

## EFFECT OF TAX REVENUE ON PER CAPITAL INCOME OF NIGERIA

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### Abstract

*This study ascertain the effect of tax revenue on Per Capita Income of Nigeria from 2000-2019. This study employed the use of time series data and Ex-post facto research design was adopted. Secondary data were sourced from Central Bank of Nigeria (CBN), Statistical Bulletin, Federal Inland Revenue Service (FIRS), World Bank Statistical Bulletin and Annual Abstract of Statistics from the National Bureau of Statistics (NBS). Descriptive statistics were utilized for the study variables while Ordinary Least Square (OLS) regression analysis was used to test the hypothesis. The study found that tax revenue has a significant positive effect on per capita income of Nigeria. According to the study's conclusion, in order to maximize the positive relationship between corporate income tax and economic development, all tax offices in Nigeria should implement information technology, which is seen as the hallmark of the twenty-first century, allowing tax payers and tax authorities to declare uniform and consistent claims, thereby preventing tax evasion in the country.*

**Keywords:** Tax revenue, per capita income and Nigerian economy.

### INTRODUCTION

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

Taxation is one of the oldest means by which the cost of providing essential services for the generality of persons living in a given geographical area is funded. Globally, governments are saddled with the responsibility of providing some basic infrastructures for their citizens. Functions or obligations the government may owe her citizens include but are not restricted to: stabilization of the economy, redistribution of income and provision of services in the form of public goods.

As a result, taxation is critical in supporting a country in meeting its demands and promoting self-sufficiency. Tax revenue has contributed for a modest part of total government revenue in

Nigeria over the years, compared to the majority of revenue needed for development reasons, which comes from oil (Oloidi & Oluwalana, 2014). Any government's aim to maximize revenue from taxes received from taxpaying citizens cannot be overstated. This is due to the fact that, as is widely known, the relevance of tax resides in its power to create income for the government, affect consumption trends, and grow and regulate the economy by influencing crucial aggregate economic variables.

Most industrialized countries' highways to economic development are paved with funds generated by an efficient taxation structure, as suggest by Ibadin and Oladipupo (2015). Governments all over the world are solely responsible for providing public services such as electricity, roads, an efficient transit system, healthcare facilities, schools, protection of people and property, and defense against internal and external aggression. To meet these commitments, governments, according to Okeke, Mbonu, and Amahalu (2018), must tap into all domestic and foreign revenue streams. Reliance on external sources of revenue for developmental purposes has proved unproductive for many countries over the years, and those countries which experienced rapid social and infrastructural development around the world were found to have leveraged on revenue from efficient tax system.

The challenges associated with Nigeria's major tax reforms might be linked to the country's inability to meet the goals it set for itself. Some of the issues identified include the Federal Government of Nigeria's increasing cost of tax administration in relation to tax revenue collections, as evidenced by scholars, which is a major indicator of the country's high level of inefficiency in tax operations, contrary to Adam Smith's tax canons. Furthermore, existing tax system distortions have threatened some of the objectives of Nigeria's tax reform strategy, resulting in an inefficient tax system. Companies Income Tax administration in Nigeria does not measure up to appropriate standards as a result of tax evasion and inadequate monitoring (Onakoya, Afintinni, & Ogundajo, 2017). Because of insufficient management, bad tax administration, poor tax education, contradictory government policies, a lack of adequate statistical data, and corruption among tax employees, noncompliance with tax rules and regulations by taxpayers is deep in the system. Fraud and financial misdeeds have a negative impact on Customs and Excise duties' contribution to Nigerian economic development. The Nigerian customs service has been chastised for incompetence and corruption, and its higher

echelon is plagued by intrigue and infighting. All of this must alter if Nigeria's ambition of economic progress is to come true. Value Added Tax rate in Nigeria is one of the factors contributing to the collapse of the real economy. This is because it disrupts the manufacturing sector by accelerating astronomical increase in the prices of goods and services (Out & Adejumo, 2013). Hence it increases the volume of unsold goods thereby reducing capacity utilization, increasing poverty levels, increasing unemployment, discouraging local and foreign investors and subjects the country to economic volatility. Although the Petroleum Profit Tax serves as the instrument of redistribution between the industrialized economies who own the technology and the emerging economies from where the petroleum resources are extracted, most of the objectives of Petroleum Profit Tax in Nigeria are not achieved. This is because of several challenges such as lack of adequate trained tax inspectors and officials; inadequate application of technology; poor assessment of tax payers; tax evasion and avoidance and ineffective tax laws and regulations (Onyeyiri, 2019).

In this context, the issue over the usefulness of taxes as a tool for fostering growth and development remains unresolved, as various studies has found a mixed influence of taxes on economic development, resulting in a knowledge gap. This may be due to differences in geographic location, variables, technique scope, and statistical methods. Nadeem, Azam, and Shinwari (2015), for example, investigated the impact of tax revenues on Pakistani economic growth and discovered a positive link between the research variables. Onakoya, Afintinni and Ogundajo (2017) used time series data to report a positive relationship between tax revenue and per capita income; Okeke, Mbonu and Amahalu (2018) found a positive relationship between tax revenue and economic development in Nigeria by employing augmented dickey-fuller test and regression analysis.

As a result of the above, there is obvious evidence of a measurement gap in economic development; however, this study closed the gap by focusing entirely on economic development index using per capita income, whereas previous studies focused on Real Gross Domestic Product. Furthermore, in order to address the currency gap in information, the scope of this current study was extended over a period of twenty (20) years, from 2000 to 2019, in order to establish current empirical findings. As a result, the impact of tax revenue on Nigeria's per capita income is investigated in this study.

## REVIEW OF RELATED LITERATURE

### Tax Revenue

Revenues received from income and profit taxes, social security payments, taxes on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes are referred to as tax revenue (Sion, 2019). The income obtained by governments through taxing is referred to as tax revenue. A state's primary source of revenue is taxation. Individuals, public enterprises, commerce, royalties on natural resources, and/or foreign aid are all potential sources of revenue (Moss, 2016). Total tax revenue as a percentage of GDP indicates the share of a country's output that is collected by the government through taxes. It can be regarded as one measure of the degree to which the government controls the economy's resources. The tax burden is measured by taking the total tax revenues received as a percentage of GDP. This indicator relates to government as a whole (all government levels) and is measured in million USD and percentage of GDP (Krugman, 2012).

Company income tax is a tax imposed by the Government on the income and profits of companies operating in the country. The law governing the administration of Companies Income Tax is the Companies Income Tax Act. The law which was first enacted in 1961 has undergone so many amendments, the latest being that of April, 2007. Companies Income Tax (CIT) is a tax on the profits of registered companies in Nigeria. It also includes the tax on the profits of foreign companies carrying on business in Nigeria (Onyeyiri, 2019).

PPT is a tax on the income of companies engaged in upstream petroleum operations *in lieu* of CIT. Petroleum profit tax (PPT) is a tax applicable to upstream operations in the oil industry. It is particularly related to rents, royalties, margins and profit sharing elements associated with oil mining, prospecting and exploration leases. It is the most important tax in Nigeria in terms of its share of total revenue contributing 95 and 70 percent of foreign exchange earnings and government revenue, respectively (Afuberoh & Okoye, 2014). The petroleum profit tax is charged, assessed and payable upon the profits of each accounting period of any industries engaged in petroleum operations during any such accounting period, usually one year (January to December) (Okeke, Mbonu & Amahalu, 2018).

Customs duties are imposed by the Customs and Excise Act 91 of 1964. They are levied on imported goods with the aim of raising revenue and protecting the local market. They are usually

calculated as a percentage of the value of the goods (set in the schedules to the Customs and Excise Act). However meat, fish, tea, certain textile products and certain firearms attract rates of duty calculated either as a percentage of the value or as cents per unit (for example, per kilogram or metre) (Odusola, 2006). Customs duties in Nigeria are the oldest form of modern taxation.

A value-added tax (VAT) is a consumption tax placed on a product whenever value is added at each stage of the supply chain, from production to the point of sale. The amount of VAT that the user pays is on the cost of the product, less any of the costs of materials used in the product that have already been taxed. VAT is essentially a regressive tax that places an increased economic strain on lower-income taxpayers, and also adds bureaucratic burdens for businesses. Value-added taxation is based on a taxpayer's consumption rather than their income.

### **Per Capita Income**

The average income earned per person in a specific location (city, region, or country) in a given year is measured by per capita income (PCI). It is computed by dividing the total income of the area by the entire population of the area (Kenton, 2019), the amount of money earned per person in a country or region is referred to as per capita income. Per capita income can be used to calculate an area's average per-person income and to assess the population's level of living and quality of life. A country's per capita income is computed by dividing its national income by its population (Kimberly, 2019). National income divided by population size equals per capita income. Per capita income is frequently used to compare the wealth of different populations and to estimate a sector's average income. The per capita income of a country is frequently used to assess its standard of living. It reveals how prosperous a country feels to its residents individually. It's frequently represented in terms of a widely used international currency like the euro or the US dollar, and it's valuable since it's well-known, easy to calculate using readily accessible GDP and population data, and provides a useful statistic for comparing wealth between sovereign territories. This helps to ascertain a country's development status. It is one of the measures for calculating the Human Development Index of a country (Amadeo, 2019). The latest value for GDP per capita (current US\$) in Nigeria was \$6,055 as of 2019. Over the past 58 years, the value for this indicator has fluctuated between \$3,222.69 in 2014 and \$92.96 in 1960 (World Bank, 2020).

### **Empirical Review**

The extant reviewed literatures drawn from both developed and developing economies as being related to theme of this study is discussed as follows: Adegbie and Fakile (2011) assessed the relationship between petroleum profit tax and economic development of Nigeria. Primary and secondary data were used to collect the research data, while chi-square and multiple regression statistical models were used to analyze the results of the field work. The findings revealed that there is a very strong relationship between petroleum profit tax and economic development of Nigeria, tax avoidance and evasion are major hindrance to income growth in this sector, poor tax administration is a problem to effectiveness and efficiency of this source of income, and lack of corporate social responsibilities is causing unrest in the crude oil production zone. Appah and Ebiringa (2012) investigated the impact of petroleum profit tax on the economic growth of Nigeria. To achieve the objective of the study, relevant secondary data were collected from the Central Bank of Nigeria (CBN) and the Federal Inland Revenue Service (FIRS) from 1970 to 2010. The secondary data collected from the relevant government agencies in Nigeria were analyzed with relevant econometric tests of Breusch-Godfrey Serial Correlation LM, White Heteroskedasticity, Ramsey RESET. Alex (2013) conducted a study to analyze the factors that affect the GDP of developing countries whereby Tanzania is selected as a representative. Keynes model was adopted to be tested in Tanzanian GDP from 1970 to 2009. The result showed the GDP being at the same level year after year with no significant changes subject to some dormant factors. Umoru and Anyiwe (2013) conducted a study on tax structures and economic growth in Nigeria from 1998-2011 by employing cointegration and error correction as methods of empirical estimation with an empirical strategy of disaggregation. In line with the objective of the study, empirical results indicated that while the policy of direct taxation is significantly and positively correlated with economic growth, indirect taxation proved insignificant with its negative impact on economic growth in Nigeria. Feng and Eko (2014) analyzed the relationship between tax revenue and economic growth of Hebei Province from 1978-2011 by the simple and amended tax multiplier effect theory and the polynomial distributed lag (PDL) model. The results showed that the negative impact of increase of tax revenue on economic growth may not be as serious as one might think and tax cuts would create more positive effects in Hebei Province. Moreover, the negative effect is lagging and more and more obvious. Tax reform of the current tax system should be reviewed and implemented. Oriakhi and Ahuru (2014) ascertain



the impact of tax reforms on tax revenue generation in Nigeria. The study employed annual time series data spanning the years (1981-2011). The various income taxes were used as a proxy for tax reforms. By way of preliminary test, the Augmented Dickey fuller was employed to test for unit root. All the time series variables were non-stationary at levels but became stationary after first differencing. On the whole, the study showed that tax reform by improving the tax system and reducing tax burden enhances the ability of the government to generate more revenue. Edame and Okoi (2014) examined the impact of taxation on investment and economic growth in Nigeria from 1980-2010. The ordinary least square method of multiple regression analysis was used to analyze the data. The annual data were sourced from the central bank of Nigeria statistical bulletin and NBS. The result of the analysis showed in conformity to a priori expectation because the parameter estimates of corporate income tax (CIT) and personal income tax (PIT) appears with negative signs, this means that an inverse relationship exist between taxation and investment. The result therefore showed that taxation is negatively related to the level of investment and the output of goods and services (GDP) and is positively related to government expenditure in Nigeria. Chigbu and Njoku (2015) investigated the impact of taxation on the Nigerian economy for the period 1994 -2012. The dependent variables used in the model includes: Gross Domestic Product (GDP) as a parameter for measuring economic growth, inflation and unemployment. To avoid spurious results, the data set collected from the Central Bank of Nigeria statistical bulletin and Federal Inland Revenue Services was subjected to Augmented Dickey Fuller Unit Root test, which revealed that the variables are stationary. The cointegration test also revealed that the variables are cointegrated and long run relationships exist between the variables. The results of the statistical analysis revealed 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. Ogbonna and Odoemelam (2015) investigated the impact of taxation on economic development of Nigeria proxied by the gross domestic product (GDP), 2000-2013. The data were analyzed using descriptive statistics, econometric model with the aid SPSS

version 20. The results showed that a strong positive and significant relationship exist between economic development and Tax variables used. It also documented a decline in tax revenue in post-IFRS period. Oraka, Okegbe and Ezejiofor (2017) investigated the impact of the value added tax on Nigeria's economy. This study used an ex post facto research design. The study used Gross Domestic Product (GDP), Per Capital Income (PCI), and Total Revenue (TR) to measure the Nigerian economy from 2003 to 2015. In order to acquire statistics on value added tax, gross domestic product, per capita income, and total revenue, the secondary data approach was used. These figures came from the CBN statistical bulletin, the federal ministry of finance's Federal Inland Revenue Service, and journals. The findings show that the value added tax has had no significant impact on Nigerian Gross Domestic Product. Aminu and Eluwa (2017) examined the impact of tax reform policy on revenue generation of the Federal Government of Nigeria. The techniques of data analysis adopted for the empirical study were the Analysis of Variance Method and the Scheffe's Multiple Comparison techniques. In addition, the 'F' test of the analysis of the variance was used to test the hypothesis of no significant difference in the impact on personal, company and custom duty tax revenues of the Federal Government by each of the following tax reform policy objectives; enhancement of the principles of good tax system, improvement in the tax administrative structure, removal of disincentives to tax compliance and promotion of investment opportunities. Neway, Kenenisa and Woldemicael (2018) identified determinants of tax revenue in Ethiopia by using secondary data and multiple variable regression model using OLS method. Quantitative research method was employed on time series data set for the years 1999/00 to 2015/16. Both descriptive statistics and econometric tools were employed to analyze and present the data collected from concerned bodies. The finding revealed that, industry sector share to GDP, per capita income and trade openness as measured by share of export and import to GDP have significant positive effect on tax revenue whereas; agriculture sector share to GDP and annual rate of inflation have significant and negative effect on tax revenue as measured by share of tax revenue to GDP. Adeyemi and Disu (2018) reviewed contemporary issues in corporate income tax practices in Nigeria against the background of Nigeria's economy being generally characterized by low tax compliance and enforcement. The study reviewed extant provisions on tax reliefs and incentives applicable to corporate entities to facilitate voluntary compliance and recommendations were made on enhancing the successful



implementation of the voluntary assets and income declaration scheme (VAIDS) and improve the corporate income tax culture in order to enhance the gross domestic product. The effect of accounting information on deferred taxation in Nigerian deposit money institutions was studied by Udeh and Ezejiofor (2018). The data was acquired from yearly reports and accounts of Nigerian deposit money institutions using an ex post facto research design. To evaluate the hypotheses, a pooled multiple regression analysis was used. According to the findings, earnings per share (EPS) and cash flow (CASHFL) have a negative impact on our dependent variable, deferred tax, but book value of equity has a statistically significant impact whereas earnings per share (EPS) and cash flow (CASHFL) do not. Olaoye and Ayeni (2019) examined value added tax and customs duties on revenue generation in Nigeria. Secondary data were sourced from Federal Inland Revenue Service (FIRS) ranging from 2000 to 2016. Autoregressive Distributed Lag (ARDL) and Granger causality tests were used as the estimation techniques. The findings of the study revealed that the F-statistics value was 2.883868 which is lesser than both the lower bound and the upper bound values of 3.79 and 4.85 respectively at the 5percent level of significance which implies that there is no long-run relationship among value-added tax, customs duties and revenue generation. It was equally revealed that there is no causality among value-added tax, customs duties, and revenue generation. The study concluded that value-added tax and customs duties have no significant effect on revenue generation and there is no long-run relationship among value-added tax, customs duties and revenue generation in Nigeria during the study period. Omondi (2019) analyzed the effect of custom and excise duties on economic growth in Kenya for the period 1973 to 2010. The study was motivated by two developments. First, by the inconsistency in existing empirics and secondly by the wide knowledge gap occasioned by the paucity of empirical literature on Kenya. The empirical results indicated that custom and excise duties are positively correlated with economic growth in Kenya.

In this context, the issue over the usefulness of taxes as a tool for fostering growth and development remains unresolved, as various studies has found a mixed influence of taxes on economic development, resulting in a knowledge gap. This could be due to differences in geographical location, variables, methodology, scope, and statistical tools, among other things. As a result of the above, there is obvious evidence of a measurement gap in economic development; however, this study closed the gap by focusing entirely on economic development

index using per capita income, whereas previous studies focused on Real Gross Domestic Product.

## **METHODOLOGY**

### **Research Design**

The study's goal was to analyze the impact of tax income on Nigeria's economic progress. The study is based on a thorough examination of the relationship between tax income and economic development in Nigeria from 2000 to 2019. As a result, the Ex-post Facto study design was used. An ex-post facto examination looks for possible connections by looking at a current situation or state of things and looking back in time for plausible contributory elements.

### **Population of the Study**

The thirty-six (36) states of the Federal Republic of Nigeria including the Federal Capital Territory, Abuja, constituted the population of this study.

The nature of data for this study was essentially secondary data and is time series in nature. The data were sourced from the Central Bank of Nigeria (CBN), Statistical Bulletin, Federal Inland Revenue Service (FIRS), The extracted variables are; company income tax, petroleum profit tax, custom and excise duties, value added tax, personal income tax and per capita income.

### **Method of Data Analysis**

The analysis of data for this study was done based on the data collected from publications and statistical bulletins of CBN, FIRS and NBS. Both the dependent and independent variables were computed from the data extracted from the publications of the CBN, FIRS, NBS and other relevant sources. Descriptive statistics was employed to report the mean, standard deviation, skewness, maximum and minimum value of the study variables. Inferential statistics of the data to be used in this study was conducted via the aid of E-View 9.0 statistical software, using:

- i. Pearson Co-efficient of Correlation: is a good measure of relationship between two variables and it tells us about the strength of relationship and the direction of relationship as well.
- ii. Regression analysis: predicts the value of a variable based on the value of the other variable and explains the effect of changes in the values of variable on the values of the other variables. Ordinary Least Square (OLS) regression analysis would be used for this study.

In order to verify the quality of the data used, the following diagnostic tools were used:

- iii. Granger Causality test: was used to prove the causality or the direction of influence of one variable on other variables.

### **Model Specification**

To measure the relationship between tax revenue on economic development, this study adapted the model of Okeke, Mbonu, and Amahalu (2018):

$$SE = f(PPT, PIT, VAT) + u_t$$

Where:

SE = School Enrolment

PPT = Petroleum Profit Tax

PIT = Personal Income Tax

VAT = Value Added Tax

Expressing the relationship in linear form using the variables, the following estimating equations were arrived at:

$$PCI_t = \beta_0 + \beta_1 CIT_t + \beta_2 PPT_t + \beta_3 CED_t + \beta_4 VAT_t + \mu_t \quad - \quad - \quad - \quad i$$

Where:

$\beta_0$  = Intercept

$\beta_1$  = Coefficient of Tax Revenue

$PCI_t$  = Per Capita Income for period t

$CIT_t$  = Companies' Income Tax for period t

$PPT_t$  = Petroleum Profit Tax for period t

$CED_t$  = Custom and Excise Duties for period t

$VAT_t$  = Value Added Tax for period t

$TRV_t$  = Tax Revenue t

$\mu_t$  = error term for period t

t denotes the annual time-period

### **Decision Rule**

Accept the alternative hypothesis, if the P-value of the test is less than 0.05. Otherwise reject.

## **DATA PRESENTATION AND ANALYSIS**

### **Table 1 Descriptive Statistics**

	PCI	CIT	PPT	CED	VAT	PIT
Mean	3.6364	11.5782	12.1038	11.5864	11.5635	10.2304
Median	3.6832	11.7809	12.1306	11.8021	11.7172	10.4878
Maximum	3.7821	12.1487	12.5053	11.9936	11.9234	10.8248
Minimum	3.3483	10.7441	11.3510	10.9528	10.9457	9.2383
Std. Dev.	0.1449	0.4402	0.3439	0.3822	0.3506	0.5773
Skewness	-0.6359	0.5891	0.7501	-0.6010	-0.6036	0.5647
Kurtosis	2.0339	1.9651	2.5179	1.6680	1.8122	1.6936
Jarque-Bera	7.1259	12.495	19.062	2.6825	12.390	2.4850
Probability	0.0004	0.0000	0.0000	0.2615	0.0000	0.2887
Sum	72.7272	231.5647	242.0760	231.7275	231.2699	204.6078
Sum Sq. Dev.	0.3987	3.6810	2.2472	2.7758	2.3355	6.3313
Observations	20	20	20	20	20	20

Source: E-Views 9.0, Descriptive Output 2021

From table 1, the observation is 20 which is the study twenty years period of interest from 2000-2019. The standard deviations in the study are 0.145, 0.44, 0.344, 0.382, and 0.351. For such distributions, it is the case that 14.5%, 44%, 34.4%, 38.2%, 35.1% and 57.7% of values are less than one standard deviation (1SD) away from the mean values of PCI, CIT, PPT, CED, and VAT respectively. Skewness and Kurtosis are contained in Jarque-Bera. Positively skewed is an indication of a rise in revenue while negatively skewed is an indication of loss or backwardness. It is delineated in table 1 that CIT, and PPT are positively skewed at the values of 0.5891, 0.7501 and 0.5647 respectively. On the other hand, PCI (-0.6359), CED (-0.6010), VAT(-0.6036) are negatively skewed. The probability values for the Jarque-bera test shows that PCI, CIT, PPT and VAT are significantly normally distributed since their probability values of 0.0004, 0.0000, 0.0000 and 0.0000 respectively are less than 5%. While the probability values of CED (0.2615) and PIT (0.2887) are not significantly normally distributed because their probability values are greater than 5%.

### Test of Hypotheses

**H<sub>0</sub>:** Tax Revenue has no significant effect on Per Capita Income of Nigeria.

**H<sub>1</sub>:** Tax Revenue has significant effect on Per Capita Income of Nigeria.

**Table 2: Ordinary Least Square regression analysis testing the effect of (CIT, PPT, CED, VAT and PCI)**

Dependent Variable: PCI  
Method: Least Squares  
Date: 06/27/21 Time: 10:53  
Sample: 2000 2019  
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2299.274	142.0867	16.18219	0.0000
CIT	-2.42E-10	5.88E-10	-0.412189	0.6860
PPT	-1.35E-11	1.52E-10	-0.089070	0.9302
CED	-3.90E-10	8.05E-10	-0.484375	0.6351
VAT	5.53E-09	1.39E-09	3.987330	0.0012
R-squared	0.960746	Mean dependent var		4545.450
Adjusted R-squared	0.950278	S.D. dependent var		1351.547
S.E. of regression	301.3742	Akaike info criterion		14.46690
Sum squared resid	1362396.	Schwarz criterion		14.71583
Log likelihood	-139.6690	Hannan-Quinn criter.		14.51549
F-statistic	91.78090	Durbin-Watson stat		0.725796
Prob(F-statistic)	0.000000			

Source: E-Views 9 Regression Output, 2021

### Interpretation of Regression Coefficient Result

The following regression equation was obtained from table 2:

Using the above model, it is possible to determine the relationship between (CIT, PPT, CED, VAT and PCI). Holding all other factors constant, an increase in the unit of the independent variables (CIT, PPT, CED, and VAT) results into a corresponding decrease in one unit of PCI, this means that a negative relationship exists between the explanatory variables (CIT, PPT, CED, and VAT) and PCI except value added tax (VAT). The slope coefficient shows that the probability value:  $P(x_1=0.686, 0.930, 0.635 > 0.05)$  is greater than the critical P-value of 0.05. This implies that CIT, PPT, and CED have an insignificant negative relationship with PCI at 5% significant level. However, value added tax (VAT) shows probability value of 0.0012 with t-value of 3.987. This implies that VAT has positive significant effect on per capital income (PCI). Results in table 2 also indicated that the R-squared for the model is 0.961, meaning that the regression model used for this study is a good predictor. The independent variables explained 96% of the variation in PCI. Only 4% of variation in PCI is not explained by the regression model. The Durbin-Watson value of 0.726 indicates the absence of serial correlation in the model.

### Decision:

The P-Value of the test Prob (F-statistic) = 0.0000 is less than the  $\alpha$ -value of 0.05; therefore  $H_1$  is accepted and  $H_0$  is rejected. Since the p-value of the test is less than 0.05, then there exists enough evidence to reject the null hypothesis and conclude that tax revenue has a significant effect on per capita income of Nigeria at 5% level of significance.

### Discussion and Conclusion

This study covers the statistical analysis and interpretation of fitting regression models between tax revenue and economic development of Nigeria. The models are to identify the extent to which tax revenue captured with companies' income tax, petroleum profit tax, custom and excise duties, value added tax, personal income tax affect per capita income which was used as a proxy for economic development. The data extracted for the analysis covered a period of twenty years time series data period of 2000 - 2019 for Nigeria.

The slope coefficient for hypothesis showed that the p-value of the test Prob (F-statistic) = 0.0000 is less than the  $\alpha$ -value of 0.05; therefore  $H_1$  is accepted and  $H_0$  is rejected. Since the p-value of the test is less than 0.05, then there exists enough evidence to reject the null hypothesis and conclude that tax revenue has a significant effect on per capita income of Nigeria at 5% level of significance.

Based on the conclusion the study suggested that to maximize the positive relationship between company income tax and economic development, there is need for application of information technology which is seen as the hallmark of the 21st century in all tax offices in Nigeria thereby making it possible for tax payers and tax authorities to declare uniform and consistent claims to avoid tax evasion in the country.

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