerian economy using ex post facto research design and time series data. The result revealed that taxation has significant (P=0.00000) welfare effect on Nigerian economy. The study recommended that the revenue generated should be spent such that income will be evenly and fairly distributed, also private investment should be encouraged as it impacts consumption positively.

Methodology

Research Design

This work made use of historical / ex-post facto research design. This type of design is undertaken after the event has taken place and the data are already in existence, hence not subject to any form of manipulation whatsoever. The design is deemed appropriate for the study since variables used were predominantly annual time series (secondary) data which have been gathered prior to this study. Time series data of Real Gross Domestic Product (RGDP), Value Added Tax (VAT), Company Income Tax (CIT), Petroleum Profit Tax (PPT), Custom and Excise Duties (CED) and of course Personal Income Tax (PIT) were extracted from Central Bank of Nigeria Statistical Bulletin, Federal Inland Revenue Services and National Bureau of Statistics data with the aid of E-Views 9.0 statistical software. The first step was a diagnostic test of each of the variables for stationarity. The Augmented Dickey Fuller Test was employed for the purpose. The series were found to be integrated at mixed order. As a result of that Johansen Co-integration Test was dropped for Auto regressive Distributed lag (ARDL) which was then used to establish a long term relationship between the dependent an explanatory variables of the specified models. Having ascertained the long run equilibrium relationship; Vector Error Correction Method (VECM) was used to tie the short run behaviour to its long run value consistent with the works of Wooldridge (2006); Asterious and Hall (2007) and Gujarajti (2009). Other necessary diagnostic test was carried out to confirm the absence or otherwise autocorrelation,

heteroscedasticity and stability of the stochastic terms.

Area of Study

The study was carried out in Nigeria with issues of Central Bank of Nigeria Statistical Bulletin, Federal Inland Revenue Services and National Bureau of Statistics.

Population of the Study:

Time series data from 1970 - 2015 were collected from various issues of Central Bank of Nigeria Statistical Bulletin, Federal Inland Revenue Services and National Bureau of Statistics. The Data Collected were on Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties, and Personal Income Tax including Gross Domestic Product. The Augmented Dickey Fuller (ADF), Auto Regressive Distributed Lag (ARDL) and Vector Error Correction Model (VECM) were used to test for stationarity of data, and for long and short run equilibrium relationship of the variables respectively

Model Specification

The following models of Ogbonna and Appah (2012) are expressed as modified:

$GDPGR = f\ (VAT, CIT, PPT, CED, PIT)$

$GDPGR = B_0 + B_1VAT + B_2CIT + B_3PPT + B_4CED + B_5PIT + u$

The above functional and explicit models were used to achieve the objectives of the study. In the model above GDPGR is Gross Domestic Product Growth Rate, VAT is Value Added Tax, CIT is Company Income Tax, PPT is Petroleum Profit Tax, CED is Custom and Excise Duties, PIT is Personal Income Tax. B_0 is constant/ intercept term, $B_1 - B_5$ stands for the coefficient/ model parameters, whereas u is the error tem or unexplained variables not captured in the model.

Analysis and Findings

Various data were gathered for this study. The data were on Real Gross Domestic Product, Gross Federally Collected Revenue and Total Tax Revenue. Others include Value Added Tax (VAT), Company Income Tax (CIT), Petroleum Profit Tax (PPT), Custom and excise Duties (CED) and Personal Income Tax (PIT), and Tax Policy Reform (TPR). These data are succinctly presented in the appendix 1. The data used in this study were analysed with the aid of appropriate quantitative and inferential statistical tools. The result of the analysis formed the basis for discussion and subsequent testing of the formulated hypotheses.

Augmented Dickey Fuller (ADF) Unit Root Test

Estimation of the model specified in this study was preceded by an examination of the statistical properties of the series, including tests of stationary of the individual series. The Augmented Dickey Fuller (ADF) unit root test results for the variables used in the analysis were presented in the table below.

According to the null hypothesis, series has a unit root as it is non-stationary. The result shows that

Table 4.1 Augmented Dickey Fuller (ADF) Unit Root Tests

Variables	ADFTS	CV@5%	Prob.	Conclusion
CED	-6.819873	-3.510075	0.0000	Stationary 1 (0)
CIT	-4.663784	-3.515523	0.0027	Stationary 1(1)
GDPGR	-6.232778	-3.513075	0.0000	Stationary 1(0)
PIT	-8.934013	-3.529758	0.0000	Stationary 1(0)
PPT	-5.238065	-3.523623	0.0006	Stationary 1(1)
VAT	-3.683224	-3.523623	0.0477	Stationary 1(1)

Source: Author's computation using E-views 9

The time series data were not all stationary at levels as only CED, GDPGR and PIT were stationary at levels while CIT; PPT and VAT were stationary at first difference

Serial Correlation LM Test

This test is necessary in order to ascertain the presence or otherwise of serial/auto correlation in the specified mode.

The result is depicted in the table below.

Table 4.2 Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.157021	Prob. F(2,34)	0.1312
Obs*R-squared	4.954263	Prob. Chi-Square(2)	0.0840

Source: Author's computation using E-views 9

The serial correlation LM test presented in the Table 4.2 which tests for serial correlation in the model is based on the null hypothesis that there is no serial correlation in the model. But the observed R^2 has a significant probability of 0.0840 which is greater than 0.05, therefore we accept the null hypothesis meaning that there is no presence of serial correlations in the model.

Heteroskedasticity Test

The result of Breusch-Pagan-Godfrey Heteroskedasticity Test to ascertain if there is equal spread of the variance from the mean, in order words if the model is homoskedastic.

Table 4.3 Heteroskedasticity Test: Breusch-Pagan-Godfrey

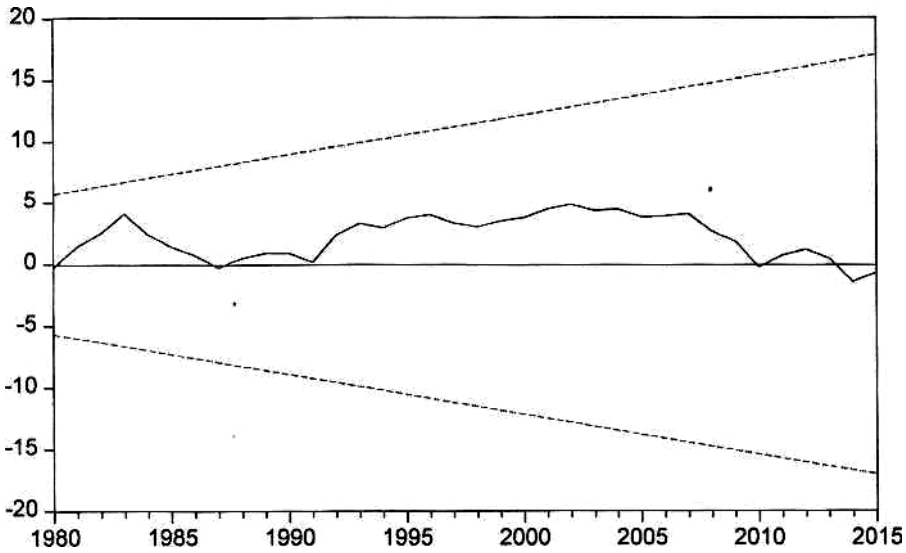
F-statistic	0.550380	Prob. F(12,31)	0.8638
Obs*R-squared	7.727806	Prob. Chi-Square(12)	0.8060
Scaled explained SS	12.35832	Prob. Chi-Square(12)	0.4173

Source: Author's computation using E-views 9

The Breusch-Pagan-Godfrey Heteroskedasticity Test presented in Table 4.3 above which test for heteroscedasticity in the model is based on a null hypothesis that the model is homoscedastic, but the observed R^2 has a probability value of 0.8060 which is greater than 0.05. Hence, we accept the null hypothesis that there is no problem or presence of heteroscedasticity.

Stability Tests

To examine the stability of the long-run parameters together with the short-run movements for the equations, cumulative sum (CUSUM) was used and the result was presented Fig 4.1 below.



—CUSUM -- 5%Significance

Cumulative Sum (CUSUM) Test of stability of data

It can be seen from Figure 1 that the plot of CUSUM stays within the critical 5% bounds that confirms the long-run relationships among variables and thus shows the stability of coefficient

Result of the Co-integration Test using GDPGR as Proxy for Economic Growth

Upon the result of the unit root test, where the variables are integrated at mixed order, i.e. 1(0) and 1(1), the Auto Regressive Distributed Lag (ARDL) co-integration approach was adopted and the result of the test for the economic growth - tax revenue model is presented in the Table 4.4 below:

Result of ARDL Bounds Test for Co-integration

Test Statistic	Value	K
F-statistic	10.75057	5
Critical Value Bounds		
Significance	10 Bound	11 Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18.4.68
1%	3.41	

Source: Author's computation using E-views 9

The results of the ARDL bounds testing approach as shown in Table 4.4 reveals that the F-statistic 10.75 is greater than the lower bound of 2.62 and 3.79 of the upper bound critical values at 5%. This implies that the null hypothesis of no cointegration among the variables in the model is rejected. The findings lead to the conclusion that a long run relationship exist between Economic growth and tax revenues in Nigeria.

Estimated long run coefficients using the ARDL approach for GDP^GR as proxy for Economic growth

The long run equilibrium relationship between the variables in the model, including the estimated first-order autoregressive coefficient of the error term was estimated and the result is presented in the table above.

Result of estimated long run coefficients using the ARDL approach on the Economic growth – tax revenue model

Table 4.4

Variable	Coefficient	Std. Error	t-Statistic	Prob.
cointEq(-1)	-1.136975	0.470446	2.416801	0.0299
VAT	4.866796	2.219252	2.192950	0.0457
CIT	13.90175	6.187142	2.246878	0.0413
PPT	59.125438	19.659968	3.007402	0.0094
CED	40.377792	13.695207	2.948316	0.0106
PIT	0.617700	0.161063	3.835149	0.0018
C	-146395.4	9752224.0	-2.803218	0.0141
R-squared	0.999993	F-Statistic		72984.22
Adjusted R-squared	0.999979	Prob(F-statistic)		0.000000

Source: Author's computation using E-views 9

The result of the empirical long run regression estimates for the economic growth -tax revenue model presented in Table 4.5 Showed that the Coefficient of determination R^2 and adjusted R^2 which measure the explanatory power of the multiple regression model has a coefficient of .999 which implies that 99.9%of the changes that occur in Economic growth in Nigeria in the long run, is accounted for by the explanatory variables and this is high. The implication is that the variables in the model are useful

for explaining the changes in economic growth in Nigeria within the period under study. Also the first-order autoregressive coefficient of the error term is significant at 5% level with the expected sign, which confirms the result of the bounds test for co-integration, suggesting that there exists a long run relationship between Economic growth and Tax revenue in Nigeria.

The p-value of the F-statistics is 0.0000 which is less than 0.05 (5%). This indicates the appropriateness of the overall model. However, Value Added Tax was found to be significant at 5% with a p-value of 0.0457 and has a positive coefficient of 4.866796. This implies that an increase in VAT will lead to an increase in economic growth proxy by Gross domestic product growth rate in the long run. Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties and Personal Income Tax were all significant at 5% with p-values of 0.0413, 0.0094, 0.0106 and 0.0018 with coefficient of 3.90175, 59.125438, and 40.37792 and 0.617700 respectively. Since the result of the various tax revenues were all significant and positive, these imply that an increase in these tax revenues would definitely yield an increase in gross domestic product of Nigeria. Their respective level of contribution to economic growth was highest with Petroleum Profit Tax, Custom and Excise Duties Company Income Tax, Value Added Tax and Personal Income Tax.

Error Correction Model (ECM) for GDPGR as proxy for Economic growth

Established the long run equilibrium relationship among the variables in the model, there is need to test for the short run relationship. Therefore the error correction model was used and the result as shown in Table 4.6.

Table 4.5 Error Correction Model (ECM) Results using GDPGR as proxy for Economic growth

	Coefficient	Std. Error	t-Statistic	Prob.
ecm(1)	-1.016560	0.413760	2.456881	0.0190
D(GRGDP(-1))	-4.448550	2.191691	-2.029734	0.0498
D(VAT(-1))	0.752627	0.292327	2.574606	0.0220
D(CIT(-1))	13.551115	3.521238	3.848395	0.0018
D(PPT(-1))	8.960593	3.199135	2.800943	0.0142
D(CED(-1))	21.19155	9.261547	2.288122	0.0281
D(PIT(-1))	5.325679	2.260684	2.355783	0.0240
C	7105874	2641337	2.690256	0.0108
R-squared	0.748664	F-statistic		15.31922
Adjusted R-squared	0.699793	Prob(F-statistic		0.000000

Source: Author's computation using E-views 9

Table 4.6 presents the results of the empirical short-run regression estimates for the Economic growth and tax revenue model resulting from the data analysed. Based on the above result, the Coefficient of determination R^2which measure the explanatory power of the multiple regression models has a coefficient of 0.748, which implies that 74.8% of the changes that occur in Economic growth in Nigeria is accounted for by the explanatory variables. The F-Statistics is significant at 1% level and the implication is that the variables in the equation are useful for explaining the changes in Economic growth in Nigeria within the period under study.

Also from the result above, the coefficient ECM is -1.02, which is correctly signed and has a p-value of 0.019 which is less than 0.05, this implies that there is a short run relationship between Economic growth and tax revenue variables in Nigeria.

Further analysis depicts that at the short run, one period lag in Gross Domestic Product Growth Rate responded positively to one period lag in Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties and Personal Income Tax. These conform to their respective coefficients of 0.752627, 13.551115, 8.960593, 21.19155 and 5.325679. The implication is that a unit increase in the short run of gross domestic product would be as result of the corresponding increase in the various tax revenues which were all significant at 5% with p-values of 0.0220, 0.0018, 0.00142, 0.0281 and 0.0240 for Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties and Personal Income Tax respectively.

Test of hypothesis

In Table 4.5, the result of the estimated long run coefficients using the Auto Regressive Distributed Lag (ARDL) approach on the impact of tax revenues and tax policy reforms on gross domestic product of Nigeria, the probability value of the F-statistics was 0.0000 which is less than 5% level of significance.

In addition the Error Correction Model (ECM) in Table 4.6 which tested for the existence of short run relationship revenues components of Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties and Personal Income Tax and Gross Domestic Product also had F- statistics of 0.0000 which was also less than 0.05 (5%) level of significance.

Base on the p-value of the long and short run relationship of the variables, the null hypothesis was rejected and the alternate accepted, meaning that tax revenues have significant impact on gross domestic product of Nigeria.

Discussion of Findings, Recommendation And Conclusion

Discussion of Findings

The results of the Auto Regressive Distributed Lag Model (ARDL) Bgund Test approach for co-integration led to a conclusion that a long run relationship exist between economic growth and tax revenues in Nigeria. Sequel to that result, ARDL test was carried out in order to estimate the long run coefficient of the explanatory variables in the dependent variable of economic growth produced by GDP growth rate. The result of the empirical long run regression estimates for the economic growth - tax revenue model revealed that the coefficients of determination R^2 which measure the explanatory power of the multiple regression model has a coefficient of 0.999 which implies that 99.9% of the changes that occur in economic growth in Nigeria in the long run is accounted for by Value Added Tax, Company Income Tax, Petroleum Profit Tax, Personal Income Tax and Custom and Excise Duties. Also the first order autoregressive coefficient of the error term is significant at 5% level with the expected significant of -1.136975 which confirms to the result of the bounds test for co-integration. The implication is that Nigerian economy in the long run may not survive without tax revenues.

Further breakdown of the result indicates that a unit increase in VAT, CIT, PPT, CED and PIT will result to a corresponding increase of 4.87, 13.90, 59.12, 40.38 and 0.62 in economic growth respectively. It could be seen that PPT has the highest on economic growth in the long run. This may be attributed to long years of over dependence on oil revenue in Nigeria. This was followed by CED which a contribution of 40.38 to GDP which may be as a result of our national unbridled taste for foreign goods making it an import based economy. CIT made a contribution of 13.9which means that company income tax is key to economic growth. VAT contributed 4.8 while Personal Income Tax made the least contribution of 0.61. This may be as a result .of predominance of tax evasion and the

preponderance of people outside the Personal Income Tax net. The above finding is in agreement with apriori expectation. The policy implication being that the nation's tax system needs to be efficiently and effectively managed so as to sustain economic growth at the long run. These findings are in conformity with Chigbu, Eze and Ebimobowei (2012) which submits that taxation is a strong instrument for fiscal policy that is used to stimulate economic growth.

Sequel to the result of the empirical short run regression estimates for the economic growth and tax revenue model as given in table 4.6. The coefficient of determination, R^2 which measure the explanatory power of the multiple regressions has coefficient of 0.78. The implication is that 0.78 changes that occur in economic growth is currently signed and significant at 0.0019 which is less than 0.05 (5%). The result suggests that there is a short run relationship between economic growth and tax revenue. The result indicates that the effect of tax revenue on economic growth is more on the long run than in the short run judging by their respective R^2 of 0.99 and 0.78 respectively. It is also evident in the result that it will take one year lag for economic growth to adjust to changes in the explanatory variables of VAT, CIT, PPT, CED and PIT.

In the short run equilibrium relationship, all the explanatory variables were found to be positive and impacts significantly on economic growth proxied by gross domestic product growth rate. The result shows that at the short run that N1 increase in VAT, CIT, PPT, CED and PIT will result to an increase in economic growth at the tune of NO.75, N13.55, N8.96, N21.19 and N5.32 respectively.

Recommendations

Having established the existence of significant and positive impact of tax revenues on economic growth of Nigeria, the study therefore recommends that government should devote a substantial share of these tax revenues towards basic social amenities such as good road networks, steady power supply, sound health and educational system etc. So as to foster voluntary tax payment and compliance this will inadvertently boost the economic growth of Nigeria.

Conclusion

Tax revenues have both long and short run relationship with economic growth of Nigeria produced by gross domestic product. The individual coefficients of the tax revenue components were all found to be positive and significant. This implies that tax revenue is a major fiscal tool for growth of Nigerian economy.

The broad objective of this study was to evaluate the impact of tax revenues on economic growth of Nigeria. The study hereby concludes that tax revenues with its components of Value Added Tax, Company Income Tax, Petroleum Profit Tax, Custom and Excise Duties, Personal Income Tax have contributed substantially to economic growth of Nigeria.

REFERENCES

Adereti, S. A., Adesina J.A., and Sanni, M. R. (2011). Value Added Tax and Economic Growth of Nigeria. *European Journal of Humanities and Social Sciences* 10(1)

Akintoye, I. R., and Tashie, G. A. (2013). The effect of tax compliance on economic growth and development in *Nigeria, West-Africa.* British *Journal of Arts and Social Sciences,* 11 (2). ISSN: 2046-9578.

Anyafo, A. M. O. (1996). *Public finance in developing economy: The Nigeria case.* Department of Banking and Finance, University of Nigeria, Enugu Campus, Enugu.

Anyanwu, J. C. (1997). *Nigerian public finance.* Onitsha: Joanne educational publisher.

Appah, E. (2004). *Principles and Practice of Nigerian Taxation,* Ezevin Mint Printers and Publishers, Port Harcourt.

Asterious, D., and Hall, S. (2007). *Applied Econometrics: A Modern Approach.* London: Palgrave Macmillan.

Azubike, J. U. B. (2009). Challenge of Tax Authorities, Tax Payers in the Management of Tax Reform Processes. *Nigerian Accountant,* 42 (2), 36- 42.

Bhartia, H. L. (2009). *Public finance.* Vikas Publishing House PVT Ltd. New Delhi Accessed 28/06/10 from en.wikipedia.org/wiki/tax reform.

Chigbu E. E., Eze, A. L. and Ebimobowei, A. (2012). An Empirical Study on the Causality between Economic Growth and Taxation in Nigeria. *Current Research Journal of Economic Theory* 4(2): 29-38, 2012 ISSN: 2042-485X© Maxwell Scientific Organization Edame, G. E. and Okoi, W. W. (2014). The Impact of Taxation on Investment and Economic Development in Nigeria, *Academic Journal of Interdisciplinary Studies* MCSER Publishing, Rome-Italy Vol. 3 No.4

Ezeabasili, V.N. (2008). The macroeconomic effects of fiscal deficits in Nigeria 1970-2006. *An Unpublished (PhD) Doctoral Dissertation* in Banking and Finance Department of Nnamdi Azikiwe University, Awka, Anambra State, Nigeria, 156p,

Ezejelue, A. C. and Ihendinihu, J. U. (2006). *Personal Income Taxation in Nigeria.* Llins Consults Nigeria. Okigwe;

Feldstein, M. (2006). The Effect of Taxes on Efficiency and Growth. NBER Working Paper 12201. *National Bureau of Economic Research,* Cambridge, MA.

Gujarati, D.N. (2009). *Basic Econometrics.* 5th ed. McGraw Hill, New York

Ihendinihu, J. U., Jones, E., and Ibanichuka, E. A. (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 and Business Management (IFBM),* Vol. 2, No. 2, Pp 39-47, March-April,2014.

Johansen, A., Christopher, H., Jens, A., Bert, B., and Vartial, L. (2008). Tax and Economic Growth. *Economics Department Working Paper* No. 620. Organization for Economic Cooperation and Development, Paris, France.

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):532-539.

Myles, G. D. (2000). Taxation and Economic Growth. Fiscal Studies, 21(1): 141-168.

Myles, G. D. (2009a). Economic Growth and the Role of Taxation — Theory. *OECD Economics Department Working Paper No.* 713. Organisation for Economic Cooperation and Development, Paris, France. '

Myles, G. D. (2009b). Economic Growth and the Role of Taxation — Aggregate Data. *OECD Economics Department Working Paper* No. 714. Organisation for Economic Co-operation and Development, Paris, France.

Myles, G. D., (2009c). Economic Growth and the Role of Taxation — Disaggregate Data. *OECD Economics Department Working Paper* No. 715. Organisation for Economic Co-operation and Development, Paris, France.

Obadan, M. I. (2003). Foreign Capital Flows and External Debt: Perspective on Nigeria and the LDCs Group, Lagos, Broadway Press Limited. .■

Odusola, A. F. (2006). Tax Policy Reforms in Nigeria. *A Research Paper* No. 2006/03, United Nations University Series. UNU -WIDER- Word *Institute for Development Economic Research.* January. 1 43P.

OgbonnaG. N. and Appah, E. (2011). Impact of Tax Reforms and Economic Growth of Nigeria: A Time Series Analysis. *Current Research Journal of Social Sciences* 4(1): 62-68.

Okafor, R.G. (2012). The impact of tax reform in Nigeria's economic growth. *European Journal of Business and management,* 4 (19): 92-106.

Ola, C. S. (2001). Income Tax Law and Practice in Nigeria. Ibadan: Heinemann Educational Books Ltd, Nigeria. 31 OP.

Oloyede, I. O. (2010). Repositioning the Nigeria's Tax System: Suggested Policy Measures. *A Paper Presented at the Conference of the Association of African Universities.*

Onuoha, C. S. (2000). Fiscal Policy and Poverty Alleviation: The Nigerian Experience. *Port Harcourt Industrial Breads Limited* 250p

Osundina, C. K., and Olanrewaju, G. O. (2013). Welfare Effects of Taxation on the Nigerian Economy. *International Journal of Humanities and Social Science Invention.* 21 (98) 76-82.

Tosun, M. S. and Abizadeb, S. (2005). Economic Growth and Tax Components: An Analysis of Tax Change. *OECD Applied Economics,* 37:2251-2263, cited in Ogbonna and Appah (2012).

Ukeje. S. (2010). Lessons of the global financial and economic crisis for fiscal policy and public expenditure management in Nigeria (Ed). The Global Economic Crisis and Nigeria Enugu. *African Institute for Applied Economics,* 1-236P.

Worlu, C. N. and Nkoro, E. (2012). Tax Revenue and Economic Development in Nigeria: A Macro econometric Approach. *Academic Journal of Interdisciplinary Studies,* 1(2): v 211 -223.