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## Article

# Taxation and economic growth in Nigeria

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### Original Research Article

## **Taxation and Economic Growth in Nigeria**

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### **Abstract**

*The study examined the relationship between taxation and the economic growth of Nigeria. It specifically explored the linkages among company income tax, petroleum profit tax and the economic growth of Nigeria proxied with Real Gross Domestic Product, using time series data for the period 1981 to 2016. Ex Post-Facto research design was employed. The findings indicate that petroleum profit tax (PPT) and company income tax (CIT) show positive and significant effect on the Real Gross Domestic Product (RGDP) in Nigeria. The study recommended that Nigerian government should put in place fiscal policies that will enhance investments in the real sector and create employment opportunities; endeavour to provide social amenities to all nooks and crannies of the country as this will boost the level of tax compliance in Nigeria; create an enabling environment for entrepreneurship and innovation to enhance income generated from tax proceeds.*

**Keywords:** Tax Revenue, Company Income Tax, Petroleum Profit Tax, Economic Growth, Nigeria.

### **JEL Classification Codes: H200, H210**

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### **1. Introduction**

Tax revenue is one of the major source through which government generate financial resources needed to meet the constitutional needs of her citizens. The

increasing responsibilities of modern day government have made it imperious for all government nonetheless its socio-political proclivities to generate enough revenue so as to meet her challenges. These challenges

which are beyond private interest consideration ranges from the provision of quality education, assurance of safety of settlement, provision of infrastructural facilities and the protection of its territorial boundaries against internal and external belligerence. The relevance of tax revenue cannot be over emphasized as it has attained a specific role in the development and sustenance of a country's economy. Tax plays a multiplicity role in the development of a nation. It is not only used to generate revenue for the government, but is also used as a tool by the government to carry out some of its fiscal policies. Such policies could be to reduce the inequalities of wealth and income of the society, to control inflation and to discourage the consumption of certain product. Hence, it is clear that tax is seen as the power that keeps a nation moving and also a necessity to the existence and prosperity of a nation, and the air it breathes to the natural man.

Tax provides a predictable and stable flow of revenue to finance developmental objectives. Therefore, effective and efficient tax system can assist the government generate enough revenue to take care of its estimated expenditure, meet the needs of the people, and effectively participate in the world economy, improve the quality of life of people, have access to education, improved healthcare delivery, employment opportunities, clean air, safe drinking water and security of life and property (Bird & Zolt, 2003; Pfister, 2009; Ofoegbu, Akwu, & Oliver, 2016). However, over the years, revenue derived from taxes has been very low and no physical development has actually taken place (Afuberoh & Okoye, 2014). This has resulted to the increased incessant lamentation of the people to infrastructure decay and the government justification of inadequate fund to attend to provisions of these amenities.

Taxation of companies and revenue generated is usually used as a major

instrument for revenue generation and to sustain economic development, but the situation is different in Nigeria. Therefore, this study examines the relationship between tax revenue, specifically company income tax, petroleum profit tax and economic growth in Nigeria. For this reason, our hypotheses are stated in null form as follows:

Ho<sub>1</sub> Petroleum profit tax has no significant relationship with the gross domestic product of Nigeria

Ho<sub>2</sub> Company income tax has no significant relationship with the gross domestic product of Nigeria

## **2. Literature Review**

### **Concepts of Taxation**

Tax is a compulsory levy made by all concerned to the government of a country from which essential services are rendered, without necessarily offering an explanation on how the money generated was spent or equating the services with the money collected. It is an instrument employed by the government for generating public funds (Anyaduba, 2004; Ofoegbu, et al. 2016). Paina (2003) reiterated that taxation is a required payment imposed by the government on the income, profit or wealth of individuals, group of persons, and corporate organisations. A well-designed tax system can help government in developing countries prioritise their spending, build stable institutions, and improve democratic accountability (Brautigam, 2008). When that is achieved the people will be consciously motivated to pay their taxes. Taxes can be used as an instrument for achieving both micro and macroeconomic objectives especially in developing countries such as Nigeria. Ola, (2001) noted that tax policy serve as an instrument of redistribution of wealth to ensure social justice. Summarily, Nzotta (2007) documented four basic issues 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. Consequently, a good tax structure plays a multiple role in the process of economic growth and development of any nation which Nigeria is not an exception (Appah, 2010).

Economic growth is the increase in the value of goods and services produced by a country over a period and Real Gross Domestic Product (Rgdp) is used as a proxy for economic growth. Real gross domestic product is an inflation-adjusted measure which reflects the value of all goods and services produced by an economy in a given year, usually expressed in base-year prices, and is often graded as constant-price or inflation-corrected GDP. Unlike nominal GDP, real GDP can account for changes in price level and provide a more accurate figure of economic growth.

### **Empirical Review**

Cornelius, Ogar, and Oka, (2016) examined the impact of tax revenue on the Nigerian economy. Their finding revealed a significant relationship between petroleum profit tax and the growth of the Nigeria economy while no significant relationship was found between company income tax and the growth of the Nigeria economy. They concluded and recommended that government should; endeavour to provide social amenities to all nooks and crannies of the country; engage in a complete re-organization of the tax administrative machineries; in order to reduce tolerable problems of tax evasion and avoidance.

Worlu and Emeka (2012) studied the impact of Tax Revenue on the economic growth of Nigeria between 1980 and 2007 using its effect on infrastructural development. They documented that tax revenue has direct and

indirect relationships with the infrastructural development and the gross domestic product respectively (GDP). The authors claim that the channels through which tax revenue affects economic growth in Nigeria are infrastructural development, foreign direct investment, and GDP. Therefore availability of infrastructure stimulates investment which in turn brings about economic growth. Adegbe and Fakile (2011) concentrated on the relationship between Company Income Tax and Nigeria Economic Development. Their result shows a significant association between company income tax and the economic development of Nigeria. Ariyo (1997) reported a satisfactory level of productivity of the tax system before the oil boom. He furthered that the advent of the oil boom encouraged some laxity in the management of non-oil revenue sources like the company income tax; this was checkmated with the then commencement of the structural adjustment programme. The report underscores the urgent need for the improvement of the tax information system to enhance the evaluation of the performance of the Nigerian tax system and facilitate adequate macroeconomic planning and implementation.

Success, (2012) investigated the impact of Petroleum Profit Tax on the economic development of Nigeria between the period 2000 to 2010. Their findings reveal that petroleum profit tax positively impacts on gross domestic product (GDP) of Nigeria, and the impact is statistically significant. Okafor (2012) examined the relationship between federally generated revenue and economic development in Nigeria using Gross Domestic Product (GDP) for the period 1981 to 2007. The result of the study showed a positive and significant relationship between Income Tax Revenue and Economic Development of Nigeria. Bukie and Adejumo (2013) examined the effect of tax revenue on economic growth of Nigeria for the period 1970 to 2011, regressing indicators of economic growth

(domestic investment, labour force and foreign direct investment) on tax revenue. The result shows that domestic investment, labour force and foreign direct investment have a positive and significant relationship with economic growth in Nigeria.

Abdul-Rahamoh, Taiwo and Adejare (2013) appraised the effect of petroleum profit tax on Nigeria Economy. The study covered a forty year period from (1970 to 2010). Analyses were done using multiple regressions. The study revealed that petroleum profit tax had significant impact on Nigerian economy. Eyisi, Chioma and Nwaorgu, (2015) study on the Effect of Taxation on Macroeconomic in Nigeria from 2002 to 2011 using ordinary least square regression method. The result obtained show that government earnings from taxation has positive and significant effect on real gross domestic product in Nigeria, government revenue from taxation has negative significant influence on unemployment rate in Nigeria. This implies that revenue generation from taxation enhances economic growth and growth that changes in taxation, automatically will affect individuals real standard of living (GDP), employment rate and interest rate. Government therefore need to consider taxpayers and other key stakeholder's interest in fiscal policy formulation and implementation in order to achieve improved tax compliance rate in the country and the current draft national policy should be passed into law by the National Assembly so as to make it a working document.

Ogbonna and Appah, (2012) analyzed the impact of Petroleum Profit Tax and Economic Growth of Nigeria from 1970 to 2010, using co-integration test and Granger Causality test as model. Co integration test result indicates the existence of long-run relationship between economic growth and petroleum profit tax. In addition the granger causality test shows that petroleum profit tax does granger causes on economic

growth in Nigeria. It was also found that petroleum profit tax is a major factor for economic growth in Nigeria for the year under review. Likewise, Olatunji and Adegbite, (2014), studied the effect of petroleum profit tax, interest Rate and Money Supply on Nigeria Economy from 1970 to 2010; multiple regression were employed to analyze the relationship among the variables. The analysis revealed a positive short run effect of Petroleum Profit Tax and economic growth. This suggests that petroleum contribute positively to income generation.

### 3. Methodology

The study investigates the effect of tax revenue on the economic growth of Nigeria for a period of thirty-five years (1981-2016). The research design used in this study is ex post facto as it is used to determine the relationship among variables where the variables involved are not manipulated by the researcher. The time series dataset employed in this paper is obtained from the CBN statistical bulletin. A time series is a set of observation on the values that a variable takes at different times; such data may be collected at regular time intervals. The technique of analyses involves the plotting of the graph, correlation and then multivariate regression to explain the trend of the variables, establish the strength and direction of the relationships between the variables and evaluate and quantitatively establish the effect or non-effect of the independent variables on the dependent variables respectively.

### Model Specification

The functional relationship between tax revenue and the economic growth of Nigeria is expressed thus:  $GDP = F(PPT, CIT)$  Obtaining the econometric model from the above expression, we have:

$$\text{Log}(GDP) = a_0 + a_1 \log(PPT) + a_2 \log(CIT) + e_t$$

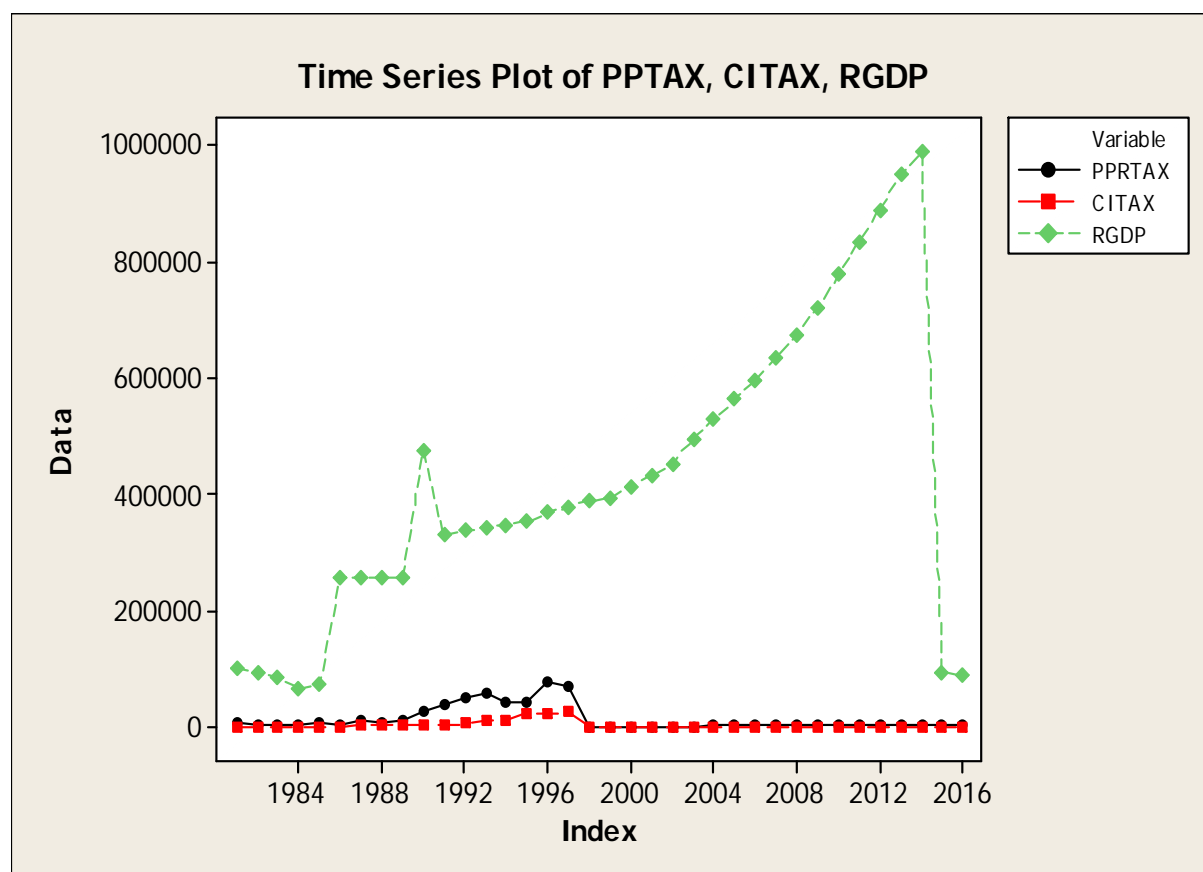
Where: GDP = Gross Domestic Product

PPT = Petroleum Profit Tax  
 CIT = Company Income Tax  
 $a_1 - a_2$  = Regression Parameters  
 $et$  = Stochastic error

#### 4. Regression Results and Discussion

This section presents the results of data analysis. The study employed descriptive

statistics to explain the features of the distributions of the variables; correlation analysis to establish the strength and direction of the relationships between the variables and multivariate regression analysis to quantitatively establish the effect or non-effect of the independent variables on the dependent variables.



Source: CBN statistical bulletin (1981-2016)

Fig.1: Graph to explain the trend of the variables.

From the index in Fig.1, PPTAX and CITAX which have black and red indicators respectively have been steady almost throughout the study period except the slight increase between 1989 to 1996. The green indicator in the index shows Nigeria's Real GDP from 1981 to 2016. Nigeria Real GDP

fluctuated substantially during the monitored period, having the highest in 2014 and the lowest in 2016. It increased in 1986 and 1990 while it decreased suddenly in 1991. It witnessed a steady increase from 1992 to 2014 and dropped in 2015 with a further drop in 2016.

**Result for Descriptive Statistics for petroleum profit tax and discussion**

Sum	116180.5
Count	36
Confidence Level(95.0%)	2266.480232

**Table 1: Descriptive analysis for petroleum profit tax**

<b>Petroleum profit tax</b>	
Mean	13875.46389
Standard Error	3590.131155
Median	2937
Standard Deviation	21540.78693
Sample Variance	464005501.6
Kurtosis	1.924714085
Skewness	1.76650176
Range	76599
Minimum	68
Maximum	76667
Sum	499516.7
Count	36
Confidence Level (95.0%)	7288.353676

The result in Table 1 shows that the distribution of petroleum profit tax is very variable, has an average (median) of 249.25, Platy-Kurtic (1.9247), positively skewed; has minimum and maximum sizes of 68 and 76667 respectively. The standard deviation of 21540.78 is large indicating that there is much variability in values of petroleum profit tax. The distribution is flattened at the top with a wider peak. It is also rightly skewed with a skewness of 1.76650176.

**Table 2 Descriptive analysis for company income tax and discussion**

<b>Company income tax</b>	
Mean	3227.236111
Standard Error	1116.433375
Median	249.25
Mode	130.1
Standard Deviation	6698.600251
Sample Variance	44871245.33
Kurtosis	5.559310717
Skewness	2.542432763
Range	25966.7
Minimum	33.3
Maximum	26000

The descriptive analysis of company income tax in the table show that the average (median) of the company income tax is 249.25, leptokurtic (5.5593), positively skewed, has 33.3 and 26000 as minimum and maximum company income tax. The standard error renders the mean not to be the best average to use. The distribution is peaked at the top and rightly skewed which indicates large variability towards higher values of the distribution.

**Table 3: Descriptive analysis for Real Gross Domestic Product and discussion**

<b>Real Gross Domestic Product</b>	
Mean	424146.2447
Standard Error	42933.46388
Median	383149.45
Standard Deviation	257600.7833
Sample Variance	66358163532
Kurtosis	-0.357197683
Skewness	0.533086311
Range	920880.56
Minimum	66462.2
Maximum	987342.76
Sum	15269264.81
Count	36
Confidence Level(95.0%)	87159.56485

The result in Table 3 show that the distribution of Gross Domestic Product is very variable, has an average (median) of 383149.45, Platy-Kurtic (-0.35719), slightly positively skewed, has minimum and maximum sizes of 66462 and 987342 respectively. The standard deviation of 257600.7833 is large indicating that there is much variability in values of Gross Domestic Product. The distribution is flattened at the top with a wider peak. It is also slightly rightly skewed with a skewness of 0.533086.

**Table 4: Correlation analysis of gross domestic product, petroleum profit tax and company income tax****Correlations**

		RGDP	PPTAX	CITAX
RGDP	Pearson Correlation	1	-.178	-.132
	Sig. (2-tailed)		.298	.444
	N	36	36	36
PPTAX	Pearson Correlation	-.178	1	.885**
	Sig. (2-tailed)	.298		.000
	N	36	36	36
CITAX	Pearson Correlation	-.132	.885**	1
	Sig. (2-tailed)	.444	.000	
	N	36	36	36

\*\*. Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis reveals that Real Gross Domestic Product has weak inverse relationship with petroleum profit tax as indicated in table 4.4 with a correlation coefficient of -0.178, also it has weak inverse relationship with company income

tax with a correlation coefficient of -0.132 respectively which means that if Real Gross Domestic Product increases, then petroleum profit tax and company income tax decreases only slightly in Nigeria.

**Table 5: Summary of Regression result****Model Summary**

Model	Change Statistics				
	R Square Change	F Change	df1	df2	Sig. F Change
1	.971 <sup>a</sup>	564.995	2	34	.000

a. Predictors: LCITAX, LPPTAX

**Coefficients<sup>a,b</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	LPPTAX	3.385	.420	2.255	8.061	.000
	LCITAX	-2.479	.539	-1.286	-4.597	.000

a. Dependent Variable: LRGDP

b. Linear Regression through the Origin

Source: From author's computation

R-sq = 0.971, Standard error = 0.9732, overall p-value = 0.000

**Discussion of Findings**

Table 5 is the summary of the regression analysis. The regression results of the effect of petroleum profit tax and company income

tax on Gross Domestic Product in Nigeria was tested using f-statistic. The test shows that the overall model is significant with a p-value of 0.000. This means that all the



independent variables together have an effect on GDP. The adjusted coefficient of determination R-square of 0.971 implies that 97.1 per cent of the sample variation in the dependent variable GDP is explained or caused by the independent variables while 2.9 per cent is unexplained. This remaining 2.9 per cent could be caused by other factors or variables not built into the model. The p-values from the table shows petroleum profit tax with p-value of 0.000 and company income tax with p value of 0.000 have significant positive effect on GDP. Therefore we reject the two null hypotheses and affirm that petroleum profit tax and company income tax do have a significant positive effect on Nigeria GDP.

### 5. Conclusion and recommendation

The study investigates the relationship between tax revenue and Nigeria GDP. We used petroleum profit tax and company income tax as the two dimensions for our tax revenue for the period 1981 to 2016 using data obtained from the Central Bank of Nigeria statistical bulletin. We find that petroleum profit tax and company income tax show positive and significant effect on the Gross Domestic Product (GDP) in Nigeria. The result is in tandem with the findings of Success (2012), Ofoegbu, et al. (2016) and Cornelius, Ogar, and Oka, (2016). This point out that PPT and CIT can be used as an economic and fiscal policy tool to grow the Nigeria GDP. We recommend that; Nigerian government should put in place fiscal policies that will enhance investments in the real sector and create employment opportunities; endeavor to provide social amenities to all nooks and crannies of the country as this will boost the level of tax compliance in Nigeria; create an enabling environment for entrepreneurship and innovation to enhance income generated from tax proceeds.

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