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ASSESSING THE RELATIONSHIP BETWEEN TAXATION AND ECONOMIC GROWTH IN NIGERIA: THE ROLE OF REVENUE MANAGEMENT

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Article Info

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Abstract

Taxation is an indispensable source of revenue for the government as it enables the delivery of vital services for the general population. This study will investigate the link between proper management of tax revenue and economic growth in Nigeria. Mobilizing tax income has been difficult for Nigerian government due to various forms of resistance, evasion, corruption, and lack of knowledge or poor education on taxation among the citizens. The country's over-reliance on crude oil sales profits has resulted in the economy growing sensitive to worldwide oil market fluctuations, which threatens the economic stability. The current study will employ empirical investigation to determine whether weak tax-induced economic development is due to low tax revenue collection or low tax payer compliance. Diversification of Nigeria's revenue sources is a major concern for the economy, and this research aims to provide a better understanding of the relationship between tax revenue management and economic growth in Nigeria

INTRODUCTION

The management of tax revenue is a crucial act of any government to ensure continuous growth and development. Taxation is one of the potential sources of cash for delivering critical services to a large group of people living in a certain geographical location. Taxation is used to support government expenditures by imposing an obligatory payment on individuals, groups, businesses or corporate entities, and properties. Taxation, according to existing literature such as James (2017) and Okoye (2014), generates funds to finance public goods, regulates the production and consumption of goods and services, controls adverse economic conditions, protects infant industries, and reduces income inequality, among other things.

Mobilization of tax income as a source of financing developmental activities to accelerate economic growth in developing economies has been difficult, owing to various forms of resistance, avoidance, evasion, corruption, and citizens' lack of knowledge or poor education on taxation, all of which have been considered a sabotage to the economy, with the country's revenue dwindling as a result (Adegbie & Fakile, 2018). Due to rising government operating costs in the face of declining revenue, all levels of government in Nigeria are devising measures to increase their revenue base (Kiabel & Nwoka, 2019).

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The Nigerian economy is at danger of stagnating unless aggressive steps to diversify revenue sources are done. Diversifying Nigeria's revenue sources, according to Oriakhi and Ahuru (2014), is a major concern for the country's economy. The awareness that reliance on crude oil profits cannot maintain state expenditure has necessitated this diversification. Over the previous few years, the main oil-consuming countries have continuously cut their demand for Nigerian oil (Nwaorgu, Herbert & Onyilo, 2019).

The economy's over-reliance on crude oil sales profits has serious consequences. The economy has grown sensitive to worldwide oil market fluctuations, posing a severe threat to the Nigerian economy. According to Oti and Odey (2019), the Nigerian economy may tank if other forms of revenue production are not promptly pursued in order to continue the effort for diversifying the country's revenue base. It is unclear if weak tax-induced economic development is due to low tax revenue collection or low tax payer compliance. As a result, this study is driven to answer this issue by empirically investigating the influence of the management of tax revenue on economic growth in Nigeria.

LITERATURE REVIEW Conceptual Review

According to the World Bank (2000), taxes are the involuntary transfer of resources from the rest of the economy to the government; it was also said that no one tax structure can potentially suit the requirements of every country. The optimal system for every nation should be chosen by taking into consideration its economic structure, tax administration capabilities, public service demands, and a variety of other criteria. Nonetheless, looking at what taxes exist across the world might give you an understanding of what is important in tax policy. This is to meet or provide common goods; revenue is essential to pay governmental expenditure, as indicated by Miller and Oats (2016).

Unegbu and Irefin (2019) defined tax as a mandatory levy imposed by the government within a certain jurisdiction on the taxable income of every taxable individual, company, institution, or commodity to offset expenditure on public goods. Taxation is the idea and science of levying a tax on the taxable income of tax payers in a certain jurisdiction. The tax collected is utilized for the common welfare of every person inside the state to produce specific services that are deemed critical to the residents' well-being (Enahoro & Olabisi, 2018).

Onoh (2017) justified tax as a mandatory payment imposed on individuals for the public benefit of the government. He went on to say that taxes are helpful since they supply the government with funding for general governance of the country. The connection between the state and its citizens is hence taxation, and tax money is the lifeblood of the social contract.

THEORETICAL REVIEW The Expediency Theory of Taxation

According to Arthur Cecil Pigou's 1929 expediency theory of taxation, any tax revenue collecting plan must satisfy the practicability test, which must be the only consideration when the county government chooses a revenue collection proposal. The proposal is that the government's economic and social goals be ignored, because it is pointless to have a tax that cannot be imposed and collected properly.

The Cost-of-Service Theory

This theory as propounded by Lindal (1945) emphasizes the semi-commercial relationship between the state and the citizens to a greater extent. The implication is that the citizens are not entitled to any benefits from the state and if they do receive any, they must pay the cost thereof. In this theory, the state is being asked to give up basic protective and welfare functions.

EMPIRICAL REVIEW

Omondi (2019) examined the impact of value-added tax management on Kenyan economic development from 1973 to 2010. Based on its capacity to determine the degree and direction of correlations between variables, the study used econometric exposition. The model was estimated using the ordinary least squares approach. According to the empirical findings, there is a positive but minor association between value-added tax and economic development in Kenya.

Osho and Omotayo (2018) examined the impact of company income tax management on gross domestic products in Nigeria. The motive of the study was to examine how company income tax revenue has contributed to gross domestic product in Nigeria. Secondary data was obtained from relevant works of literature, the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics publications. Ordinary Least Square Linear Regression model was used to test the related data extracted from the Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics. Findings revealed that company income tax revenue has a positive and significant effect on gross domestic product in Nigeria.

Wonders and Mohamed (2021) conducted research on the influence of petroleum profit tax management on Nigerian economic growth from 1981 to 2020. From 2010 to 2018, the study used an interval scale of measurement and a previous year foundation of sampling, with a sample size of nine (9) years. For data analysis, the study used univariate and bivariate analysis in MS Excel 2019 and SPSS Statistics 26. According to the study, PPT has no significant link with per capita income and no significant relationship with employment.

METHODOLOGY Research Design

The investigation employed the *Ex Post Facto* design given that it is targeted at analyzing the impact of some independent variables on a specified dependent variable. This study makes use of an econometric procedure in estimating the effect of taxation on economic growth in Nigeria. **Area of Study**

This study was carried out in Nigeria with an empirical focus on analyzing the effect of taxation on economic growth in Nigeria covering the period 1994–2020. The areas of taxation that were explored in the study include Value Added Tax (VAT), Company Income Tax (CIT) and Petroleum Profit Tax (PPT). Economic growth was measured using Gross Domestic Product (GDP).

Source of Data

Data for the study are secondary in nature and were extracted from the Central Bank of Nigeria Statistical Bulletin (2020).

Model Specification

According to Koutsoyiannis (2003), a model specification is a mathematical expression which involves the determination of a dependent variable given a set or sets of independent variables.

The model for this study is specified thus:

In implicit form, we have: $GDP = f(VAT, CIT, PPT)$ … … … … … … … . (3.1) Transforming

equation 3.1 into an explicit econometric form, we have:

$GDP = \beta_0 + \beta_1 VAT + \beta_2 CIT + \beta_3 PPT + \mu$ … … … … … … … … … … … … . (3.2) where:

GDP = Gross Domestic Product (Measure of Economic Growth)
VAT = Value Added Tax
CIT = Company Income Tax
PPT = Petroleum Profit Tax
μ = The stochastic error term
$\square 0, \square 1, \square 2, \square 3$ = Parameters of the independent variables to be estimated.

Method of Data Analysis

This study adopted the linear regression with the application of Ordinary Least Squares (OLS) technique. To avoid the estimation of spurious regression, the unit-root test and other diagnostic tests were conducted. Post estimation tests like the normality test and heteroscedasticity test were carried out as well.

Statistical Software Adopted

The econometric software that was used in this research is the Eviews Version 10 statistical software.

RESULTS AND ANALYSIS Unit Root Result/Analysis

Time series data are often assumed to be non-stationary and thus, it is necessary to perform unit root test to ensure that the data are stationary. The test was employed to avoid the problem of spurious regression. Therefore, the Augmented Dickey-Fuller (ADF) unit root test was used to determine the stationarity of the data to complement each other. The decision rule based on the ADF test is that its statistic must be greater than Mackinnon Critical Value at 5% level of significance and in absolute term. The results of the unit-root test are reported in table 1 below. **Unit-Root Test Result**

Table 1

VARIABLE	ADF STAT.	CRITICAL VAL.	ORDER
GDP	-5.197535	-3.622033	I(1)
VAT	-3.808271	-3.658446	I(1)
CIT	-6.138727	-3.603202	I(1)
PPT	-5.133122	-2.986225	I(1)

Having conducted the unit-root analysis, it can be clearly seen from Table 1 that all the variables are stationary at first difference (I(1)). This entails that none of them was stationary at level form. Hence, the variables were now fit to conduct a regression analysis with reliable numerical coefficients.

Descriptive Statistics Table 2

	PPT	GDP	CIT	VAT
Mean	3663.207	49747.67	365.5185	218.7333
Median	3830.100	34318.67	305.7100	144.3700
Maximum	8879.000	152324.1	801.2900	699.3700
Minimum	160.2000	1751.280	10.93000	5.030000
Std. Dev.	2573.674	47592.24	319.2038	204.0216
Skewness	0.204435	- 0.759137	0.199703	0.668922
Kurtosis	1.984878	2.314070	1.296774	2.317559
Jarque-Bera	1.347354	3.122611	3.443065	2.537494
Probability	0.509830	0.209862	0.178792	0.281184
Sum	98906.60	1343187	9869.000	5905.800
Sum Sq. Dev.	1.72E+08	5.89E+10	2649168	1082245
Observations	27	27	27	27

Source: *Analysis Using Eviews 10*

It can be clearly seen from Table 2 that the mean of petroleum profit tax (PPT), gross domestic product (GDP), company income tax (PIT), value added tax (VAT) and gross national income per capita (GNIPC) yielded 3663.207, 49747.67, 365.5185, and 218.7333 respectively. The standard deviation of PPT yielded 2573.674, GDP deviated by 47592.24, CIT yielded a standard deviation of 319.2038, and VAT yielded 204.0216. The skewness for PPT, GDP, CIT, VAT and GDP yielded 0.204435, -0.759137, 0.199703, and 0.668922 respectively. This clearly shows that GDP yielded a negative skewness. All the variables have positive Kurtosis as revealed in the table. PPT yielded a positive Kurtosis at the magnitude of 1.984878, GDP yielded 2.314070, CIT yielded 1.296774, and VAT yielded 2.317559.

Cointegration Analysis (Johansen Method) Table 3

Date: 04/05/22 Time: 06:18
Sample (adjusted): 1996 2020
Included observations: 25 after adjustments

Trend assumption: Linear deterministic trend
Series: GDP VAT CIT PPT
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.777459	72.37314	47.85613	0.0001
At most 1 *	0.642487	34.80707	29.79707	0.0122
At most 2	0.279367	9.092479	15.49471	0.3569
At most 3	0.035431	0.901841	3.841466	0.3423

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
** MacKinnon-Haug-Michelis (1999) p-values

Source: *Analysis Using Eviews 10*

The Johansen method of cointegration was used for the study because all the variables are stationary at first difference. The Johansen result as displayed in Table 3 clearly shows evidence of cointegration as trace statistics test indicates two cointegrating equations at 5% level of significance. We therefore reject the null hypothesis of no cointegration meaning that there exists a long-run relationship existing between GDP, VAT, CIT and PPT.

Regression Analysis Table 4

Dependent Variable: LOG(GDP)
Method: Least Squares
Date: 04/05/22 Time: 06:15
Sample: 1994 2020
Included observations: 27

R-squared	0.923788	Mean dependent var	10.14133
Adjusted R-squared	0.913847	S.D. dependent var	1.360196
S.E. of regression	0.399243	Akaike info criterion	1.137459
Sum squared resid	3.666077	Schwarz criterion	1.329434
Log likelihood	-11.35569	Hannan-Quinn criter.	1.194543
F-statistic	92.92952	Durbin-Watson stat	2.625588
Prob(F-statistic)	0.000000		

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.434433	0.136377	61.84636	0.0000
VAT	0.002258	0.001093	2.066442	0.0502
CIT	-0.001677	0.000734	-2.282854	0.0320
PPT	0.000164	4.25E-05	3.853999	0.0008

Source: *Researcher's Computation Using Eviews 10*

Interpretation of the Numerical Coefficients

From Table 4, it can be clearly seen that the numerical coefficient of Value Added Tax (VAT) yielded a positive numerical coefficient at that magnitude of 0.002258. This shows that VAT contributes positively to economic growth in Nigeria. It entails that a 1% increase in VAT leads to a 0.002258% increase in GDP for the years under analysis. This conforms to economic a priori expectation because VAT revenue channeled to productive ends by the government translates to economic growth.

Table 4 also reveals that Company Income Tax yielded a negative numerical coefficient at the magnitude of -0.001677. This entails that CIT contributes negatively to economic growth in Nigeria for the period under analysis. It entails that an increase in CIT by 1% leads to a reduction in economic growth by 0.001677%.

Petroleum profit tax (PPT) yielded a positive numerical coefficient at the magnitude of 0.000164. This entails that PPT contributes positively to economic growth in Nigeria. This result is in line with a priori expectation because an increase in PPT increases government revenue which is therefore channeled to economic growth generating projects.

Coefficient of Determination

The coefficient of determination (R-Squared) = R^2 yielded 0.923788. This entails that much of the variations in GDP is largely explained by the changes in taxation in Nigeria. It practically shows that approximately 92% of the changes in GDP is explained by the variations in taxation components in Nigeria for the period under analysis. Other macroeconomic variables that affect GDP do so at approximately 8%.

F-Statistics Analysis

The F-statistics is a statistical measure employed to analyze the statistical significance of the entire regression plane. Based on the regression from Table 4, it can be clearly seen that the Fstatistics yielded 92.93952 with a corresponding probability value of 0.000000 < 0.05. This entails that the test is statistically significant at the entire regression plane.

Autocorrelation Test (Durbin-Watson Statistic)

The Durbin-Watson statistic yielded 2.625588 and this entails that there is no presence of autocorrelation problem in the model. Hence, the coefficients derived from the analysis are reliable for policy prescriptions.

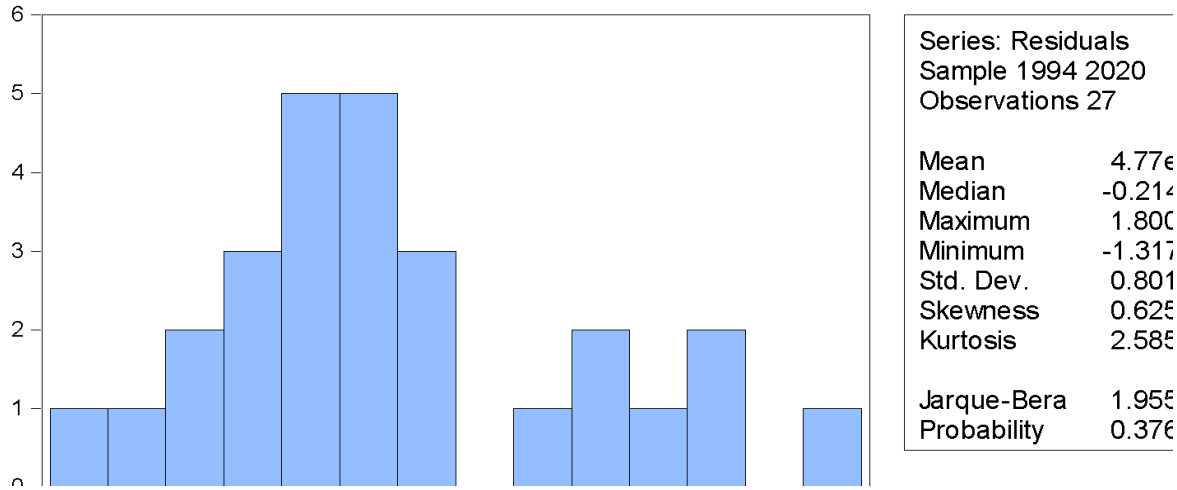
Heteroskedasticity Test: Breusch-Pagan-Godfrey Table 5

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.690705	Prob. F(3,23)	0.5670	Obs*R-squared	2.231449 Prob. Chi-Square(3) 0.5258
Scaled explained SS	1.734200	Prob. Chi-Square(3)	0.6294		

From 4.3.5, it can be clearly seen that the F-statistics of the heteroskedasticity test yielded 0.690705. This entails that the model is homoskedastic. Hence, the mean and variance are constant overtime. This is desirable in a time series analysis. The main output is reported in the appendix.

Normality Test Table 6



From the analysis from Table 4 above, it can be seen that Jarque-Berra yielded 1.955878 with a probability value of 0.376085. Since the probability value is greater than 0.05, we accept the null hypothesis which states that the residuals are normally distributed. Hence, residuals of the model are normally distributed.

SUMMARY, CONCLUSION AND RECOMMENDATION Summary of Findings

An empirical analysis of the effect of taxation on economic growth in Nigeria covering the period 1994 to 2020 has been the focus of this study. Data for the study were extracted from the Central Bank of Nigeria (CBN) statistical bulletin (2020). The method of data analysis employed in the research is the multiple linear regression. The major findings of the study are that:

1. Value Added Tax (VAT) management has a positive but non-significant effect on economic growth in Nigeria.
2. Company Income Tax (CIT) management has a negative and significant effect on economic growth in Nigeria.

3. Petroleum Profit Tax (PPT) management has a negative and significant effect on economic growth in Nigeria.

Conclusion

This study has been able to empirically estimate the impact of tax revenue management on economic growth in Nigeria from 1994 to 2020. Based on the findings of the research, it can be concluded that Nigeria generates enough revenue through the tax components analyzed in the study. However, it is clear that the effect of tax is more positive on statistical results but not on real life experiences. This clearly shows that Nigeria is indeed suffering from income inequality.

Recommendations

Based on the findings of the study, the researcher made the following suggestions:

1. The government should put in place necessary measures to guarantee that VAT money is used efficiently to expand and grow the economy through proper infrastructure development.
2. In order to extend income tax, tax authorities in charge of administration should modernize the tax database to include all possible income tax payers.
3. The government should provide the necessary people and material infrastructures to assist the petroleum industry so that it can produce more money, which would increase taxation.

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