JOURNAL OF GLOBAL ACCOUNTING
9 (2) July, 2023.
ISSN: 1118 – 6828
https://journals.unizik.edu.ng/joga

EFFECT OF TAX REVENUE ON ECONOMIC GROWTH IN NIGERIA

Paper Type: *Original Research Paper.*
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Key words: *Company Income Tax, Petroleum Profit Tax, Personal Income Tax, Value Added Tax, Gross Domestic Product*

CITATION: John-Akamelu, C.R., Ezeagba, C.E. & Nzeoma, I.S. (2023). Effect of Tax Revenue on Economic Growth in Nigeria, *Journal of Global Accounting*, 9(2), 36 – 53.

Available:https://journals.unizik.edu.ng/joga

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ABSTRACT:

This study assessed the effect of tax revenue on economic growth in Nigeria. Company income tax , petroleum profit tax, personal income tax and value added tax were used to proxy tax revenue, while gross domestic product was used to measure economic growth for a period of twenty eight years spanning from 1994 to 2021. Based on the objectives of the study, four hypotheses were formulated. Ex-Post facto research design was adopted. The time series data were obtained from Federal Inland Revenue Services, Central Bank of Nigeria, National Bureau of Statistics and the World Bank Publications. As a preliminary step in testing, the study employed the Augmented Dickey Fully Unit root test to confirm the order of integration of the time series variables. The study employed descriptive statistics and inferential statistics using Pearson correlation and Ordinary Least Square (OLS) regression analysis. Specifically, the study found that company income tax has a positive but non-significant effect on Gross Domestic Product ($\beta1=0.000945$; p-value = 0.9848>0.05); petroleum profit tax has a positive but non-significant effect on Gross Domestic Product ($\beta2=0.035575$; p-value = 0.4857>0.05); personal income tax has a positive but non-significant effect on Gross Domestic Product ($\beta3=0.008635$; p-value = 0.9068>0.05); value added tax has a positive but non-significant effect on Gross Domestic Product ($\beta4=0.158820$; p-value = 0.2654>0.05) of Nigeria at 5% level of significance. It was recommended that government should diversify the economy for more development in order to increase the overall tax revenue base. The implication of the findings is that an increase in tax revenue will cause economic growth to be improved.

1. INTRODUCTION

The principal obligation of every responsible government is the provision of adequate public goods and services that improve the standard of living of citizens. The fulfillment of these responsibilities essentially depends on the quantum of revenue generated by the government through various means. Taxation is one of the viable sources of revenue generation to provide essential services for the generality of people living in a particular geographical area. Taxes are mandatory contributions levied on individuals or corporations by a government entity whether local, regional, or national. Tax revenues, such as petroleum profit, personal income tax, company income tax, value added tax, custom and excise duties tax, capital gains tax amongst others finance government activities, including public works and services such as roads and schools, or programs such as Social Security and Healthcare. Taxation generates funds to finance public goods, regulates production and consumption of goods and services, controls adverse economic conditions, protects infant industries and reduces income inequality among others (Amahalu, Obi, Okudo & Okafor, 2022). A tax system is a veritable tool that mobilizes a nation's internal resources that create enabling environment to grow economy. When taxes are efficiently and effectively administered, there will be an increased revenue generation and citizens will expect deployment of such revenue to provide amenities that enhance standard of living.

Economic growth can generally be defined as an increase in the productive capacity of the country, as measured annually. The Nigeria government, being continually saddled with the responsibilities of stabilizing the economy, redistributing income, providing infrastructure, and providing services for Nigeria citizens in a bid to ensure that Nigeria achieves economic growth and becomes one of the world's largest economies has increasingly given attention to sources capable of generating revenues for financing Nigeria's development activities. Tax revenue has received priority attention amongst other sources of revenue including oil and foreign trade. The falling prices of oil and the periodic fluctuations of prices make revenues from oil exports unstable, and therefore dependence on oil and foreign trade would be too risky and not beneficial for sustainable development in Nigeria (Dim, Okafor, Eneh & Amahalu, 2022). Nigeria tax system is confronted with many issues and challenges such as multiplicity of taxes, bad administration, non-availability of database, tax touting, complex nature of the Nigerian tax laws, minimum tax, commencement, change of accounting date and cessation, non-payment of tax refunds, inadequate and ineffective databases, complexity of the tax system, audit effectiveness, trust in authorities, perceived corruption and the supply of public goods and strained power, and the fiscal relationship between central and sub national governments. From an empirical point of view, many researchers have

investigated the effect of tax revenue on economic growth of Nigeria. The studies carried out based on this motivation differed, in terms of data usage, across countries, the methodologies applied, as well as the different time frames either being conducted in developed or developing countries. However, several scholars agree that taxation is one of the significant factors that determines the productive capacity of the country (Pamba, 2022; Nguyen, Minh and Binh (2022) on the other hand, empirical studies conducted by Olabode and Idebi (2022); Okonkwo, Amahalu and Obi (2022); Okeke, Mbonu and Amahalu (2018a) found a negative relationship between tax revenue on economic growth while, Kamasa, Nortey, Boateng and Bonuedi (2022); held that a non-significant relationship exists between tax revenue on economic growth. The mixed results obtained from the reviewed empirical literatures gave rise to a gap in literature which this study tends to fill. It is in view of this that this study sought to ascertain the effect of tax revenue on economic growth of Nigeria.

1.1 Objectives of the Study

The main objective of this study is to determine the effect of Tax Revenue on Economic Growth in Nigeria.

The specific objectives were to:

i. Ascertain the effect of Company Income Tax on Gross Domestic Product in Nigeria
ii. Determine the effect of Petroleum Profit Tax on Gross Domestic Product in Nigeria
iii. Examine the effect of Personal Income Tax on Gross Domestic Product in Nigeria
iv. Evaluate the effect of Value Added Tax on Gross Domestic Product of Nigeria

1.2 Hypotheses

In line with the above research questions, the following null hypotheses were formulated:

Ho_1: Company Income Tax has no significant effect on Gross Domestic Product in Nigeria.

Ho_2: Petroleum Profit Tax has no significant effect on Gross Domestic Product in Nigeria.

Ho_3: Personal Income Tax has no significant effect on Gross Domestic Product in Nigeria.

Ho_4: Value Added tax has no significant effect on Gross Domestic Product in Nigeria.

2. LITERATURE REVIEW

2.1 Conceptual review

2.1.1 Tax Revenue

Tax revenue is the income that is collected by governments through taxation. Taxation is the primary source of government revenue. Revenue may be extracted from sources such as individuals, public enterprises, trade, royalties on natural resources and/or foreign aid (Sitharaman, 2022). Taxation is the primary source of income for the government. The most important revenue receipts for the government, taxes are involuntary fees levied on individuals and corporations to finance government activities. Tax revenue is defined as the revenues collected from taxes on income and profits, social security contributions, taxes levied on goods and services, payroll taxes, taxes on the ownership and transfer of property, and other taxes (Okeke, Mbonu & Amahalu, 2018b). Taxes collected from both direct tax and indirect tax are the government's tax revenue. It includes collections from income tax, corporation tax, customs, wealth tax, tax on land revenue, petroleum profit tax, value added tax, custom and excise duties and so on (Ashiedu, Okafor, Amahalu & Obi, 2022).

2.1.2 Company Income Tax

The corporate income tax is a levy that is imposed on the net profits of corporations, computed as the excess of receipts over allowable costs. A corporate tax is a tax on the profits of a corporation (Ezechukwu, Amahalu & Okudo, 2022). The Company Income Tax Act (CITA) is the principal law that regulates the taxation of companies in Nigeria. The tax regime in Nigeria is a multi-level tax system, which simply means that taxation is administered by the three tiers of government. The Federal Inland Revenue Service (FIRS) administers or oversee the income tax for companies. 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 any business in Nigeria. The CIT is paid by limited liability companies inclusive of the public limited liability companies. The CIT is currently charged at the rate of 30% for companies having more than N100 Million Naira turnover. It is also charged at the rate of 20% for companies with a turnover between N25 Million and N100 Million. CIT is governed by Companies Income Tax Act (CITA), Cap C21, LFN 2004 (as amended).

2.1.3 Petroleum Profit Tax (PPT)

PPT is a tax on the income of companies engaged in upstream petroleum operations. Petroleum Profits Tax is imposed on income of companies in petroleum operations (upstream). The PPT is charged on the profits of oil companies in the upstream sector. Upstream relates to winning, exploration and transportation (Ernst & Young, 2022). Petroleum is a huge earner for the government. Taxation of petroleum profit started in 1959 with the enactment of the Petroleum Profit Tax Act 1959 which was meant to have a retrospective effective date of 1st January, 1958.

2.1.4 Personal Income Tax (PIT)

Personal Income Tax (PIT) is a statutory obligation imposed by the government on the incomes of individuals, communities and families, trustees or executors of any settlement. In Nigeria, PIT is guided by the Personal Income Tax Act Cap P8 LFN 2004 (as amended). PIT is a direct tax charged on the income of a person. It is levied on an individual's wages, salaries, and other types of income (FIRS, 2022). PIT is calculated using the graduated tax table/scale with rates ranging between 7% – 24%, depending on the amount of chargeable income. However, the maximum tax payable by any individual, regardless of the income, is 19.2% of such individual's gross income. An individual is entitled to a Consolidated Relief Allowance of N200,000 or 1% of gross income whichever is higher plus 20% of gross income. Individuals are subject to minimum tax of 1% of gross income where the income is less than N300,000 per annum (FIRS, 2022).

The table below shows a summary of the taxable income tax bands and applicable rates of tax on an annual basis.

Table 1: Personal Income Tax

Annual income (NGN)	Personal income tax (PIT) rate (%)
First 300,000	7
Next 300,000	11
Next 500,000	15
Next 500,000	19
Next 1,600,000	21
Above 3,200,000	24

Source: FIRS, 2023

2.1.5 Value Added Tax

VAT is governed by Value Added Tax Act Cap V1, LFN 2004 (as amended). Value-added tax (VAT) is a type of indirect tax levied on goods and services for value added at every point of production or distribution cycle, starting from raw materials and going all the way to the final retail purchase (FIRS, 2022). VAT is a consumption tax paid on all goods and services provided in or imported into Nigeria. VAT, which is currently charged at the rate of 7.5% is payable by individuals, companies, and government agencies. Certain goods and services including medical and pharmaceutical products, medical services basic food items, books and educational materials, exports e.t.c. are exempt from VAT (CITN, 2022). The Federal Inland Revenue Service (FIRS) as an agency of the Federal Government, has been solely responsible for the administration and management of VAT assessment and collection in Nigeria.

2.1.6 Economic Growth

Economic growth is an increase in the production of economic goods and services, compared from one period of time to another (Picardo, 2021). Economic growth can be defined as the increase or improvement in the inflation-adjusted market value of the goods and services produced by an economy over a certain period of time (Bennee, Okoye & Amahalu, 2021a). Economic growth is the process by which a nation's wealth increases over time. Economic growth is the increase in the value of an economy's goods and services, which creates more profit for businesses. As a result, stock prices rise.

2.1.7 Gross Domestic Product

Gross domestic product (GDP) is the monetary value of all finished goods and services made within a country during a specific period. GDP provides an economic snapshot of a country, used to estimate the size of an economy and growth rate (Ndum, Okoye & Amahalu, 2019). Gross domestic product (GDP) is the standard measure of the value added created through the production of goods and services in a country during a certain period. As such, it also measures the income earned from that production, or the total amount spent on final goods and services (OECD, 2022).Gross domestic product tracks the health of a country's economy. It represents the value of all goods and services produced over a specific time period within a country's borders.

2.1.8 Company Income Tax and Economic Growth

In order to attract internationally mobile capital, governments have to offer a business environment at least comparable to that of other countries. Profit taxation is clearly a relevant part of that environment. This explains why most countries have reduced their taxes on mobile capital. The effect of corporate income taxation on economic growth has stirred debate in both academic and policy circles. Those in favour of corporate tax cuts have argued that lower tax rates would boost growth (Bennee, Okoye & Amahalu, 2021b; Zhou, Tian, Gao, Ling, Fan, Hou, Shen & Zhou, 2019). Others have raised doubts that substantial growth enhancing impacts of corporate tax reductions would materialize (Yang, 2021; Cai, Chen & Wang, 2018).

2.1.9 Petroleum Profit Tax and Economic Growth

The sales of crude oil and gas are the main sources of oil revenue, petroleum profit tax and royalties, and so on. Nevertheless, these revenues cause economic growth to rise or decrease depending on the type of government-adopted theory, policy and realistic implementation. The discovery of crude oil has had a positive and adverse impact on the Nigerian economy. The high potential of petroleum exploration and production of pollution and depletion makes it an environmental tax priority (Aruna, Oshiole & Amahalu, 2020) found a positive relationship between petroleum profit tax and economic growth. Conversely, Heimberger (2021); found a negative relationship between petroleum profit tax and economic growth.

2.1.10 Personal Income Tax and Economic Growth

Kunawotor, Bokpin, Asuming & Amoateng (2022) argued that though PIT may not be the most fundamental source of government revenue in terms of magnitude of revenue derivable from taxation, however, PIT is one of the most fundamental sources of government revenue, from the viewpoint of certainty and consistency of taxpayers. Prior studies have shown that there is a link between personal income tax and economic growth (Dorofeev, 2021), while Okoye, Amahalu, Obi & Iliemna (2019) reported a negative relationship between personal income tax and economic growth.

2.2 Theoretical Review

2.2.1 Endogenous Growth Theory

The endogenous theory which was propounded by Paul Romer in 1990 is a financial theory which argues that financial or economic growth is generated from internal (rather than external such as inflation, interest rates, tax rates, currency exchange rate, saving rates, consumer confidence levels)

procedures and inputs. The theory notes that productivity can be improved by the efficiency of a skilled labor force and by rightly using technology. The endogenous growth theory is the concept that economic growth is due to factors that are internal to the economy and not because of external ones. The theory is built on the idea that improvements in innovation, knowledge, and human capital lead to increased productivity, positively affecting the economic outlook. Endogenous growth theory maintains that economic growth is primarily the result of internal forces, rather than external ones. It argues that improvements in productivity can be tied directly to faster innovation and more investments in human capital from governments and private sector institutions.

2.3 Empirical Review

Arodoye and Adegboye (2016) investigated tax structure in Nigeria and how it relates to productivity growth and overall economic performance. The changing structure of the Nigerian economy was considered in terms of the tax structure evolution. Three issues were considered, namely, responses of government spending to tax changes, tax-spending effects of growth of output per man, and the structural effects of taxes on growth over time. Using appropriate techniques and data for the period 1981 to 2013, the results indicated that company income taxes performs best in explaining changes in government spending while VAT performed worst. Also, spending patterns that are economic and productive tend to provide optimality for taxation in terms of productivity growth. In relation to tax structure, indirect taxes appear to be more output stimulating than direct taxes, therefore, growing the economy in terms of productivity and employment generation requires more appropriate tilting of the tax structure towards indirect taxation as well as channeling tax revenues to more productive uses.

Gbegi, Adebisi and Bodunde (2017) examined the effect of petroleum profit tax (PPT) on Profitability of oil and gas firms in Nigeria, in line with the objectives of the study, secondary data were obtained from financial statement of ten (10) selected oil and gas firm covering the period of 2011 to 2015. Panel data were deployed and both descriptive statistics and multiple regressions technique employed 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 $R^2$of 95%. The study revealed that taxes paid by oil and gas industries have a downward effect on profitability of oil and gas industries. Following the outcome of the study, it was therefore concluded that higher tax rate cause reduction in Profitability of oil and gas firms in Nigeria for the period 2011 to 2015. It was recommended that Government should reduce the tax rate to enable oil and gas firms strive especially during this economic recession.

Arowoshegbe Uniamikogbo and Aigienohuwa (2017) explored the effect of income tax revenue on the economic growth of Nigeria, proxied by Gross Domestic Product (GDP). Data were collected from secondary sources, that was, the Statistical Bulletins of Federal Inland Revenue Service and the Central Bank of Nigeria respectively for the period 1995 to 2015. Econometric Model of Multiple Linear Regressions and Ordinary Least Square (OLS) technique were adopted to explore the relationship between GDP (the dependent variable) and a set of government income tax revenue heads over the period 1995 to 2015. Findings showed that tax revenues that determine government economic growth are Petroleum Profit Tax and Company Income Tax. This implies that taxes that have positive effect on economic growth are direct taxes, thus direct taxes exert more significant effect on economic growth of Nigeria than indirect taxes. The anomaly was attributed to dysfunctionalties in the income tax system, loopholes in tax laws and inefficient tax administration. It was recommended that tax policymakers and regulatory bodies should strengthen the legal and regulatory framework in order to control tax evasion and avoidance by taxpayers. Also, strategies should be adopted to improve on the system of tax administration to increase tax revenue generation in Nigeria.

Okeke, Mbonu and Amahalu (2018) ascertained the relationship between tax revenue and economic development in Nigeria during the period 1994 -2016. Data were obtained from the Central Bank of Nigeria, Office of the Federal Inland Revenue Service and Annual Abstract of statistics of the National Bureau of Statistics. This study was based on time series data. The Augmented Dickey Fuller test, Multple linear regression, Multicollinearity test, Granger Causality test, Johansen cointegration test and Error correction model were employed in the analysis of the data. The findings of this study showed that tax revenue has a statistically significant relationship with labour force and gross fixed capital formation in Nigeria at 5% level of significance respectively. On the basis of the findings, it was recommended among others that since tax revenue has been proven to contribute to economic development in Nigeria, Government needs to increase its allocation to the priority sectors of the economy such as agriculture and industry in order improve on the welfare of the citizenry.

Okonkwo, Amahalu and Obi (2022) ascertained the relationship between Tax Revenue and Productivity of Nigeria for sixteen years ranging from 2005-2020. Specifically, the study ascertained the relationship between Value Added Tax, Petroleum Profit Tax, Personal Income Tax and Gross Domestic Product per Capita. The time series data sets used in this study were obtained from Central

Bank of Nigeria Statistical Bulletin, Securities and Exchange Commission Office publications, National Bureau of Statistics publications and World Bank Statistical Bulletin for the study period. Longitudinal research design was employed. Inferential statistics using Augmented Dickey-Fuller (ADF) test, Pearson correlation coefficient, Ordinary Least Square regression analysis, Granger Causality test, Johansen Co-integration test and Error Correction Model were applied to test the hypotheses of the study. The specific findings showed that there is a significant but negative relationship between Value Added Tax and GDP per Capita ($\beta1$ = -0.383441; p-value = 0.0342); a significant but negative relationship between Petroleum Profit Tax and GDP per Capita of Nigeria at 5% level of significance ($\beta2$ = -0.385457; p-value = 0.0305); a significant but negative relationship between Personal Income Tax and GDP per Capita of Nigeria at 5% level of significance.

Olabode and Idebi (2022) examined the relationship between tax revenue and economic growth in Nigeria over 1981–2019 periods, with special focus on Companies Income Tax, Value Added Tax and Petroleum Profits Tax. The data were sourced from the National Bureau of Statistics (NBS) and the Federal Inland Revenue Service (FIRS). The study employed the Vector Error Correction Model (VECM) to establish the nature and strength of the relationship between taxation and economic growth. The Johansen test of co-integration revealed that there is at least one cointegrating equation in the long-run between the variables. Granger causality test found a causal relationship among Real GDP and the different tax components. The impulse response functions and the variance decomposition analysis upheld the findings that the impact of the shock in the indirect tax (VAT) and direct tax (CIT and PPT) on GDP growth did not die out over the specified period under consideration. Variance decomposition analysis found that the effect of the shock to the direct tax (CIT and PPT) on GDP growth tend to be low, whereas the effect of the shock to the indirect tax (VAT) on GDP growth tend to be significant to increase over the period.

3. MATERIAL AND METHOD

The *Ex-post Facto* research design was adopted. This study constituted the thirty-six (36) states of the Federal Republic of Nigeria including the Federal Capital Territory, Abuja. The nature of data for this study was 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), World Bank Statistical Bulletin and Annual Abstract of Statistics from the National Bureau of Statistics (NBS) for the period of interest (1994 – 2021). Inferential statistics of the study was done using Pearson coefficient correlation, unit root test and ordinary least square regression analysis.

The independent variable in this study is tax revenue which was decomposed into:

i) Company Income Tax (CIT): were obtained from Federal Inland Revenue (FIRS) statistical bulletin (various issues).

ii) Petroleum Profit tax (PPT): were obtained from Federal Inland Revenue (FIRS) statistical bulletin (various issues).

iii) Personal Income Tax (PIT): were obtained from Federal Inland Revenue (FIRS) statistical bulletin (various issues).

iv) Value Added Tax (VAT): were obtained from Federal Inland Revenue (FIRS) statistical bulletin (various issues).

The dependent variable is economic growth, which was proxied with:

i. Gross Domestic Product (GDP): was sourced from Central Bank of Nigeria Statistical Bulletin, World Bank Statistical Bulletin and National Bureau of Statistics (various issues).

3.1 Model Specification

To ascertain the effect of tax revenue on economic growth, this study adapted and modified the model of Okonkwo, Amahalu and Obi (2022):

$RGDP = \beta + \beta_1 VAT + \beta_2 CED + \beta_1 PPT$

Where:

RGDP = Real Gross Domestic Product

CED = Custom and Excise Duties

VAT = Value Added Tax

By adapting the model of Okonkwo, Amahalu and Obi (2022), the following linear equation was estimated:

$GDP_t = \beta_o + \beta_1 CIT_t + \beta_2 PPT_t + \beta_3 PIT_t + \beta_4 VAT_t + \mu$

Where:

βo stands for the intercept term.

μ is the error term

β_1 = Coefficient of Tax Reforms

GDP = Gross Domestic Product for period t

CIT_t = Companies Income Tax for period t

PPT_t = Petroleum Profit Tax for period t

PIT_t = Personal Income Tax

VAT_t = Value Added Tax

4. RESULT AND DISCUSSIONS

4.1 Data Analysis

Table 2: Pearson Correlation Matrix

	GDP	VAT	PPT	PIT	CIT
GDP	1.0000				
VAT	0.6760	1.0000			
PPT	0.6555	0.7334	1.0000		
PIT	0.6697	0.7196	0.6933	1.0000	
CIT	0.6933	0.7141	0.7370	0.7060	1.0000

Source: E-Views 10.0 Correlation Output, 2023

4.1.1 Interpretation of Correlation Matrix

Table 4.2 indicates that there is a positive correlation between VAT (0.6760), PPT (0.6555), PIT (0.6697), CIT (0.6933) and GDP.

4.1.2 Test of Reliability (Unit Root Test)

The test for unit root is invariably, the test for stationarity. The test was carried out on each variable in the model in order to avoid the estimation of a spurious relationship arising from using two or more non-stationary time series data to estimate long-run relationship. The Augmented Dickey Fuller (ADF) method was used to test for the unit root. The initial set of analysis involves the test on the data series in their level and to further difference it to make it stationary.

The results of the unit root are presented in Table 3

Table 3: Differenced Results

Variables	Test Statistic	Test Critical Values			Status	Prob.
	ADF	1% level	5% level	10% level	Stationary	
DCIT	-7.893698	-3.737853	-2.991878	-2.635542	1(1)	0.0000
DGDP	-7.626804	-3.724070	-2.986225	-2.632604	1(1)	0.0000
DPIT	-7.067551	-3.737853	-2.991878	-2.635542	1(1)	0.0000
DPPT	-6.400539	-3.737853	-2.991878	-2.635542	1(1)	0.0000
DVAT	-9.782307	-3.737853	-2.991878	-2.635542	1(1)	0.0000

Source: E-views 10.0, Output File, 2023

Using the MacKinnon critical values for rejection of hypothesis of a unit root, we therefore reject the null hypothesis that there is no unit root for all the variables in the model whose ADF test statistic values are greater than the critical values at 10%, and accept that there is unit root for all in the variables. The result of the unit root using ADF test reported in Table 3 shows that all the variables were non-stationary at level. However, after first difference (CIT, GDP, PIT, PPT and VAT) were stationary at 1% level, , 5% level and at 10% level of significance. Implying that all the variables are integrated of order one "1(1)." This result also made regression analysis suitable for estimation.

4.2 Test of Hypotheses

Table 4: Ordinary Least Square regression (OLS) analysis showing the effect of CIT, PPT, PIT and VAT on GDP

Dependent Variable: DGDP

Method: Least Squares

Date: 02/03/23 Time: 14:12

Sample (adjusted): 1995 2021

Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.033437	0.012117	2.759451	0.0114
DCIT	0.000945	0.048876	0.019330	0.9848
DPPT	0.035575	0.050170	0.709099	0.4857
DPIT	0.008635	0.072893	0.118465	0.9068
DVAT	0.158820	0.138960	1.142914	0.2654

R-squared	0.102426	Mean dependent var	0.041111
Adjusted R-squared	-0.060769	S.D. dependent var	0.055701
S.E. of regression	0.057368	Akaike info criterion	-2.713080
Sum squared resid	0.072404	Schwarz criterion	-2.473110
Log likelihood	41.62657	Hannan-Quinn criter.	-2.641724
F-statistic	0.627632	Durbin-Watson stat	2.317634
Prob(F-statistic)	0.647850		

Source: E-Views 10.0 regression Output, 2023

4.2.1 Interpretation of Estimated Regression Coefficients

The effect of tax revenue on economic growth of Nigeria is evaluated based on the result of table 4:

GDP = 0.033437 + 0.000945CIT + 0.035575PPT + 0.008635PIT + 0.158820VAT

The drawn inference from the model implies that one unit increase in CIT, PPT, PIT and VAT will cause GDP to increase by 0.09%, 3.56%, 0.86%, 15.88% respectively. From table 4.4, CIT with a positive co-efficient of 0.000945 has a non-significant effect on GDP as indicated by the t-statistic of 0.019330 and its associated probability value of 0.9848 > 0.05; PPT is positively but non-significantly related to GDP as indicated by the t-statistic of 0.709099 and p-value of 0.4857 > 0.05; PIT has a positive but non-significant relationship with GDP as denoted by the t-statistic = 0.118465 and p-value = 0.9068 > 0.05; a non-significant positive relationship exists between VAT and GDP at t-statistic = 1.142914, with the p-value = 0.2654 > 0.05.

The adjusted R squared which examines the extent to which the predictors (CIT, PPT, PIT and VAT) explain the variations in the dependent variable (GDP) shows that the adjusted R Squared figure of 0.260769 indicates that, reliance on this model will account for 26.08% of the variations in the dependent variable (GDP), while the remaining 73.92% is accounted by other factors outside the scope of this model The Durbin-Watson value of 2.317634 buttressed the fact that the model does not contain auto-correlation, since the value2.317634 is not more than 2 approximately, thereby, making the regression fit for prediction purpose.

4.2.2 Decision

Since the p-value of the test = 0.647850 is greater than the critical significant value of 5%, thus Ho is accepted and H_1 rejected. Therefore, this study upholds that tax revenue has a positive but non-significant effect on economic growth of Nigeria at 5% level of significance.

4.2.3 Findings

Based on the analysis of this study, the following findings were deduced:

i. Company Income Tax has a positive but non-significant effect on Gross Domestic Product in Nigeria at 5% level of significance (β_1=0.000945; p-value = 0.9848>0.05).
ii. Petroleum Profit Tax has a positive but non-significant effect on Gross Domestic Product in Nigeria at 5% level of significance (β_2=0.035575; p-value = 0.4857>0.05).
iii. Personal Income Tax has a positive but non-significant effect on Gross Domestic Product in Nigeria at 5% level of significance (β_3=0.008635; p-value = 0.9068>0.05).

iv. Value Added Tax has a positive but non-significant effect on Gross Domestic Product in Nigeria at 5% level of significance (β_4=0.158820; p-value = 0.2654>0.05).

CONCLUSION AND RECOMMENDATIONS

This study determined the effect of tax revenue on economic growth of Nigeria. The data set used for this analysis is the annual series of the selected relevant macroeconomic variables from 1994 to 2021. Data for company income tax, petroleum profit tax, personal income tax and value added tax were used as tax revenue variables. Data for gross domestic product were used as economic growth variable. The time series data were obtained from Federal Inland Revenue Services, Central Bank of Nigeria, National Bureau of Statistics and the World Bank Publications. As a preliminary step in testing, the study employed the Augmented Dickey Fuller Unit root test to confirm the order of integration of the time series variables. The findings indicate clearly that that company income tax has a positive but non-significant effect on Gross Domestic Product (β_1=0.000945; p-value = 0.9848>0.05); petroleum profit tax has a positive but non-significant effect on Gross Domestic Product (β_2=0.035575; p-value = 0.4857>0.05); personal income tax has a positive but non-significant effect on Gross Domestic Product (β_3=0.008635; p-value = 0.9068>0.05); value added tax has a positive but non-significant effect on Gross Domestic Product (β_4=0.158820; p-value = 0.2654>0.05) of Nigeria at 5% level of significance. The research therefore accepts the null hypotheses; that tax revenue has a non-significant added, petroleum profit tax, personal income tax and company income tax have a statistical significant effect on the economic growth in Nigeria at 5% significant level. The implication of the findings is that an increase in tax revenue will cause economic growth to be improved.

The following recommendations were proffered based on the findings of the study:

i. In order to reverse the non-significant effect of VAT on gross domestic product, government should see that the application of VAT ensures that international trade takes place on a transparent basis and avoids distortions like tax cascading associated with alternative commodity taxes.

ii. For the PPT to have a more significant effect on economic growth of Nigeria, Government should devise means of curbing corruption and leakages in the PPT administration. 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.

iii. Government should ensure that self-employed individuals in Nigeria register with the revenue authority and pay their taxes which can impact positively on increased PIT revenue generation, hence, bolstering the productivity of Nigeria economy. It is expected 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 in the overriding goal of achieving national development

iv. In order to reverse the non-significant effect of VAT on gross domestic product, government should see that the application of VAT ensures that international trade takes place on a transparent basis and avoids distortions like tax cascading associated with alternative commodity taxes.

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