

IMPACT OF TAX REVENUE ON ECONOMIC PERFORMANCE OF NIGERIA

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Abstract: The study empirically examines the impact of tax revenue on economic performance of Nigeria. It considered the two major categories of taxes which are direct and indirect taxes, and the study focused on the various types of taxes collected by the federal, state and local governments. The secondary data – projected taxation values and tax revenue for the period 2001 to 2018 were obtained from the Central Bank of Nigeria Statistical Bulletin. The Ordinary Least Square (OLS) statistical technique was adopted in the analysis of the data using the simple regression model via the STATA 13.0 software. The analyses were done in sections: descriptive statistics (mean, standard deviation, minimum and maximum values, normality test (skewness, kurtosis, and Jarque-Bera), ordinary least square regression estimates analysed and interpreted include regression coefficients, r-squared (R^2), adjusted r-squared, f-test, and t-test). The study has depicted on general note that tax revenue has impacted positively on economic performance of Nigeria, though, two of the taxes, namely value added tax (VAT) and customs and excise duties (CED) have significant impact on gross domestic product but negative relationship, while company income tax (CIT) and petroleum profit tax (PPT) did not show significant impact but depicted positive correlation. The import of this revelation is that more attention needs to be paid on indirect taxes in order to make them have the desired positive impact on economic performance of Nigeria. Well-equipped database on tax payers should be established by Government at all levels with the aim of identifying all possible sources of income of tax payers for tax purpose, for a better tax administration, adequate machinery should be put in place and strengthened, the level of the deterrent punishment should also be made stricter and there should be continuous education for the citizens on the importance of tax payment and the problems attached to non-performance of their civil obligations.

Keywords: Tax Revenue, Economic Performance, tax administration, Nigeria.

1. INTRODUCTION

Taxation is not a new concept in Nigeria and the globe in general. Taxation has been in existence in Nigeria even before the coming of the colonial men or the British. Tax can be defined as the system of imposing a compulsory levy on all incomes (from goods, services, and properties of individuals, partnerships, trustees, executors, and companies by the government (Samuel and Simon, 2011; Yunusa, 2013). Income tax is one of the significant sources of income for all governments, and it is a factor to be figured within the Federal Government's budget, with the taxes so collected come back to the taxpayer in the form of services in Nigeria, and has over the years encouraged or discouraged some undertakings in the private sector; though, this depends on whether the strategy of the government is towards discouraging or encouraging such companies (Ola, 2009).

Taxation is recognized as a valuable tool for national development and growth in most societies. It is viewed as a major vehicle for the longterm development of infrastructures of the nation. The fluctuation in the oil price in recent years has led to a decrease in the funds available for distribution to the Central, state, and the Local Governments. The need for lower tiers of governments to generate adequate income from internal sources has become a matter of extreme resolution and significance. This need highlights the eagerness on the part of state and local governments and even the central

government to look for new sources of revenue or to become hostile and innovative in the mode of collecting income from existing sources (Aimurie, 2012). People with loss of income caused by widespread tax evasion and tax avoidance in Nigeria is due to inefficient and inept tax administration. Omorogiuwa (2001) has opined that ineffective tax administration is the main factor responsible for large scale tax evasion in Nigeria. Philips (1973) validated this view when he stated that tax evasion is due principally to administrative ineffectiveness.

Aguolu (2014) stated that though taxation may not be the most crucial source of revenue to the government in respect of the magnitude of income derivable from tax, however, tax is the most vital source of income to the government, from the submissions of certainty, and consistency principles of taxation. That is, the inherent power of the authority to impose taxes, the government is assured at all times of its tax returns no matter the circumstances. Over the years, income resulting from taxes has been inadequate, and no physical development actually took place; hence the impact on the poor is not being felt. Thus, this study aimed at investigating the effect of tax revenue on economic performance in Nigeria during the period 2001-2018 but specifically to evaluate the contribution of Value Added Tax (VAT), Company Income Tax (CIT), Petroleum Income Tax (PPT) and Customs and Excise Duties (CED) on economic performance of Nigeria. The study will provide residents, knowledge on the importance of taxation in Nigeria and on the effective utilization of taxation to promote fiscal redistribution of income as well as effective means of generating revenue for the government owing to the decline in the prices of oil which has to be the mainstay of the Nigeria economy over the years.

2. REVIEW OF RELATED LITERATURE

This fragment of the article deals with the analysis of related literature, which encompasses the conceptual, theoretical and empirical framework of the study.

2.1 Conceptual framework

The Concept of Taxation

Taxation as an unavoidable payment made by individuals and organizations to relevant Inland Revenue authorities at the federal, state or local government level (Anyafu, 1996). Tobansi-Ochiogu (1994) sees taxation as a levy imposed by the government against the income, profit or wealth of the individual, partnership, corporate organization.

Ola (2009) defined taxation as a compulsory levy levied on a subject or upon his assets by the government to provide security, social amenities, and create conditions for the economic well-being of humanity. An exact definition of taxation by Farayola (1987) and Okon (1997) is that taxation is one of the sources of income for the government, such income as used to finance or run public utilities and perform other social responsibilities. According to Adams (2001), taxation is the most crucial source of revenue for modern authority, typically accounting for ninety percent or more of their income. Taxes are classified into direct and indirect.

Yunusa (2013) and Aguolu (2014) defined direct taxes as taxes levied on the income of an individual, groups of individuals, and business firms and are paid directly by the person or persons on which the tax authority legally imposes it. Personal Income Tax (PIT), Company Income Tax (CIT), Capital Gain Tax (CGT), Petroleum Profit Tax (PT), and Capital Transfer Tax (CTT) are classes of direct taxes.

Taxes levied on expenditure (goods and services) are classified as indirect taxes in Nigeria. These taxes are paid as part of the payment for products and services procured by the ultimate consumers. The third party usually bears the incidences of direct taxes. Import duties, Export duties, Custom and Excise duties, and Value Added Tax are common examples of indirect taxes in Nigeria.

Tax edifice in the various developing nations differs widely; the objectives of taxation in these countries are virtually the same. Unfortunately, however, the purposes of the tax system and the relationship between these objectives are hardly clearly stated (Cutt, 1969), and this does not only make tax administration and revenue generation through taxation difficult; but also gives room for tax evasion with the attendant effects on economic performance.

2.2 Theoretical Framework

Taxation is a product of theorists. The theoretical framework of this study is premised on several theories because no single philosophy can entirely explain the ontology and epistemology of the variables (direct and indirect taxes) under study: the Laffer theory by Professor Arthur Laffer, popularly known as the "Laffer Curve," the Ibn Khaldun taxation theory and fiscal adequacy or productivity theory.

Laffer theory

Laffer theory is a theoretical picture of the connection between government returns raised by levies and all possible rates of taxation. This theory is demonstrated with a curve (i.e Laffer Curve which is constructed by through experiment). It considered the amount of tax revenue raised at the extreme tax rates of 0% and 100%. The theory concludes that a 100% tax rate raises no revenue in the same way that a 0% tax rate raises no revenue, and this is because at 100% rate, there is no more extended incentive for a rational taxpayer to receive any income. Thus, the revenue raised will be 100% of nothing. It, therefore, follows that there must exist at least one rate in between where tax revenue would be a maximum. One potential result of the theory is that growing the tax rate further than a certain point will become counterproductive for raising further tax revenue because of diminishing returns (Laffer, 2004).

IBN Khaldun Theory

This theory was explained in terms of two different effects that is the arithmetic effect and the economic effect which the tax rates have on revenues. In a situation where rates are increased or decreased, the two effects will have opposite results in income. The Arithmetic effect of the tax is that, if rates are lowered, tax returns will be dropped by the amount of the decrease in the rate and vice versa for the increase in tax rates. The economic effect, however, recognized the positive impact that lower tax rates have on work, output and employment and thereby the tax rate base used in providing incentives to increase these activities whereas raising tax rates here the opposite economic effect is used by penalizing participation in the taxed activities. At a very high tax rate, negative economic effect dominates the positive arithmetic effect, thereby, the tax revenue declines (Islahi, 2006).

Fiscal Adequacy or Productivity Theory

Economic adequacy or productivity theory implies that a tax should yield sufficient revenue to cover the government expenditure; otherwise, the government will be in deficit when its cost exceeds the income realized from tax. A tax should not have adverse effects on the economic progress of the country and should not also restrain trade and industry. Any tax that discourages people from working, saving, investing and entangles production is uneconomical and counter-productive. Meaning, heavy tax on raw materials and spare parts will increase the cost of production and affect the quality and quantity of output and this is not of the whole interest of the economy of a nation whereas, faculty theory also referred to as ability to pay dictates that every taxpayer should be taxed according to his ability to pay. It implies that those who are better-off should pay heavily and vice versa irrespective of whether or not they benefit more from government expenditure. This theory ensures justice and equity in taxation because people with equal abilities to pay the same amount of tax (horizontal equity) and people with different skills to pay should pay a different amount of tax. That is, people with less ability should pay less tax than those with a greater ability (vertical equity).

2.3 Review of Empirical Studies

Dennis and Okoye (2014) scrutinized the impact of taxation on revenue generation in Nigeria, with reference to FCT and some selected states in the country. Secondary data was employed in highlighting the concepts, theories and empirical works of literature related to the study. Primary data was also adopted to present and evaluate the information under investigation. With the aid of SPSS version 17.0, the data was analyzed through regression analysis. The researchers find out among others that taxation has significantly contributed to revenue generation. The study recommends alongside others that Well Equipped DataBase (WEDB) on all taxpayers should be established by the three tiers of Government with the basic aim of identifying all possible sources of income of taxpayers for tax purposes, the tax collection processes must be free from corruption. Finally, the Federal, States and Local Governments should urgently fully remodel and automate all its tax system, advance taxpayers' convenience in the assessment and payment processes while embedding operative and modern human resources management practice in the tax authorities.

Michael and Ben (2007) investigated the causes and consequences of the spread of value-added tax (VAT) via a panel study of 143 countries for 25 years. The result shows that VAT has a substantial but mixed impact. It implies that from the adoption of VAT, some nation-states would have gained revenue while others would not. The adoption of VAT had a long-run increase in overall revenue to GDP ratio of about 4.5 percent collectively. Though, allowing the impact of VAT to vary with country specifics will shift the effect to become negative while acting in the opposite direction are gains that tend to be greater in higher income and more open economies.

Osoro (2003) examined the revenue productivity implications of VAT reforms in Tanzania. Double log form equation and tax revenue elasticity were utilized in estimating tax buoyancy via the proportional adjustment method. The idea for the

use of proportional method was that a series of discretionary changes had taken place during the sample period, 1979 to 1989, making the use of fictitious variable technique challenging to apply. For the study period, the overall elasticity was 0.76, with a buoyancy of 1.06. The study concludes that the tax reforms in Tanzania had failed to raise tax revenues. These results were attributed to the government granting numerous tax exemptions and poor tax administration.

Denis (2010) examined the bond between VAT and Gross Domestic Product (GDP) in Nigeria. The study finds that VAT is not as effective as a revenue earner. It implies that significant parts of GDP which represent aggregate national income, as well as aggregate national expenditure, are not collected as tax. Wildford and Wildford (2008) explore income-elasticity and buoyancy of VAT returns in Central America for the period 1955 to 1974, via exponential tax revenue function. The study finds that income elasticity of the tax revenue was less than unity. Meaning, the tax structure was stable; and therefore, tax revenue grew less than proportionately in response to income growth.

Saeed, Ahmad, and Zaman (2012) researched the revenue effect of the value-added tax (VAT) in the SAARC region by utilizing panel data of SAARC countries from 1995 to 2010 on various macroeconomic elements to regulate the effect of VAT on revenue ratio. The results show a thriving set of determinants of VAT adoption as it proves to be a dynamic mechanism to collect tax and boost revenue ratio. The result reveals that most of the SARRC countries that adopted value-added tax have gained a reasonable, effective tax instrument to upgrade their GDP to revenue ratio. On the same premises, Zaman, Okasha, and Iqbal (2012) examine the impact of value-added tax on Pakistan's economy. The study adopted household survey data to grasp the effect of value-added tax on the social and economic life of the populace. Results show that VAT would interrupt the economic order of society.

Milambo (2001) used the Divisia Index method to study the revenue productivity of the Zambian VAT structure for the period 1981 to 1999. The results showed elasticity of 1.15 and buoyancy of 2.0, which confirmed that VAT reforms had improved the revenue productivity of the overall tax system. Conversely, the results were not dependable because time trends were used as proxies for discretionary changes, and it was the study's major weakness. Salti and Chabaan (2010) explored the effect of an increasing rate of VAT by targeting poverty and inequality. To study the impact, a scientific model based on consumer theory of demand was established. Simulation results show that the increased rate of VAT would have a significant negative impact on poverty. Even though the increased rate would have a negative impact on overall consumption, its effect on the poor is higher compared to the rich.

Adereti, Sanni, and Adesina (2011) investigated the contribution of VAT to GDP in Nigeria. Their findings show that VAT revenue to total tax revenue averaged 12.4% which the study considered low compared to other African countries such as Ivory Coast, Kenya and Senegal that had 30%. Another observation was that a positive and significant correlation between VAT and GDP exists. Smith, Islam and Moniruzzaman (2011) attempt to analyze the contribution and performance of VAT in Bangladesh compared to other developing countries. The result shows that the performance of VAT was quite satisfactory in the initial years; VAT collection remained stationary at a certain level. The study finds that a small number of VAT payers, a general lack of awareness, and a weak monitoring system caused stagnation.

Luthuanian, Bikas, and Rashkauskas (2011) studied the impact of VAT standard tariffs, reduced tariffs and shadow economy on income from this tax. The Lithuanian VAT structure, the dynamics of revenue from this tax and amendments in the Law on Value Added Tax in terms of narrowing and widening the taxable base according to the theoretical analysis of the sources were analyzed using multiple regression, correlation, and optimization and Cost-effectiveness ratio analysis. The report reveals that the amendments in the Law on Value Added Tax in terms of narrowing and widening the taxable base has influenced the amount of income from VAT collected to the budget. Samimi and Abdolahi (2011) scan the impact of implementing Value Added Tax on the Export of goods and services in selected countries. Four different indices for export; export of goods and services, the export of goods and services (BOP), export of goods and services (annual % growth), export of goods and services (% of GDP) to investigate the sensitivity to different definitions. Findings of the study based on the Mean Difference Statistical Test in a two-three year period before and after the introduction of VAT show that, in various indices, the impact of VAT on export is positive.

Jina, Lawrence, and Benzum (2016) examined the causal affiliation between petroleum profits tax and economic growth in Nigeria over the years 1999 to 2015. Relevant data on the real gross domestic product, petroleum profits tax, companies' income tax and value-added tax were collected from the Central Bank of Nigeria Statistical Bulletin, 2015 edition, the Annual Report and Accounts of the CBN, for 2014. The econometric technique of ordinary least squares (OLS) was used to estimate the regression line, the Correlogram Q Statistic was used to test for stationarity of the variables, the Johansen Cointegration test was used to establish any long-run relationship among the variables of the

research, and the granger causality test was used to determine the nature and direction of causality between petroleum profits tax and economic growth in Nigeria over the relevant years. The study ascertained that petroleum profits tax has a significant positive relationship with economic growth, but does not granger cause economic growth over the years under consideration. The study recommends among other things that, Government should diversify the economy and improve the economic environment to boost commerce and business which can expand the tax base available to it.

Gbegi, Adebisi and Bodunde (2017) investigated the effect of petroleum profit tax (PPT) on Profitability of oil and gas firms in Nigeria. Secondary data were obtained from financial statement of ten (10) selected oil and gas firm covering the period of 2011 to 2015. Panel data was deployed and both descriptive statistics and multiple regressions technique were utilised to establish the effect of PPT rate on Profitability oil and gas firms. Petroleum profit tax was found to have significant effects on the Profitability of oil and gas firms with the Adjusted R² of 95%. The study revealed that taxes paid by oil and gas industries have a downward effect on profitability of oil and gas industries. The study concludes that higher tax rate causes reduction in profitability of oil and gas firms in Nigeria between 2011 and 2015; and recommends that Government should reduce the tax rate to enable oil and gas firms strive especially during the economic recession period.

Onaolapo, Fasina and Adegbite (2013) empirically scrutinized the effect of petroleum profit tax (PPT) on Nigeria economy. Secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1970 to 2010. Multiple regressions were used to analyze data on variables such as Gross Domestic Product (GDP), petroleum profit tax, inflation, and exchange rate were all found to have significant effects on the Economics Growth with the Adjusted R² of 86.3%. The study concludes that the abundance of petroleum and its associated income has been beneficial to the Nigerian economy for the period 1970 to 2010. Income from the country's natural resources has a positive influence on economic growth and development. And recommends that the Government should transparently and judiciously account for the revenue it generates through PPT by investing in the provision of infrastructure and public goods and services, and this implies that the more effectively and efficiently revenue is utilized by Government to create growth, employment opportunities and wealth in the economy, the more willing taxpayers would be to meet their obligations to the Government and discharge their duties to achieve the economic objective of the nation.

Ogbonna and Ebimobowei (2012) positively studied the impact of petroleum revenue and petroleum profit tax on the economy of Nigeria from a period of 1970 to 2009 and it was observed that petroleum revenue positively affects the gross domestic product (GDP) and per capita income of Nigeria. The results of the investigation showed that is a negative relationship between petroleum revenue and inflation rate. The researchers opined that, since petroleum revenue contributes to the gross domestic product and per capita income of Nigeria, they should be properly managed and utilized to ensure long term growth and development of Nigeria's economy.

Inyiama and Ubesie (2016) empirically examined the effect of Value Added Tax and Customs and Excise Duties on Nigeria Economic Growth. Secondary sources were explored in data gathering while simple regression technique was employed in data analysis for test of the study hypotheses, and correlation analysis was applied in the assessment of the relationship between the non-oil revenue sources and Nigeria Gross Domestic Product. The outcome reveals that all the non-oil tax revenue affects Nigeria Gross Domestic Product. On the side of the relationship among the variables studied, the strength of their relationship was very high for all the variables. The study concludes that Value Added Tax and Customs and Excise Duties are some of the major contributors to Nigeria Gross Domestic Product. The revenue sources could be used to envisage the value and status of the nations' Gross Domestic Product as indicated by the strength of the relationship between the variables and recommends that the three tiers of government should finance a reasonable proportion of the nation's capital and recurrent budget through non-oil tax revenue.

Ayuba (2014) studied the impact of non-oil tax revenue on economic growth from 1993 to 2012 in Nigeria. Central Bank of Nigeria (CBN) 2012 was the primary source of time series secondary data employed for the analysis, using the ordinary least square (OLS) regression method. A positive impact of non-oil tax revenue on the economic growth in Nigeria was ascertained in the study. Ebiringa and Emeh (2012) empirically scrutinized the effect of different taxes on the economic growth in Nigeria, using a period of 1985-2011. Results showed that customs and excise duties were negatively related to the gross domestic product (GDP) which implies that an inverse bond existed between customs and excise duties and economic growth in Nigeria. Salami, Apelogun, Omidiya and Ojoye (2015) investigated the impact of taxation on the growth of the Nigerian economy from 1976-2006. The study utilized both simple and multiple linear regression analysis in the form of the ordinary least square method to analyze the variables under scrutiny. The fundamental objective was to determine the impact of the exogenous variables, PPT, CIT, CED and VAT on the endogenous variable, RGDP. All the exogenous variables had a significant effect on the economy within the period.

3. METHODOLOGY

The research methodology provides details on the design and methods applied in the study. It provides discussions on the methods adopted in carrying out the survey. It also contains reviews on the various sources and means through which the data for this study were acquired, the techniques used in the analysis of such data and the justification for the methods and techniques.

The research design adopted was the ex-post facto research design. This design was employed because it seeks to establish the factors that are associated with certain occurrences or types of behaviour by analyzing past events of an already existing condition. Here, the researcher has no control over certain factors or variables as the events already exist and can neither be manipulated.

The population of the study refers to the totality of all the elements or variables under study from which the researcher draws his sample. The study population comprised all the states of the federation and the federal capital territory of Nigeria.

The data collection method emanated from secondary data. The secondary data – projected taxation values and tax revenue for the period 2001 to 2018 were obtained from the Central Bank of Nigeria Statistical Bulletin. These data have been deemed valid by standard and recognized bodies that regulate the Nigerian economy. That is the data sourced comprise GDP, Value Added Tax revenue, Petroleum Profit Tax revenue, Companies, and Income Tax revenue and Customs and Excise Duties revenue.

3.1 Model Specification

To test the hypotheses of the study and to examine the relationship between taxation and economic performance, the functional relationship (model) is expressed as:

$$GDP = f(VAT, CIT, PPT, CED) \dots\dots\dots (1)$$

The above functional relationship is econometrically stated as:

$$GDP_{it} = \alpha_{it} + \beta_1 VAT_{it} + \beta_2 CIT_{it} + \beta_3 PPT_{it} + \beta_4 CED_{it} + \varepsilon_{it} \dots\dots\dots (2)$$

The variables of the above model are defined as follows:

GDP_{it} = Gross Domestic Product as a proxy for Economic performance at time t,

VAT_{it} = Value Added Tax of Nigeria in time/year t,

CIT_{it} = Company Income Tax of Nigeria in time/year t,

PPT_{it} = Petroleum Profit Tax of Nigeria in time/year t,

CED_{it} = Customs and Excise Duties of Nigeria in time/year t,

β_1, β_4 = Coefficient of the explanatory variable

ε_{it} = Error term.

α_{it} = Constant/intercept

The study period is 2001-2018 (i.e. a period of 18 years).

Apriori expectation

The study expects the relationship between the dependent and each of the independent variables to be positive. This is expressed as $\beta_1 \dots \beta_4 > 0$

3.2 Method of Data Analysis

The Ordinary Least Square (OLS) statistical technique was adopted in the analysis of data using the simple regression model. The analyses were done in sections: descriptive statistics (mean, standard deviation, minimum and maximum values, normality test (skewness, kurtosis, and Jarque-Bera), ordinary least squares regression estimates analyzed and interpreted, which include regression coefficients, r-squared (R^2), adjusted r-squared, f-test, t-test and DW test). The analysis was done via the STATA 13.0 software.

4. DATA PRESENTATION AND ANALYSIS

In an attempt to provide answers to the propositions highlighted in this research, this section, therefore, presents the secondary data collected from the Central Bank of Nigeria statistical bulletin for the sample in Nigeria. The presentation of the results is divided into parts in order of precedence: First, we presented the descriptive statistics analysis; secondly, we presented the simple regression, third the results utilized in testing the hypotheses. The study used annual data for each of the variables for the period 2001 to 2018.

4.1 Descriptive statistics

Table 1 shows the univariate presentation of the summary statistics.

Table 1 Descriptive Statistics

	GDP	VAT	CIT	PPT	CED
	N'bn	N'bn	N'bn	N'bn	N'bn
Mean	7755116	293.0136	517.9723	1700.17	114415.4
Median	29389.5	213.695	172.3274	1029.513	174150.0
Maximum	69799942	1100.45	2512.31	6530.63	241400.0
Minimum	6895.200	44.91000	41.2085	50.4078	1.308500
Std. Dev.	200.2307	298.7837	738.4847	1770.102	106753.7
Skewness	2.475052	1.73168	1.690257	1.645752	-.1436457
Kurtosis	7.127545	5.125149	4.443233	4.807386	1.120513
Jarque-Bera	102.9508	1.795337	9.956324	12.88886	2.446627
Probability	0.000000	0.4230501	0.0077448	0.001839	0.307424
Sum	1328126.7	5274.244	9323.502	30603.05	2059478
Sum Sq. Dev.	5264574	70.424	174.0625	417.217	25162.09
Observations	18	18	18	18	18

Source: STATA, 13.0 Output 2020

The descriptive statistics on the above table show that GDP has a mean value of N7,755,116 million with maximum and minimum values of N69,799,942 million and N6,895.2 million respectively. The standard deviation was N200.2307 million, indicating the amount by which gross domestic product has deviated from the mean value over the period under study. The Jarque-Bera statistic shows that it is not normally distributed with a probability of 0.000, while the skewness indicates that it is positively skewed with a coefficient of 2.47. Value Added Tax depicts a mean value of N293.0136 million with maximum and minimum values of N69,799,942million and N44.91 million respectively. The standard deviation was N298.7837 million. The Jarque-Bera statistic shows that VAT is normally distributed with a probability of 0.4230501. Company Income Tax has a mean value of N517.9723million with maximum and minimum values of N2512.31 million and N41.2085 million, respectively. The standard deviation was N738.4847 million. The Jarque-Bera statistic shows that CIT is not normally distributed with a probability of 0.0077448, while the skewness indicates that it is positively skewed with a coefficient 1.690257. Petroleum Profit Tax has a mean value of N1700.17million with maximum and minimum values of N6530.63 million and N50.4078 million, respectively. The standard deviation was N1770.102 million. The Jarque-Bera statistic shows that PPT is not normally distributed with a probability of 0.001839, while the skewness indicates that it is positively skewed with a coefficient of 1.645752. Customs and Excise Duty has a mean value of N114415.4 million with maximum and minimum values of N241,400.0 million and N1.308500 million, respectively. The standard deviation was N106753.7 million. The Jarque-Bera statistic shows that CED is normally distributed with a probability of 0.307424.

4.2 Ordinary Least Squares (OLS) regression results

Table 2 shows the results of the level series OLS estimation.

Table 2: Level series OLS estimation results

Source	SS	df	MS	Number of obs = 18		
Model	7.5015e+15	4	1.8754e+15	F(4, 13) =	24.89	
Residual	9.7950e+14	13	7.5346e+13	Prob > F =	0.0000	
				R-squared =	0.8845	
				Adj R-squared =	0.8490	
Total	8.4810e+15	17	4.9888e+14	Root MSE =	8.7e+06	

gdp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
vat	86750.67	10364.02	8.37	0.000	64360.57	109140.8
cit	-7342.865	8860.644	-0.83	0.422	-26485.12	11799.39
ppt	643.3948	3996.662	0.16	0.875	-7990.868	9277.658
ced	73.49845	32.60352	2.25	0.042	3.062839	143.9341
_cons	-2.34e+07	5430895	-4.30	0.001	-3.51e+07	-1.16e+07

Source: STATA 13.0 output 2020

The results indicate that VAT has a positive coefficient of 86750.67, CIT -7342.865, PPT 643.3948, and CED 73.49845, meaning that only company income tax has a negative impact on economic growth. That an increase in CIT leads to a decrease in the gross domestic product, and vice versa, while an increase in VAT, PPT and CED lead to an increase in gross domestic product. The above relationship can be expressed in the model as follows:

$$\text{GDP} = 2.34\text{e}+07 + 86750.67\text{VAT} - 7342.865\text{CIT} + 643.3948\text{PPT} + 73.49845\text{CED}$$

Test of hypotheses

Based on the analysis above, the formulated hypotheses are tested below:

Hypothesis I

H₀: Value Added Tax has no significant contribution towards economic performance of Nigeria.

The results on table 2 show that VAT has a t-statistic of 8.37 with a p-value of 0.0000. Since the p-value of less than 5 percent, we reject the null hypothesis and conclude that value-added tax has a significant impact on the economic performance of Nigeria.

Hypothesis II

H₀: There is no significant relationship between the Company Income Tax and the economic performance of Nigeria.

Table 2 shows that CIT has a t-statistic of -0.83 with a p-value of 0.422, it means that we cannot reject the null hypothesis, but accept it and conclude that company income tax does not have a significant impact on the economic performance of Nigeria.

Hypothesis III

H₀: Petroleum Income Tax has not contributed significantly to the economic performance of Nigeria.

The results in table 2 show that PPT has a t-statistic of 0.16 with a p-value of 0.875. Since the p-value is greater than 5 percent, the null hypothesis cannot be rejected but accepted. The study, therefore, concludes that the petroleum profit tax has not contributed significantly to the economic performance of Nigeria.

Hypothesis IV

Ho: The economic performance of Nigeria does not respond significantly to stimulation from Customs and Excise Duties.

CED has a t-statistic of 2.25 with a p-value of 0.042 in table 2. The null hypothesis is therefore rejected since the p-value is less than 5 percent. It is therefore concluded that the economic performance of Nigeria has responded significantly to stimulation from customs and excise duties.

Overall, the r-squared is 0.88 which means that all the taxes (the explanatory variables) taken together, account for 88percent of changes in gross domestic product (the dependent variable), Also, the f-statistic is 24.89 with a p-value of 0.0000, which is significant. This means that even though, some of the explanatory variables, individually do not significantly impact on the gross domestic product, all the tax taken together, have a significant impact on gross domestic product.

Discussion of findings

The study was set out to investigate the impact of tax revenue on economic performance of Nigeria for the period 2001 to 2018. The tax revenues include value added tax (VAT), company income tax (CIT), petroleum profits tax (PPT), and custom and excise duties (CED), which were also used as the explanatory variables; while, economic performance was proxied by gross domestic product (GDP). The results reveal that three (VAT, CIT, and CED) out of the four tax revenue sources have a negative relationship with economic performance.

The study also revealed that two of the taxes, namely value added tax and customs and excise duties, respectively, have significant impact on gross domestic product, while company income tax and petroleum profit tax, respectively did not have significant impact. The import of this revelation is that more attention needs to be paid on indirect taxes in order to make them have the desired positive impact on economic performance. However, the overall result indicates that tax revenue, taken as a whole – that is, from all the sources, has a significant impact on economic performance in Nigeria. This finding corroborates the works of many earlier researchers such as Enejo and Tyokoso (2014), Dennis and Okoye (2014), etc.

5. CONCLUSION/RECOMMENDATION

The study was set out to examine the impact of tax revenues on economic performance of Nigeria. It considered the two major categories of taxes which are direct and indirect taxes, and the study focused on the various types of taxes collected by the federal, state and local governments. The study has depicted on general note that tax revenue has impacted positively on economic performance of Nigeria, though, two of the taxes, namely value added tax (VAT) and customs and excise duties (CED) have significant impact on gross domestic product but negative relationship, while company income tax (CIT) and petroleum profit tax (PPT) did not show significant impact but depicted positive correlation. The import of this revelation is that more attention needs to be paid to indirect taxes in order to make them have the desired positive impact on economic performance of Nigeria.

Other recommendations are that, well equipped database on tax payers should be established by the Federal, State and Local Governments with the aim of identifying all possible sources of income of tax payers for tax purpose, the tax collection processes must be free from corruption and embezzlement and stringent penalties should be meted by the tax authorities to people who evade and avoid tax payments, a conscious effort should be made to enhance the effectiveness of revenue officers and this should be done through conscious effort at training and retraining, provision of greater motivation for the personnel and provision of better working environment for an enhanced productivity; for a better tax administration, adequate machinery should be put in place and strengthened, the level of the deterrent punishment should also be made stricter and there should be continuous education for the citizens on the importance of tax payment and the problems attached to non- performance of their civil obligations, to further encourage effective tax administration, a simplified income tax assessment form and a tax table should be introduced to assist people in determining their own tax liability. Mini tax offices should be established in all the major markets to effect and simplify the collection of tax by tax collectors; and in addition to liaising with collecting banks, the database for tax administration should be computerized to ensure that the system of information storage, processing and retrieval is efficient. Tax clearance certificate should also be presented where an individual wants to transact business with government agencies.

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Appendix I: Secondary Data

Periods	GDP Billion of Naira	VAT Billion of Naira	PPT Billion of Naira	CIT Billion of Naira	CED Billion of Naira
2001	6,895.20	44.91	639.2	68.701	170,600
2002	7,795.76	52.63	392.21	89.1	181,400
2003	9,913.52	65.89	682.27	114.8	195,500
2004	11,411.07	96.2	1,182.28	113.08	217,200
2005	14,610.88	87.45	1,304.30	140.3	232,800
2006	18,564.59	110.57	2,008.30	244.9	177,700
2007	20,657.32	144.37	1,500.81	275.32	241,400
2008	24,296.33	198.07	6,530.63	2,512.31	205,250
2009	24,794.24	229.32	3,191.94	1,256.52	223,325
2010	33,984.75	275.57	5,396.03	1,944.71	214,287

2011	37,409.86	318	876.7466	151.393	1.9471
2012	40,544.10	347.69	813.7443	156.4812	2.0403
2013	42,396.77	389.53	551.8105	167.8149	2.1549
2014	89,043.62	388.85	581.79	176.84	3.8889
2015	135,690.46	388.17	266.92	265.32	1.4468
2016	784,076.76	64.234	50.4078	41.2085	1.4007
2017	68,490,067.00	972.34	2166.1044	182.903	1.3546
2018	69,799,941.95	1,100.45	2,467.56	1,421.80	1.3085

Source: CBN Statistical Bulletin, FIRS, Planning, Reporting and Statistics Department, NBS 2018

GDP	=	Gross Domestic Product
VAT	=	Value Added Tax
PPT	=	Petroleum Profit Tax
CIT	=	Company Income Tax
CED	=	Customs and Excise Duty Tax

Appendix II: Output

	GDP N'bn	VAT N'bn	CIT N'bn	PPT N'bn	CED N'bn
Mean	7755116	293.0136	517.9723	1700.17	114415.4
Median	29389.5	213.695	172.3274	1029.513	174150.0
Maximum	69799942	1100.45	2512.31	6530.63	241400.0
Minimum	6895.200	44.91000	41.2085	50.4078	1.308500
Std. Dev.	200.2307	298.7837	738.4847	1770.102	106753.7
Skewness	2.475052	1.73168	1.690257	1.645752	-.1436457
Kurtosis	7.127545	5.125149	4.443233	4.807386	1.120513
Jarque-Bera	102.9508	1.795337	9.956324	12.88886	2.446627
Probability	0.000000	0.4230501	0.0077448	0.001839	0.307424
Sum	1328126.7	5274.244	9323.502	30603.05	2059478
Sum Sq. Dev.	5264574	70.424	174.0625	417.217	25162.09
Observations	18	18	18	18	18

Source	SS	df	MS	
Model	7.5015e+15	4	1.8754e+15	
Residual	9.7950e+14	13	7.5346e+13	
Total	8.4810e+15	17	4.9888e+14	

Number of obs = 18
F(4, 13) = 24.89
Prob > F = 0.0000
R-squared = 0.8845
Adj R-squared = 0.8490
Root MSE = 8.7e+06

gdp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
vat	86750.67	10364.02	8.37	0.000	64360.57 109140.8
cit	-7342.865	8860.644	-0.83	0.422	-26485.12 11799.39
ppt	643.3948	3996.662	0.16	0.875	-7990.868 9277.658
ced	73.49845	32.60352	2.25	0.042	3.062839 143.9341
_cons	-2.34e+07	5430895	-4.30	0.001	-3.51e+07 -1.16e+07