



Effect of Tax Structure on Economic Growth in Nigeria

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ABSTRACT

This study covers the effect of tax structure on economic growth in Nigeria. The study made use of time series data from 1994 to 2016. Tax was disaggregated into value added tax, petroleum profit tax, personal income tax and company income tax. These tax components were regressed against gross domestic product which is a proxy for economic growth. The data generated were analyzed using descriptive statistics, stationarity test, cointegration test and ordinary least square. The study found that all the tax components studied (Value added tax revenue, personal income tax revenue, petroleum profit tax revenue and company income tax revenue) has significant effect on economic growth in Nigeria. The study contends that tax administrative loopholes should be plugged for tax revenue to contribute immensely to the development of the economy.

Key Words: Tax Structure, Economic Growth

INTRODUCTION

Every economy of the world needs revenue to develop and grow. 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 (Otu & Adejumo, 2013). Base on this, Umoru and Anyiwe (2013) noted that “the policy of taxation in Nigeria is directed towards achieving some specific objectives which include amongst others revenue generation and upholding economic growth”. Tax revenue is a core instrument in the hands of the government to fulfill expenditures and it helps in acquiring sustained growth targets. The nature of taxes can help predict a growth pattern (Romer & Romer, 2010). Musgrave and Musgrave (2004) maintained that the “economic effects of taxation include micro effects on the distribution of income and efficiency of resource use as well as macro effects on the level of capacity output, employment, prices and growth”. Government exists in order to effectively collect taxes from available economic resources and make use of same to create economic prosperity. The governments of developed countries like Canada, United States, Netherland, United Kingdom, who derive substantial revenue from Company Income tax, Value Added Tax, Import Duties and have used same to create prosperity (Appah, 2004). Thus, tax revenue can be used to influence or achieve macroeconomic stability. The tax system provides an opportunity for government to collect additional revenue besides other sources of income, which is needed in discharging its pressing obligations. A good system of tax also offers itself as one of the most effective means of mobilizing a nation's internal resources and it lends itself to creating enabling and conducive environment to the promotion of economic growth and development (Ogbonna, 2010).

The contribution of tax revenue in Nigeria has not met the expectations of Government. Government has equally expressed this disappointment and has accordingly vowed to expand the non-oil tax revenue (Festus and Samuel, 2007). The emergence of oil as a major tax revenue is one of the means a country's government devises in solving the economic problems of the country and to enhance government expenditure which is expected to be beneficial to the citizens of such country through the provision of social and economic infrastructures (Adereti et al 2011). But, the advent of the oil boom encouraged some laxity in the management of non-oil revenue sources like the company income tax and custom and excise

duties. This calls for an urgent need in the improvement of the tax system to enhance the evaluation of the performance and facilitate adequate macroeconomic planning and implementation (Adereti et al 2011). The empirical nexus between tax structure and economic growth has been a contentious issue especially in developing countries. The empirical literatures depict different and disaggregated findings. For instance, Otu and Adejumo (2013), Muriithi (2013), Umeora (2013), Nasiru, et al (2016), Apere and Durojaiye (2016), Enokela (2010), Ifurueze et al (2012), Gopar, Dalyop and Bezum (2016), Lababatu (2014) and Okoli, Njoku and Kaka (2014) indicated positive relationship between tax components and economic growth. On the other hand, a negative nexus was reported in the works of Njogu (2015), Ojong, Ogar and Oka (2016), Chigbu and Njoku (2015), Ehigiamusoe (2014), and Akhor and Ekundayo (2016). It remains unclear why empirical evidence in developing country like Nigeria often yield conflicting findings. These conflicting conclusions show that the effect of tax structure on economic growth is not yet resolved. The inconclusive evidence has made the issue of growth effect of taxation open to further research. The gap in terms of the period covered and methodology is also a contributory factor to the disparity in the outcomes of the effect of tax structure on economic growth. Following the aforementioned gap created by the earlier researchers in the light of mixed views in findings and conclusion reached by different researchers, this study will aim at filling the gap by introducing a profound and clearer variables and analysis on the effect of tax structure on economic growth in Nigeria. Also, the present study improves on the previous studies by updating the data to 2016 and by using a more robust statistical tool. Therefore, the purpose of this study is to examine critically the effect of tax components namely value added tax, personal income tax, petroleum profit tax, and company income tax and on economic growth in Nigeria proxied by gross domestic product. The study therefore hypothesized that the tax components has no significant effect on economic growth in Nigeria. Following this introduction is the review of related literature where conceptual issues, theoretical framework and empirical evidence were examined. Thereafter, the methodology, result, discussion of findings and conclusion were presented.

LITERATURE REVIEW

Tax and Tax Structure in Nigeria

Tax is a compulsory payment made by individuals and organizations to the government in accordance with predetermined criteria for which no direct or specific benefit is received by the tax payer (Bassey 2013). Chartered Institute of Taxation of Nigeria (2002) defined tax as an enforced contribution of money to government pursuant to a defined authorized legislation. Appah (2004) defined tax as 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”. In his own view, Bhartia (2009) argues that a “tax is a compulsory levy payable by an economic unit to the government without any corresponding entitlement to receive a definite and *direct quid pro quo* from the government”. Wikipedia defined tax as a “financial charge or other levy imposed upon a taxpayer (an individual or legal entity) by a state or the functional equivalent of a state such that failure to pay is punishable by law”. Going by the definition of tax, Nzotta (2007) identified four key issues which must be understood for taxation to play its functions in any society. First, a tax is a compulsory contribution made by the citizens to the government and this contribution is for general common use. Secondly, a tax imposes a general obligation on the tax payer. Thirdly, there is a presumption that the contribution to the public revenue made by the tax payer may not be equivalent to the benefits received. Finally, a tax is not imposed on a citizen by the government because it has rendered specific services to him or his family. Thus, it is evident that a good tax structure plays a multiple role in the process of economic development of any nation which Nigeria is not an exception (Appah, 2010).

Taxes can be structured into direct and indirect. There are different components of direct taxation. These include the personal income tax, petroleum profit tax, companies’ income tax, educational tax. The different prominent components of indirect taxation in Nigeria include, Value Added Tax and Custom and Excise Duty (Umoru & Anyiwe, 2013).

Value Added Tax: Ariyo (1998) defined value added tax as “a consumption tax levied at each stage of the consumption chain, and is borne by the final consumer”. It requires a taxable person upon registering

with the Federal Board of Inland Revenue to charge and collect VAT at a flat rate of 5% of all invoiced amounts of taxable goods and services. Umeora (2013) sees Value Added Tax (VAT) as a tax on estimated market value added to a product or service at each stage of its manufacture or distribution and the additions are ultimately added to and services bear the tax burden or the incidence because they cannot recover the tax paid on consumption of goods and services. VAT was introduced by The Federal Government of Nigeria in January, 1993. The rationale behind replacing the then sales tax with VAT was informed by the narrow tax base of the sales tax while VAT has a broader tax base.

Personal Income Tax: Personal income tax is a type of tax charged on the income of individual. The chargeable income of an individual is the aggregate amount from all sources (whether from employment, investment, profit from trade, profession or vocation etc) after deducting all non-taxable incomes and relief granted (Ogbonna & Appah, 2016). Personal income tax (PIT) according to Anyafo (1996) is a direct tax levied on income of a person. Lababatu (2014) defined personal income tax as a tax on the Pay As you Earn (PAYE) basis that is the tax payable depends on how much is earned by the tax payer.

Petroleum Profit Tax: Petroleum profit tax involves the charging of tax on the income accruing from petroleum operations (Ogbonna & Appah, 2016). Odusola (2006) sees petroleum profit tax as a tax applicable to upstream operations in the oil industry. Petroleum Profit Tax (PPT) is the tax imposed on companies which are engaged in the extraction and transportation of petroleum products. It is particularly related to rents, royalties, margins and profit-sharing elements associated with oil mining, prospecting and exploration leases (Ekeocha et al., 2012). Petroleum profit tax is a tax applicable to upstream operations in the oil industry as it is related to rent, royalties, margin, oil mining prospecting and exploration leases. It is the most important tax in Nigeria in terms of its share of total revenue, contributing over 70% of government revenue and 95% of foreign exchange earnings (Odusola, 2006).

Company Income Tax: Ogbonna and Appah (2016) defined companies income tax as a tax imposed on the profit of companies (excluding profit from companies engaged in petroleum operations) accruing in, derived from, brought into or received in Nigeria in respect of any trade or business, rent, premium, dividends, interest, royalties and any other source of annual profit. Chigbu and Njoku (2015) see that company income tax as a tax on the profit made by companies. It was introduced in Nigeria in 1961 and administered by the Federal Internal Revenue Services. Since enactment, the law on CIT has passed through series of amendment. The rate of CIT varies according to operation and size of turnover per annum.

Education Tax: This tax was introduced in 1993 to serve as a social obligation placed on all companies to ensure their contribution to developing educational facilities in the country to prevent education system from total collapse due to financial crisis that rocked the sector for years (Kizito, 2014). It is a sectorial tax imposed on the assessable profit of corporate bodies incorporated in Nigeria. The tax was established by Decree No 7 of 1993 as amended. The education tax revenue is to be used exclusively to upgrade educational infrastructures as well as augment the funding problem of education sector in Nigeria.

Custom and Excise Duties: The custom and excise duties are regulated by the Custom and Excise Management Act of 1990. The duty is chargeable on all goods and services imported into Nigeria. The tax is administered by the Nigeria Custom Services and is also referred to as import duties. Currently, the duties ranged between 2.5 percent to 100 percent depending on the product (Umoru & Anyiwe, 2013).

Economic Growth

Ayres and Warr (2006) define economic growth as 'a rise in the total output (goods or services) produced by a country'. It represents an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. Economic growth refers only to the quantity of goods and services produced. Economic growth can be measured in nominal terms including inflation, or in real terms, which are adjusted for inflation like by the percent rate of increase in the gross domestic product (GDP). Economic growth measures growth in monetary terms and looks at no other aspects of development (Illyas and Siddiqi, 2010). Economic growth can be either positive or negative. Negative growth can be referred to by saying that the economy is shrinking. Negative growth is associated with economic recession and economic depression (King and Levine, 1993).

Economic growth is a gradual and steady change in the long-run which comes about by a general increase in the rate of savings and population (Jhingan 2005). It has also been described as a positive change in the level of production of goods and services by a country over a certain period of time. Economic growth is measured by the increase in the amount of goods and services produced in a country. An economy is said to be growing when it increases its productive capacity which later yield more in production of more goods and services (Jhingan 2003). Economic growth is usually brought about by technological innovation and positive external forces. It is the yardstick for raising the standard of living of the people. It also implies reduction of inequalities of income distribution.

Theoretical Framework

This study was anchored on Endogenous Growth Model. According to endogenous growth theory, fiscal policy can affect both the level and growth rate of per capita output Barro (1990) and Barro and Sala-i - Martin (1992, 1995). They employed a Cobb- Douglas- type production function with government provided goods and services (g) as an input to show the positive effect of productive government spending and the adverse effects associated with direct taxes.

The production function, in per capita terms, can be given as follow,

$$Y = AK^{1-\alpha}g^\alpha \tag{2}$$

Where Y is per capita output, k is per capita private capital and A is a productivity factor. If the government balances its budget in each period by raising a proportional tax on output at rate (r) and indirect (lump- sum) taxes L, the government budget constraint can be expressed as,

$$ng + c = L + tny \tag{3}$$

Where n is the number of producers in the economy and C is government consumption, which is assumed unproductive, g is government goods and services, t is period and y is per capita output. Theoretically, a proportional tax on output affects private incentives to invest, but a lump sum tax does no. thus, if there is no investment then economy growth will be negatively affected.

The investigation of the relationship between direct tax and economic growth in Nigeria is anchored on the endogenous framework which advanced a dynamic steady growth state. Popularized by King and Rebelo (1990), the endogenous growth model contends that government policy, including taxation, can permanently increase per capital output with a high level of innovation. The economic implication of this model is that taxes and government spending can have consistent effect on output in both the short run and the long run. King and Rebelo (1990) show that in the endogenous growth theories, the stable growth rate of the Solow model is restructured by introduction of technology. Governments pursue reforms in tax and expenditure policies act as incentives to firms to venture into research and development and to invest in capital formation which yield external effects that benefits the rest of the economy. Therefore in the long-run, taxes have unrelenting effects on the economy. Higher direct taxes reduce personal income and discourage private investment and consumption, thereby impeding economic growth. Moreover, higher direct taxes create incentives for agents to engage in less productive and more lightly taxed activities, leading to lower rates of economic growth (Mendoza et al., 1997).

Empirical Studies

Akhor and Ekundayo (2016) examined the impact of indirect tax revenue on economic growth in Nigeria. The study uses value added tax revenue and custom and excise duty revenue as independent variables and economic growth was proxy with real gross domestic product as the dependent variable. The study employ secondary data collected from Central Bank of Nigeria statistical bulletin for the period covering 1993 to 2013 for the empirical analysis using the convenient sampling techniques. Error correction model regression was employed in analyzing the data. The result revealed that value added tax had a negative and significant impact on real gross domestic product. In the same vein, past custom and excise duty had a negative and weakly significant impact on real gross domestic product. The Error Correction Model (ECM (-1)) coefficient had a correct negative and statistically significant sign. This shows that short-run deviation can be quickly corrected. The Durbin-Watson positive value indicates the absence of autocorrelation in the model.

Ojong, Ogar and Oka (2016) examined the impact of tax revenue on economic growth: Evidence from Nigeria. The objectives of the study were; to examine the relationship between petroleum profit tax and the Nigeria economy, the impact of company income tax on the Nigerian economy and the effectiveness of non oil revenue on the Nigerian economy. Ordinary least square of multiple regression models was used to establish the relationship between dependent and independent variables. The finding revealed that there is a significant relationship between petroleum profit tax and the growth of the Nigeria economy. It showed that there is a significant relationship between non oil revenue and the growth of the Nigeria economy. The finding also revealed that there is no significant relationship between company income tax and the growth of the Nigeria economy.

Salami, Apelogun, Omidiya and Ojoye (2015) empirically investigated the impacts of taxation on the growth of the economy between 1981 to 2012. Gross Domestic Product (RGDP), is specified to depend on the taxation indicators which are the petroleum profit tax (PPT), company income tax (CIT), customs and excise duties (CED), value added tax (VAT). The study employed the use of both simple and multiple linear regression analysis of the ordinary least square method. These were used to determine the impact and relationship between the endogenous variable, RGDP, and the exogenous variables, PPT, CIT, CED and VAT. It was discovered that if all the exogenous variables were tested individually on the economic growth, they show a significant impact individual on economic. The F-statistic shows that the overall model is statistically significant.

Lababatu (2014) examined tax revenue and economic growth in Nigeria. The main objective of this study is to explore the relationship between taxation and economic in Nigeria. The study covered the period between 1981 to 2010. The study employed petroleum profit tax, company income tax, custom and excise duty and value added tax while gross domestic product was employed as the dependent. Multiple linear regression analysis was used to analyze the data by employing the use of Vector Error Correction Model. The findings reveal that petroleum profit tax, company income tax and value added tax have a positive impact on Nigeria's economic growth while custom excise and duties impacted negatively but overall, a significant relationship between tax revenue and the Nigeria economic growth exists. The study recommends that only skilled and professionals and trustworthy hands be responsible for tax administration.

Okoli, Njoku and Kaka (2014) examined taxation and economic growth in Nigeria using Granger causality approach. The study covered the period 1994-2012. Taxation was disaggregated into: Value Added Tax, Personal Income Tax, Company Income Tax and Petroleum Profit Tax, while the Gross Domestic Product was used as a parameter for measuring economic growth in Nigeria. The data collected were analyzed using the Granger Causality Approach and regression analysis. The results of the analysis reveal that a significant positive relationship exists between Taxation and economic growth in Nigeria. The study also found significant relationship between the disaggregated tax revenue (Value Added Tax, Personal Income Tax, Company Income Tax and Petroleum Profit Tax) and gross domestic product.

Chigbu and Njoku (2015) examined taxation and the Nigerian economy using time series data from 1994 to 2012. The dependent variables used in the model includes: Gross Domestic Product (GDP) as a parameter for measuring economic growth, inflation and unemployment. The objective of this study is to determine how taxation affects these macroeconomic variables. Ordinary least square analysis was employed to analyze the data. The results of the statistical analysis reveal that positive relationships exist between the explanatory variables (Custom and Excise Duties, Company Income Tax, Personal Income Tax, Petroleum profit tax and Value Added Tax) and the dependent Variables (Gross Domestic Product, Unemployment). But, the individual explanatory variables have not significantly contributed to the growth of the economy; also the explanatory variables have not significantly contributed to the reduction of the high rate unemployment and inflation in Nigeria for the period under review.

METHODOLOGY

The study adopted ex post facto research design. The data used for this study were collected from the Central Bank of Nigeria statistical Bulletin (2016) and Federal Inland Revenue Service (FIRS). The data is made up of Gross Domestic Product (GDP at current basic price) from Nigeria from 1994 to 2016

while the data for tax revenue covers the same period and captures revenues from petroleum profit tax, company income tax, value added tax, and personal income tax.

The model used in this study is a modification on the model of Okoli, Njoku and Kaka (2014), Ogbonna and Appah (2016) and Okafor (2012). The functional form of the model used in this study is specified as follows:

$$GDP = f(VATR, PITR, PPTR, CITR) \quad (1)$$

Where

GDP = Gross Domestic Product at Current Basic Price

VATR = Value Added Tax Revenue

PITR = Personal Income Tax Revenue

PPTR = Petroleum Profit Tax Revenue

CITR = Company Income Tax Revenue

From equation 1, the econometric form is stated thus:

$$GDP = b_0 + b_1VATR + b_2PITR + b_3PPTR + b_4CITR + \mu \quad (2)$$

Where

b_0 = Autonomous or intercept

b_1 = Coefficient of parameter VATR

b_2 = Coefficient of parameter PITR

b_3 = Coefficient of parameter PPTR

b_4 = Coefficient of parameter CITR

μ = Stochastic variable or error term

To linearize equation 3, we apply logarithm to equation 2 which gives:

$$LGDP = b_0 + b_1LVATR + b_2LPITR + b_3LPPTR + b_4LCITR + \mu \quad (3)$$

Where

LGDP = Log of Gross Domestic Product

LVATR = Log of Value Added Tax Revenue

LPITR = Log of Personal Income Tax Revenue

LPPTR = Log of Petroleum Profit Tax Revenue

LCITR = Log of Company Income Tax Revenue

Descriptive statistics, unit root tests, cointegration test and ordinary least square was employed in analyzing the data.

RESULTS

Descriptive Statistics

The result of the descriptive statistics is presented in the table below.

Table 1 Summary of the Descriptive Statistics

	GDP	VAT	PIT	PPT	CIT
Mean	3493828.	515233.4	556019.9	1394785.	241979.4
Median	2296998.	178100.0	253010.0	1256500.	140300.0
Maximum	10148949	1996205.	1933721.	3201000.	847500.0
Minimum	176280.0	7261.000	29453.00	42803.00	12275.00
Std. Dev.	3336374.	685612.8	634470.5	1136130.	242898.9
Jarque-Bera	2.796144	7.750673	5.598307	2.272489	4.615226
Probability	0.047073	0.020747	0.050862	0.021022	0.049498

Source: E-view Version 8.0

The result in table 1 provided some insight into the nature of the components of the tax revenue used in this study. The table shows that gross domestic product, value added tax, personal income tax, petroleum profit tax and company income tax recorded an average value of 3493828, 515233.4, 556019.9, 1394785 and 241979.4 respectively. Value added tax, personal income tax and company income tax recorded a standard deviation which is higher than their respective mean and this shows that these variables recorded fast growth within the period under study. This is also seen in the wide margins between their respective

maximum and minimum values. On the contrary, gross domestic product and petroleum profit tax recorded a standard deviation that is lower than their respective average and this implies that the two variables recorded slow growth within the period under review. Jarque-Bera statistics which measures whether the series is normally distributed shows that all the variables were statistically significant at 5%. This means that no variables with outlier, even if there are, they are not likely to distort the conclusion and are therefore reliable for drawing generalization.

Unit Root Test

The test for stationarity was done using Augmented Dickey-Fuller (ADF) tests on the data. The ADF tests are done on level series, first and second order differenced series.

Table 2 Summary of ADF Test Results

Variables	ADF Statistics	1% Critical Value	5% Critical Value	10% Critical Value	Order of Integration	Level of significance
GDP	-6.385530	-3.808546	-3.020686	-2.650413	1(2)	5%
VAT	-4.077954	-3.857386	-3.040391	-2.660551	1(1)	5%
PIT	-5.648685	-3.788030	-3.012363	-2.646119	1(1)	5%
PPT	-4.617086	-3.788030	-3.012363	-2.646119	1(1)	5%
CIT	-4.613896	-3.788030	-3.012363	-2.646119	1(1)	5%

Source: E-view 8.0

The ADF results in table 2 above shows that value added tax, personal income tax, petroleum profit tax and company income tax were differenced once to assume stationarity while gross domestic product were difference twice to assume stationarity.

Cointegration Test

Johansen cointegration test was employed to determine whether variables are cointegrated and will not produce a spurious regression. The result is presented and summarized in the tables below for Trace and Maximum Eigenvalue cointegration rank test respectively.

Table 3 Result of Johansen Multivariate Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.844590	81.83079	69.81889	0.0041
At most 1	0.607753	42.73538	47.85613	0.1391
At most 2	0.452605	23.08222	29.79707	0.2420
At most 3	0.310924	10.42794	15.49471	0.2492
At most 4	0.116766	2.607468	3.841466	0.1064

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.844590	39.09541	33.87687	0.0109
At most 1	0.607753	19.65316	27.58434	0.3656
At most 2	0.452605	12.65428	21.13162	0.4845
At most 3	0.310924	7.820469	14.26460	0.3972
At most 4	0.116766	2.607468	3.841466	0.1064

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: E-view 8.0

It can be seen from Tables 3 that both the trace statistic and the maximum- Eigen value statistic indicate the presence of one cointegration among the variables. This confirms the existence of a stable long-run relationship among economic growth (Y) as measured by real GDP, and value added tax revenue (VAT), personal income tax revenue (PIT), petroleum profit tax revenue PPT and company income tax revenue (CIT).

Regression Result

Ordinary Least Square was employed to measure the effect of tax structure on economic growth in Nigeria. The result obtained is presented in table 4 below

Table 4 OLS Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.271100	0.419615	7.795477	0.0000
LVAT	0.366742	0.124078	2.955753	0.0085
LPIT	0.236918	0.151265	2.566242	0.0047
LPPT	0.468139	0.047365	2.438610	0.0074
LCIT	0.240673	0.051990	4.629182	0.0002
R-squared	0.693772	Mean dependent var		14.44310
Adjusted R-squared	0.622388	S.D. dependent var		1.277400
S.E. of regression	0.111446	Akaike info criterion		1.360899
Sum squared resid	0.223563	Schwarz criterion		1.114052
Log likelihood	20.65033	Hannan-Quinn criter.		1.298817
F-statistic	718.0873	Durbin-Watson stat		1.941708
Prob(F-statistic)	0.000000			

Source: E-view 8.0

From table 4, it is observed that the regression line have a positive intercept as presented by the constant (c) = 3.271100 which is statistically significant at 0.05%. The regression result shows that value added tax has a positive coefficient of 0.366742 which is statistically significant at 5% level. This implies that a unit increase in value added tax will bring about 0.366742 increases in economic growth all things being equal. The table also shows that personal income tax has a positive and significant effect on gross domestic product. This implies that a unit increase in personal income tax will bring about 0.236918 increase in economic growth. On a similar note, petroleum profit tax and company income tax were each found to have a positive significant effect on gross domestic products. This implies that a unit increase in petroleum profit tax and company income tax will bring about 0.468139 and 0.240673 increase in economic growth respectively all thing being equal.

Table 4 also shows that r-square coefficient of 0.693772 which shows that the explanatory powers of the variables is high. This implies that 69.4% of the variations in economic growth are being accounted for or explained by the variations in value added tax, personal income tax, petroleum profit tax and company income tax within the period under review. While other variables not included in the model account for 30.6% of the variation in economic growth in Nigeria. The adjusted R² supports the claim of the R² with a value of 0.622388 indicating that 62.2% of the total variation in the dependent variable (economic growth) is explained by the independent variables (the regressors).

The F-statistic is instrumental in verifying the overall significance of an estimated model recorded a coefficient of 718.0873 with a probability value of 0.0000 which is statistically significant. In other words, independent variables have a joint significant effect on the dependent variable as specified in the model. Also, the Durbin-Watson (DW) statistics recorded a coefficient of 1.941708 and this implies that there is no autocorrelation since d* is approximately equal to two. Therefore, the variables in the model are not autocorrelated and that the model is reliable for predications.

DISCUSSION

The findings of this study clearly show that tax structure has a significant effect on economic growth within the period reviewed. It was found that value added tax revenue has a significant effect on economic growth in Nigeria. This agrees with the findings of Adereti et al (2011), Akhor et al (2016), Umeora (2013), Njogu (2015), Owolabi et al (2011) and Nasiru, et al (2016) that value added tax has significant effect on economic growth in Nigeria.

The study also found that personal income tax revenue has a significant effect on economic growth in Nigeria. This finding tallies with that of Okoli, et al (2014) that personal income tax has significant relationship with economic growth in Nigeria. This also agrees with the findings of Okafor (2012) and Ogbonna et al (2016) that personal income tax revenue has significant relationship with economic growth in Nigeria. This is contrary to the findings of Chigbu and Njoku (2015) that personal income tax has not significantly contributed to the growth of the economy.

The study further revealed that petroleum profit tax revenue has a significant effect on economic growth in Nigeria. This finding collaborates with the findings of Ebimobowe et al (2012), Ifurueze, et al (2012), Gopar, et al (2016), Ilaboya and Ofiafor (2014), Ojong, et al (2016), Salami, et al (2015) and Okoh, et al (2016) that petroleum profit tax has positive and significant relationship with economic growth.

Finally, the study revealed that company income tax revenue has a significant effect on economic growth in Nigeria. This correlates with the findings of Okafor (2012) that company tax revenue has positive and significant relationship with economic growth. This also agrees with the findings of Adegbe et al (2011) whose study found a significant relationship between company income tax and Nigerian economic development. The results of Ibanichuka, et al(2016), Adegbite (2015), Ojong, et al (2016) and Etale et al (2016) showed similar trend.

One explanation for these significant relationship between the components of tax structure and economic is that government has implemented strategic reforms in the tax system to improve the revenue generating capacity of the different tax components.

CONCLUSION

The study concludes that tax structure has a positive significant effect on economic growth in Nigeria within the review period. The implication of the findings is pointing majorly at policy makers, especially the Federal Board of Inland Revenue as all the variables studies shows a positively significant relationship with economic growth, meaning that there should be no area in tax collection that should be taken lightly as they have all proven to have a major effect on economic growth in Nigeria. The major contribution made by this study is it showed that tax structure has a significant positive effect on economic growth thereby reaffirming the previous studies that reported positive relationship between tax structure and economic growth.

The study therefore recommends that tax administrative loopholes should be plugged for tax revenue to contribute immensely to the development of the economy since main components of tax revenue studies had a significant impact on economic growth. Similarly, government should embark on policies and programmes that will enhance the level of income of the citizens so as to raise the consumption level of the people with a view to accelerating investment, employment, output, and ultimately value added tax revenue.

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