

IMPACT OF TAX STRUCTURE ON ECONOMIC GROWTH IN NIGERIA

AJAYI, E. OLUSUYI¹, GIWA, B. AGBOLADE², OBAFEMI, T. OLUTOKUNBOH³ & ARAOYE, F. EBUN⁴

¹Department of Economics, Accounting and Finance, Bells University of Technology, Ota

²Department of Economics, Federal College of Education (Special) Oyo, Nigeria;

³Department of Accounting Federal University, Lokoja, Kogi State, Nigeria

⁴Department of Accounting, Ladoke Akintola University, Ogbomosho, Oyo State, Nigeria.

<https://doi.org/10.37602/IJSSMR.2024.7303>

ABSTRACT

This study examined the relationship among tax structure, poverty and economic growth in Nigeria. Specifically, this study investigated the impact of tax structure on economic growth in Nigeria. Secondary data sourced from Central Bank of Nigeria Statistical Bulletin, Federal Inland Revenue Services and WDI were used. The main explanatory variables are the tax structure variables which include personal income tax (PIT), value added tax (VAT), company income tax (CIT) and petroleum profit tax (PPT), while the dependent variable is economic growth. Augmented Dickey Fuller (ADF), Phillips-Perron (PP) and Autoregressive Distributed Lagged (ARDL) Bound tests, and Error Correction Model (ECM) techniques were adopted. The results revealed that personal income tax and value added tax have significant negative effects on economic growth, but company income tax and petroleum profit tax have significant positive effect on economic growth. Also, the lagged value of personal income tax has a significant effect on economic growth. In same manner, the lagged value of value added tax has significant negative effect on economic growth. Therefore, the study concluded that tax structure significantly impacts on poverty and economic growth in Nigeria.

Keywords: Tax Structure, Economic Growth, Nigeria

1.0 INTRODUCTION

Taxation is an instrument employed by the government for generating public fund. It is a required payment imposed by a government on the income, profit or wealth of individuals, group of persons, and corporate organizations (Ihenyen & Ebipanipre, 2014). It is a result of the application of tax rate to a tax base (Piana, 2003). A well-designed tax system can help governments in developing countries prioritize their spending, build stable institutions, and improve democratic accountability. The main purpose of a tax is to enable public sector finance its activities so as to achieve some nation's economic and social goals. It can equally be used as an instrument for redistribution of income and wealth to ensure social justice (Ofoegbu et al, 2016).

Sadly, the dwindling level of tax revenue generation in the developing countries makes it difficult to use tax as an instrument of fiscal policy for the achievement of economic development (Ofoegbu et al, 2016). Furthermore, there has been debates on the matter of taxation which has further questioned its effectiveness in promoting growth and development

of a nation. For instance, while Keynesian economics see taxation as robust tool to promote national development due to its ability to offers government with income to provide public goods such as health, education and infrastructure necessary for economic growth. However, this view is challenged by classical economists, who view taxation as harmful to national growth and development, because of the burden of tax on private sector business and growth. Hence, classical economists propose minimal tax.

Economic growth which is the increase in the volume of productive economic activities in the country, is usually one of the main focuses of countries of the world regardless of their status (developed, developing or underdeveloped). It is the basis of increased prosperity, investment in new capital (both human and physical), the implementation of new production techniques and the introduction of new products are the fundamentals of the growth process (Myles, 2000). From the basic knowledge of economics principles, the growth in the economy could be an indication of increased employment opportunity, upward movement in income generation and better performance or improvement when compared with other countries.

However, the pursuit of economic growth, as one of the basic macroeconomic objectives, by both the developing and underdeveloped countries seems to be well pronounced than the case of developed countries. For an economy to improve her level of development, economic growth appears to be a necessary condition though not a sufficient one. In Nigeria, as a developing country, the growth of the economy is unstable. For instance, the Nigerian economy appeared to improve in 2000 as the real GDP growth rate rose to 3.8 percent compared with 2.8 per cent in 1999 and 1.8 percent in 1998. The improved growth performance then was due largely to the positive terms of trade shock, following an oil price increase from \$18 per barrel in 1999 to \$28 per barrel in 2000. The income effect of the shock enabled an expansion in government expenditure, which together with the buoyant oil sector boosted growth (African Economic Outlook, 2002). Recently, the growth of real GDP was 4.21 percent in 2012, 2.79 percent in 2015, 0.82 percent in 2017 and 2.29 percent in 2019 (WDI, 2020). Despite the dependence of the Nigerian government on oil revenue over the years, one of the viable sources of revenue to the government is taxation. The role of taxation in national development in Nigeria is circumspect.

Despite several legislations put in place to make tax a veritable source of income to the government in Nigeria, the tax system has remained underdeveloped. This is because government earning has majorly relied on earnings from agriculture during the first decade after independence (1960-1970); while oil earnings dominated government earnings between the 1970s until recent times. CBN Statistics show that except tax revenue from the oil sector, total tax revenue has performed poorly, contributing meagerly to government revenue between 1981 and 2019. Remarkably, tax revenue from excise duty, value added tax and company income tax have contributed less than 16% of total government revenue since 1981-2019. This is an indication that the tax system cannot contribute meaningfully to the growth and development of the country.

Undoubtedly, there are empirical studies on the impact of taxation and tax structure on the economy, but with mixed results. For instance, some studies found that taxation has positive significant contributions to economic growth (Ihenyen & Ebipanipre, 2014; Afuberoh & Okoye, 2014; Ofoegbu, Akwu, & Oliver, 2016; Uzoka & Chiedu, 2018) while other studies

discovered a negative impact of taxation on economic growth (Gashi et al, 2018; Macek, 2014). Interestingly study by Stoilova and Patonov (2012) in developed Europe examined the basic trends in the distribution of the total tax burden in 27 European Union member states and found that tax structure based on direct taxes was more efficient in promoting economic growth. These conflicting results give room for further research in this area. Therefore, the focus of this study is to determine the impact of tax structure (PPT, CIT, PIT and VAT) on economic growth in Nigeria.

2.0 LITERATURE REVIEW

2.1 Theoretical Review

Theoretical arguments on Tax

The concept of tax proliferates the literature, as there are two major positions on the imposition of tax. Classical economics as argued by Smith (1776) stated that minimum taxes should be imposed so as not to distort the working of the market system. Smith argued that taxes are however needed for the government to raise funds and provide an enabling environment for the private sector to flourish, such as providing security and infrastructure. However Keynesian economics argues that the imposition of taxes is expedient for achieving macroeconomic goals. Consequently, studies have investigated the relevance of tax in economic performance as well as to its importance to government revenue and the adverse effects it creates.

Adams (2001) highlighted the importance of tax by stating it is the most important source of revenue for modern governments, typically accounting for ninety percent or more of their income. Okon (1997) asserts that income tax is a tool of fiscal policy used by government all over the world to influence positively or negatively particular type of economic activities in order to achieve desired objectives. Thus, income tax serves as a channel to direct economic performance towards a prescribed target. Okon (1997) further stated that tax rate could be fluctuated to achieve a specific economic goal. Thus, tax rates are not always increased, but also decreased to meet specific macroeconomic goals. Pfister (2009) opines that taxation is central to the current economic development agenda in Africa. This is premised on the fact that it provides a stable flow of revenue to finance development priorities, such as strengthening physical infrastructure, and is interwoven with numerous other policy areas, from good governance and formalizing the economy, to spurring growth. According to Bonu and Pedro (2009) traditional schools of thought advocated the theory of low-income tax rates' influencing economic development; however modern schools of thought propagated the theory of higher income tax rates producing greater economic growth, especially for developed nations. However, Besley and Persson (2014) attribute the growth of developed economies to tax; but they stressed that the same cannot be said for developing countries owing to the poor tax administration in such economies and the low tax rates in such economies.

2.2 Empirical Review

Ihenyen and Ebipanipre (2014) examined taxation as an instrument of economic growth in Nigeria. Using annual time series data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin during the period 1980 through 2013, a linear model of Corporate Income Tax (CIT), Value Added Tax (VAT) and Economic Growth (GDP) was estimated using the

Ordinary Least Square (OLS) technique. The empirical result suggests that the hypothesized link among corporate income tax, value added tax and economic growth indeed exist in the Nigerian context. Thus, the result offer tantalizing evidence that taxation is an instrument of economic growth in Nigeria. This conclusion points to the need for additional measures by government in ensuring that taxpayers do not avoid and evade tax so that income can be properly redistributed in the economy. In addition, regulatory authorities charged with the sole responsibility of collecting tax should further be strengthened to enforce compliance by taxpayers. Above all, the tax collected should be properly distributed so that economic growth can be properly harnessed.

Macek (2014) evaluated the impact of individual types of taxes on the economic growth by utilizing regression analysis on the OECD countries for the period of 2000 – 2011. The author integrated the impact of taxation into growth models by its impact on the individual growth variables, which are capital accumulation and investment, human capital and technology. The analysis was based on extended neoclassical growth model of Mankiw, Romer and Weil (1992), and for the verification of relation between taxation and economic growth. The panel regression method was used. It was found that corporate taxation followed by personal income taxes and social security contribution had the most harmful impact on economic growth. Concurrently, in case of the value added tax approximated by tax quota, the negative impact on economic growth was not confirmed, from which it can be concluded that tax quota, in this case as the indicator of taxation, fails. When utilizing World Tax Index, a negative relation between these two variables was confirmed, however, it was the least quantifiable. The impact of property taxes was statistically insignificant. The author concluded that in the effort to stimulate economic growth in OECD countries, economic-politic authorities should lower the corporate taxation and personal income taxes, and the loss of income tax revenues should be compensated by the growth of indirect tax revenues.

In another study by Ofoegbu et al, (2016) the focus was examination of the effect of tax revenue on the economic development of Nigeria. The approach adopted in this study was that of using annual time series data for the period 2005 to 2014 to estimate a linear model of tax revenue and human development index using ordinary least square (OLS) regression technique. Findings show positive and significant relationship between tax revenue and economic development. The result also reveals that measuring the effect of tax revenue on economic development using Human Development Index (HDI) gives lower relationship than measuring the relationship with Gross Domestic Product (GDP) thus suggesting that using GDP gives a painted picture of the relationship between tax revenue and economic development in Nigeria. The researcher, therefore, conclude that tax revenue can be an instrument of economic development in Nigeria. Development of any tax policy on tax revenue for economic development should better be based on human development index rather than GDP.

Uzoka and Chiedu (2018) adopted similar methodology as Ihenyen and Ebipanipre (2014) by decomposing tax revenue, in their study on “tax revenue and economic growth in Nigeria”. Tax revenue was decomposed into: petroleum profit tax, value added tax, company income tax, customs and excise duty, capital gain tax and education tax. The study made use of time series data, covering 1997-2016. However, the study bearing in mind the problem of endogeneity adopted Vector Error Correction estimation technique in place of OLS. The Engle-Granger and Johansen co-integration methods were used to test for long run relationships among the

datasets. The results found long run relationship. The result of VECM regression estimates found that petroleum profit tax, value added tax, company income tax, capital gain tax and customs and excise duty all had significant positive impacts on economic growth in Nigeria; whereas capital gain tax and education tax did not significantly influence economic performance in the country. In another related study on Nigeria by Dang and Bala (2018) which examined the impact of tax components (PPT, CIT, CED & VAT) between 1981 and 2013. The result of ECM estimation technique shows that tax revenue did not have any significant impact on real GDP. This result was further buttressed by the research by Abomaye et al (2018) which revealed that PPT and CIT had no significant impact on economic growth while custom and excise duty had significant impact on economic growth. However, the above results was in conflict with the result arrived at by Yahaya and Bakare (2018) which investigated the influence of tax revenue on economic growth in Nigeria between 1981 and 2014. Their results revealed that PPT and CIT has significant positive impact on economic growth in Nigeria. The finding of Asaolu et al (2018) incidentally and contrary to the above result discovered significant negative effect of VAT and CED on economic growth in Nigeria. The fact that we have contrary results of VAT and CED in study of the same year and country inspire us to carry another study that will throw more insight into this tax phenomenon.

Gashi et al, (2018) analyzed the effect of the tax structure in the economic growth of Kosovo in the period 2007-2015. The study evaluated the impact of specific types of taxes on economic growth. The methodology was based on comparative analysis of data using primary and secondary sources. Through the econometric model and linear regression analysis, the research hypotheses were tested. The model estimated includes several independent variables (types of taxes), and the dependent variable GDP. Based on data obtained through the log-log model, the results showed that the impacts of personal tax (PT) and withholding tax (WHT) on economic growth are negative, while the impacts of income tax (IT), Value Added Tax (VAT), individual businesses tax (IBT), tax on interest, on dividends, on rent, on the win of the lottery or other gambling games (TDR) and corporation tax (CT) on economic growth are positive. The findings imply that not all taxes have the same impact on economic growth.

In another literature, Uket et al, (2020) analysed the effects of taxation on development in Nigeria, using time series data from 1994-2018. Taxation was measured using petroleum profit tax, value added tax and company income tax; whereas GDP was used as proxy for development. The OLS method was engaged to analyse the data. The results obtained showed that all the three measures of taxation had positive impacts on GDP in Nigeria, but while value added tax and company income tax exerted significant impact, petroleum profit tax did not significantly improve GDP. The study by Adeusi et al (2020) which reviewed the impact of tax on economic growth for the same period 1994 to 2018 appears to be in tandem with the above result. However, custom duties as an additional tax component was reported to assert significant impact on economic growth in Nigeria.

In another study by Uzoamaka and Osaretin (2020) which focused on the impact of taxation on the growth of the Nigerian economy between 1996 and 2019 revealed through the ARDL results that PPT and custom and Excise duties have significant positive impact while CIT and VAT have negative impact on the growth of the economy via various sectors of the economy. In a recent study by Ayeni and Cordelia (2023) which used data from 2000 to 2021, the result of VECM shows that PPT and VAT have significant positive effect on GDP while CIT has

significant negative effect on GDP. It is pertinent to show at this juncture to report the finding of Etim et al (2021) which discovered that indirect tax has greater detrimental effect on economic growth than direct tax. This throw up indirect tax as an area to focus tax reform policy with a view to make it contribute its quota to economic growth in Nigeria. The conclusion that could be derived from the above review is that tax components could be used as a catalyst to grow the Nigerian economy

3.0 METHODOLOGY

3.1 Theoretical Framework

The dependent variable dictates the choice of theoretical framework. Since productivity growth across all sectors of the economy potential brings about the growth of the economy, this study adapts the classical production theory as the theoretical framework in which output is a function of input. Specifically, productivity depends on the amount and quality of capital and labour inputs. Mathematically,

Y = f(K, L) (1)

Where, Y: Productivity

K: Capital

L: Labour.

Introducing technology component (A) into production activities, equation (1) becomes;

Y = f(A, K, L)..... (2)

3.2 Model Specification

To evaluate the impact of tax structure (PPT, CIT, EXC and VAT) on economic growth in Nigeria, this study adapts equation (2) as a multivariate model after the work of Okafor (2012).

Y = f(A, K, L, TAXST) (3)

Where TAXST = f (PPT, CIT, EXC, VAT) (4)

Introducing ‘G’ as a vector of other explanatory variables of economic growth, equation (5) is derived as:

Y = f(A, K, L, TAXST, G)..... (15)

Since Nigeria engages in international trade, trade openness variable (TOPEN) is a variable in G. Also, there are possible variations in the level of inflation (INFL) and government expenditure (GEXP) in the country that can influence the growth of the economy over the study period. Therefore, equation (16) is:

G = f (TOPEN, INFL, GEXP) (6)

Combining equations (4) and (6) into equation (5) to obtain a new equation (7):

$$Y = f(A, K, L, PPT, CIT, EXC, VAT, TOPEN, INFL, GEXP) \dots \dots \dots (7)$$

Expressing equation (7) in Cobb Douglas production function format and taking Y as economic growth variable measured as the real gross domestic product (RGDP):

$$RGDP = A^{a_0} K^{a_1} L^{a_2} PPT^{a_3} CIT^{a_4} EXC^{a_5} VAT^{a_6} TOPEN^{a_7} GEXP^{a_8} INFL^{a_9} \dots \dots \dots (8)$$

Taking the natural logarithm to linearize equation (18) and assuming technology (A) as constant:

$$\ln RGDP_t = a_0 + a_1 \ln K_t + a_2 \ln L_t + a_3 \ln PPT_t + a_4 \ln CIT_t + a_5 \ln EXC_t + a_6 \ln VAT_t + a_7 \ln TOPEN_t + a_8 \ln GEXP_t + a_9 \ln INFL_t + \epsilon_t \dots \dots \dots (9)$$

a_0 and ϵ_1 are the intercept and the error term respectively, the subscript t is the time series indicator. $a_1, a_2, a_3, a_4, a_5, a_6, a_7, a_8$ and a_9 are the parameters to be estimated. A-priori, it is expected that tax revenues from petroleum profit, company income, excise duties and value added contribute positively to economic growth according to Keynesian proposition that tax revenues provide the government with funds to influence the economy in a growth path. Similarly, other variables are expected to promote economic growth, thus their parameters are expected to be positive.

Therefore, equation (9) is the economic growth model to be estimated to report the impact of Tax Structure (TAXST) on economic growth in Nigeria.

3.3 Estimation Techniques

Prior the choice of appropriate econometrics techniques to estimate the specified models, preliminary tests is conducted. For instance, the unit root tests are carried out to determine their order of integration and right choice of method of analysis is adopted to avoid spurious results. In econometric literature, most time series variables are non-stationary and utilizing such non-stationary variables in estimations might lead to spurious regressions (Granger & Newbold, 1977). To avoid this pitfall, we investigate the stationarity status of the series using the Augmented Dickey-Fuller (ADF).

In economic analysis the Adjustment Dickey-fuller (ADF) test have been vastly used to test for unit roots in time series by comparing the ADF test statistic and the ADF critical value. On comparison, if the former is greater than the latter in absolute terms, we then conclude that the series is stationary. These outcomes help in the choice of appropriate econometrics technique to employ in estimating the specified models.

A series of post-estimation tests are carried out to ascertain the existence or absence of violation of regression assumption. Such assumption includes absence of multicollinearity, serial correlation and heteroscedasticity so as not to damage the BLUE properties of the estimates, thereby leading to misleading results (Ojameruaye and Oaikhenan, 2001).

The outcome of the tests led the study to use Vector Error Correction Model as the estimation technique.

3.4 Data Sources

The data for this study are secondary data, which are obtained from the Central Bank of Nigeria Statistical Bulletin, Central Bank of Nigeria Annual reports and World Development Indicators. The data are drawn from 1981-2019.

4.0 RESULT AND DISCUSSION OF FINDINGS

4.1 Test for Stationary

The study applies Augmented Dickey-Fuller and Phillips- Perron Unit Root test to determine the stationarity of the variables used in the study. Augmented Dickey Fuller (ADF) test of unit root is the main stationarity test in this study, while Phillips-Perron (PP) unit root test is engaged for robustness check. In the case of contrary results, the ADF test result is upheld. The result is presented in Table 4.1

Table 4.1: Results on the Augmented Dickey-Fuller and Phillips-Perron (PP) Unit Root Tests

Variable	Augmented Dickey-Fuller (ADF) Test		Phillips-Perron (PP) Test		Order of Integration
	LEVEL with C	1 ST DIFF with C	LEVEL with C	1 ST DIFF with C	
<i>LRGDP</i>	0.026217 (0.9551)	-3.856836* (0.0054)	0.722361 (0.9911)	-3.856836* (0.0054)	I(1)
<i>LVAT</i>	-4.230070* (0.0031)	-----	-4.230070* (0.0031)	-----	I(0)
<i>LPIT</i>	-1.861606 (0.3429)	-5.067720* (0.0006)	-2.355117 (0.1650)	-5.072970* (0.0006)	I(1)
<i>LCIT</i>	-1.805397 (0.3724)	-5.659097* (0.0000)	-1.744651 (0.4014)	-5.742584* (0.0000)	I(1)
<i>LPPT</i>	-0.935997 (0.7657)	-5.785849* (0.0000)	-0.830043 (0.7990)	-6.821248* (0.0000)	I(1)
<i>TOPEN</i>	-4.138527* (0.0025)	-----	-4.146262* (0.0024)	-----	I(0)
<i>INFL</i>	-2.915636* (0.0529)	-----	-2.784994 (0.0699)	-9.669308* (0.0000)	I(0)
<i>LLABOR</i>	1.823426 (0.9996)	-4.328828* (0.0018)	1.349023 (0.9984)	-2.776256* (0.0715)	I(1)
<i>LCAPITA</i>	-2.052179 (0.2644)	-4.850754* (0.0004)	-3.295199* (0.0221)	-----	I(1)
<i>LGEXP</i>	-1.421197 (0.5615)	-7.708211* (0.0000)	-1.081691 (0.7131)	-7.323788* (0.0000)	I(1)

Note: * denotes stationary at 5% level of significance

Source: Author’s Computation (2023)

From table 4.1, the results revealed that value added tax (LVAT), trade openness (TOPEN) and inflation (INFL) are stationary at levels, that is I(0), while other variables [economic growth (LRGDP), personal income tax (LPIT), company income tax (LCIT), petroleum profit tax (LPPT), labour (LLABOR), capital (LCAPITA) and government expenditure (LGEXP)] are stationary at first difference [that is, I(1)]. These mixed results [I(0) and I(1)] suggest the adoption of Autoregressive Distributed Lagged (ARDL) technique to evaluate the effects of tax structure on poverty and economic growth.

Similarly, the test for the existence or otherwise of the long-run relationship among the variables in the model is also carried out. The Autoregressive Distributed Lag (ARDL) Bounds test is also applied in checking for existence of long-run relationship. Table 4.2 presents the Co-integration test results.

Table 4.2: ARDL Bounds Test for Dependent Variable: D(LRGDP)

Test Statistic				
F-statistic		28.11700		
Critical Value Bounds				
Significance	10%	5%	2.5%	1%
I(0)	2.2	2.56	2.88	3.29
I(1)	3.09	3.49	3.87	4.37

From table 4. the results revealed that F-statistic = 28.11700 which is greater than I(1) critical value bound at 5 percent (3.49), we then conclude that there is Co-integration. Therefore, the Error Correction Model (ECM) will be estimated.

4.2 Effect of Tax Structure on Economic Growth

The results of the estimated Error Correction Model (ECM) are shown in table 4.3

Table 4.3: ECM estimates on the Effect of Tax Structure on Economic Growth

Method: Least Squares Dependent Variable: D(LRGDP)
 Sample (adjusted): 1999 2019 Included obs.: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<i>ECM(-1)</i>	-1.838319	0.136373	-13.48006	0.0055
<i>C</i>	1.002327	0.051530	19.45125	0.0026
<i>D(LVAT)</i>	-0.106745	0.012073	-8.841282	0.0126
<i>D(LPPT)</i>	0.010333	0.002347	4.402603	0.0479
<i>D(LPIT)</i>	-0.050903	0.005029	-10.12262	0.0096
<i>D(LCIT)</i>	0.294238	0.021259	13.84072	0.0052
<i>D(INFL)</i>	0.001135	0.000311	3.646807	0.0677
<i>D(LGEXP)</i>	-0.038045	0.005343	-7.120669	0.0192
<i>D(LLABOR)</i>	-19.93138	1.682261	-11.84797	0.0070
<i>D(TOPEN)</i>	0.002765	0.000322	8.598672	0.0133

<i>D(LCAPITA)</i>	-0.151904	0.014791	-10.27010	0.0093
<i>D(LVAT(-1))</i>	-0.614026	0.059475	-10.32416	0.0093
<i>D(LPPT(-1))</i>	0.003625	0.002495	1.453126	0.2834
<i>D(LPIT(-1))</i>	0.053945	0.011323	4.764110	0.0413
<i>D(LCIT(-1))</i>	0.032962	0.011640	2.831838	0.1054
<i>D(INFL(-1))</i>	0.002556	0.000367	6.967797	0.0200
<i>D(LGEXP(-1))</i>	0.184791	0.016268	11.35918	0.0077
<i>D(TOPEN(-1))</i>	-0.000312	0.000164	-1.900207	0.1978
<i>D(LLABOR(-1))</i>	-14.87941	1.196470	-12.43609	0.0064
R-squared	0.999632	S.D. dependent var	0.034225	
Adjusted R-squared	0.996318	Akaike info criterion	-10.05794	
S.E. of regression	0.002077	Schwarz criterion	-9.112894	
F-statistic	301.6764	Hannan-Quinn criter.	-9.852840	
Prob(F-statistic)	0.003309	Durbin-Watson stat	2.606749	

Source: Author's Computation, 2023

From table 4.3, the results revealed that all the explanatory variables, significantly explained the variation in economic growth with F-statistic of 301.6764 (Pr.= 0.003309<0.05). The R-square result shows that about 99.96 percent of variations in economic growth are explained by the joint explanatory variables in the model. The Adjusted R-Squared of 0.996318 suggest that the model for this study is well specified. The adjustment coefficient of the error correction term [ECM(-1)] is negative and statistically significant at 5 percent level of significance. This implies that there will be correction of the previous error in the subsequent year. The speed of adjustment is 184 percent.

All the tax structure variables significantly matter for economic growth. However, personal income tax [D(LPIT)] and value added tax [D(LVAT)] have significant negative effects on economic growth [D(LRGDP)], company income tax [D(LCIT)] and petroleum profit tax [D(LPPT)] have significant positive effect on economic growth [D(LRGDP)]. A one percent increase in personal income tax and value added tax will reduce economic growth by 0.050903 and 0.106745 percent respectively, while a one percent increase in company income tax and petroleum profit tax will raise economic growth by 0.294238 and 0.010333 percent respectively.

Also, the lagged values of personal income tax [D(LPIT(-1))], petroleum profit tax [D(LPPT(-1))] and company income tax [D(LCIT(-1))] promote economic growth, but only the effect of personal income tax is statistically significant at 5 percent level of significance. In same manner, the lagged value of value added tax [D(LVAT(-1))] has significant negative effect on economic growth as shown in table 4.3.

Furthermore, government expenditure [D(LGEXP)], labour [D(LLABOR)] and capital stock [D(LCAPITA)] have significant negative effect on economic growth [D(LRGDP)] at 5 percent level of significance. A one percent increase in government expenditure, labour and capital stock will retard economic growth by 0.038045, 19.93138 and 0.151904 percent respectively. Both inflation and trade openness have positive effects on economic growth, however only the

effect of trade openness is statistically significant at 5 percent level of significance. A one percent increase in trade openness will raise economic growth by 0.002765 percent.

The lagged values of inflation [INFL(-1)] and government expenditure [D(LGEXP(-1))] significantly promote economic growth at 5 percent level of significance, while lag of labour [D(LLABOR(-1))] does not promote economic growth.

4.3 Discussion of Findings

Series of developments in tax management and administration right from the creation of Income Tax Management Act (ITMA) in 1960 which are capable of influencing the level of national development has led this study to investigate the relationship between tax structure and economic growth in Nigeria. Using series of appropriate econometrics techniques, this study found a long run relationship between the variables. This is similar to the findings by Ofoegbu et al, (2016) that long run relationship exists between tax variables and economic growth.

The study equally establish that all the tax structure variables significantly matter for economic growth in Nigeria. This is the same with the findings by Stoilova and Patonov (2012) that tax promote economic growth. However, personal income tax and value added tax have significant negative effects on economic growth, but company income tax and petroleum profit tax have significant positive impact on economic growth. This finding is similar to that of Gashi et al, (2018), that corporate taxes have positive effect on economic growth. Also, the lagged values of personal income tax, petroleum profit tax and company income tax promote economic growth, but only the effect of personal income tax is significant. In same manner, the lagged value of value added tax has significant negative effect on economic growth.

Furthermore, government expenditure, labour and capital stock have negative and significant effect on economic growth. Also, trade openness has a significant positive effect on economic growth. The lagged values of inflation and government expenditure significantly promote economic growth. Therefore, tax structure significantly impacts on economic growth in Nigeria.

5.0 CONCLUSION AND RECOMMENDATIONS

Taxation is an instrument employed by the government for generating public fund. Since the creation of the Income Tax Management Act (ITMA) in 1960, which was later amended in 1975, there have been series of developments in tax management and administration which are capable of influencing the level of national development. In the light of this, this study has examined the effect of tax structure on economic growth.

Secondary data that spanned from 1981 to 2019 are engaged. Data were sourced from Central Bank of Nigeria statistical bulletin, Federal Inland Revenue Service and world development indicators. The main explanatory variables are the tax structure variables which include personal income tax (PIT), value added tax (VAT), company income tax (CIT) and petroleum profit tax (PPT), the dependent variable is economic growth. Augmented Dickey Fuller (ADF), Phillips-Perron (PP) and Autoregressive Distributed Lagged (ARDL) Bound tests and Error Correction Model (ECM) techniques were adopted to estimate the model. The study found that

all the tax structure variables significantly matter for economic growth. However, personal income tax and value added tax have significant negative effects on economic growth, but company income tax and petroleum profit tax have significant positive effect on economic growth. Also, the lagged values of personal income tax, petroleum profit tax and company income tax promote economic growth, but only the effect of personal income tax is significant. In same manner, the lagged value of value added tax has significant negative effect on economic growth. Finally, Government expenditure, labour and capital stock have negative and significant effect on economic growth while trade openness has a significant positive effect on economic growth. The lagged values of inflation and government expenditure significantly promote economic growth.

Based on the findings of this study, the authors recommend that:

- i. Since the personal income tax and value added tax influence economic growth directly, the government should formulate appropriate tax policy on personal income tax and value added tax towards the growth of the economy and reduction of poverty
- ii. As the tax structure variables significantly matter for economic growth, the government through the appropriate authorities to lower the corporate taxation and personal income taxes, and avoid the loss of income tax revenues through automated approach to tax collection,
- iii. Government should ensure that the revenue from tax is engage in the provision of infrastructure which will consequently promote the growth of the economy.
- iv. Also, the government should improve the degree of the openness to trade as it will result in encouraging higher economic growth.

This study contributes to the body of knowledge by pointing out that tax structure has a significant effect on economic growth. This was done by specifically pointing out PIT and VAT which have significant negative impact on economic growth as tax components that require immediate policy instrument to make them relevant in the economic growth drive in Nigeria.

REFERENCES

- Abamaye, N. W. A. S., Michael, J. E. M. and Friday, H. C. (2018). An Empirical Analysis of Tax Revenue and Economic Growth in Nigeria from 1980-2015. *Global Journal of Human Social Science. And Political Science*, 18(3), 9-19.
- Adams, C. (2001). *For Good and Evil; the impact of Taxes on the Course of Civilization*. U. S. A; Madison Publishers
- Adeusi, A. S., Uniamikogbo, E., Erah, O. D. and Aggrey, M. (2020). Nonoil Revenue and Economic Growth in Nigeria. *Research Journal of Finance and Accounting*, 11(8), 95-106 <https://doi.org/10.7176/RTFA/11-8-10>.
- Afubero, D. & Okoye, E. (2014). The Impact of Taxation on Revenue Generation in Nigeria: A Study of Federal Capital Territory and Selected States. *International Journal of Public Administration and Management Research (IJPAMR)*, 2(2):22-4722

- Anyanwu, J. C. (1997), Nigerian Public Finance, Joanee Educational Publishers Limited, Onitsha. p.20
- Asaolu, T. O., Olabisi, J., Akinbode, S. O. and Alebiosu, O. N.(2018). Tax Revenue and Economic Growth in Nigeria. *Scoledge International Journal of Management and Development*, 57, 72-85.
- Ayeni, O. A. and Cordelia, O. O (2023). Tax Revenue and Economic Growth in Nigeria. *Cogent Business and Management*.
- Besley, T. & Persson, T. (2014). Why Do Developing Countries Tax So Little? *Journal of Economic Perspectives*, 28 (4): 99–120
- Bonu, N. S. & Pedro M. P. (2009). The impact of income tax rates (ITR) on the economic development of Botswana. *Journal of Accounting and Taxation*, 1 (1): 8-22
- Etim, O.E., Nsima, J. U. , Austin, U. N., Samuel, S. C. and Anselem, M.U. . Comparative Analysis of the Effect of Direct and Indirect Taxation Revenue on Economic Growth in Nigeria. *Account and Financial Management Journal*, 6(7), 2403-2418.
- Ewa, U., Adesola, W., & Essien, E. (2020). Impact of tax revenue on economic development in Nigeria. *International Business Research*, 13(6), 1-1.
- Gashi, B., Asllani, G. and Boqolli L. (2018), “The Effect of Tax Structure in Economic Growth”, *International Journal of Economics and Business Administration*, Volume VI, Issue 2, pp. 56-67
- Granger, C.W.J. & Newbold, P. (1977). The Time Series Approach to Econometric Model Building. In C.A. Sims (ed.). *New Methods in Business Cycle Research*. Proceeding from a Conference at the Federal Reserve Bank of Minneapolis
- Ihenyen, C. J., & Ebipanipre, G. M. (2014). Taxation as an Instrument of Economic Growth (The Nigerian Perspective). *Information and Knowledge Management*, 4 (12)
- Macek, Rudolf (2014), ‘The Impact of Taxation on Economic Growth: Case Study of OECD Countries’, *Review of Economic Perspectives – Národohospodárský Obzor*, Vol. 14, Issue 4, pp. 309–328
- Myles, Gareth D. (2000), ‘Taxation and Economic Growth’, *Fiscal Studies*, Vol. 21, no. 1, pp. 141–168
- Ofoegbu, G. N., Akwu, D. O., & Oliver, O. (2016). Empirical Analysis of Effect of Tax Revenue on Economic Development of Nigeria. *International Journal of Asian Social Science*, 6(10): 604-613
- Ojameruaye, E.O. & Oaikhenan, H.E. (2001). *A First Course in Econometrics*. Benin City, H.Henans Publishers, 182

- Okon, E. (1997). Company Income Tax in Nigeria (unpublished Monograph). University of Port Harcourt
- Omodara, C. O., Okafor, M. C. and Nnmesirionye, J. A. (2021). Personal Income Tax Revenue and Nigeria Aggregate Earnings. *Universal Journal of Accounting and Finance*, 9(4), 783-789.
- Pfister, M. (2009). Taxation for investment and development: An overview of policy challenges in Africa. Ministerial Meeting and Expert Roundtable of the NEPAD-OECD Africa Investment Initiative on 11-12 November 2009.
- Piana, V. (2003). Tax revenue. Economics Web Institute. Available. <http://www.economics>.
- Smith, A. (1776). *An inquiry into the nature and causes of wealth of nations*, reprinted in 1937. New York: Modern Library
- Stoilova, Desislava and Patonov, Nikolay (2012), 'An Empirical Evidence for the Impact of Taxation on Economy Growth in the European Union' Book of Proceedings – Tourism and Management Studies International Conference, University of the Algarve, Portugal
- Uzoamaka, C. and Osaretin, E. S. N. (2022). The Effect of Taxation on the Growth of Nigerian Economy. *International Journal of Researchgate*, 1(6): 1-17.
- Uzoka, P. U., & Chiedu, C. O. (2018). Effect of tax revenue on economic growth in Nigeria. *International Journal of Social Sciences and Management Research*, 4(7), 17-24.
- Yahaya, K. A. and Bakare, T. O. (2018) Effect of Petroleum Profit Tax and Company Income Tax on Economic Growth in Nigeria. *Journal of Public Administration, Finance and Law*, 13(1), 100 – 121.