
Tax revenue and economic growth in Nigeria: does the system of governance matter?

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ABSTRACT

This study examined the effect of tax revenue on economic growth in Nigeria taking into cognizance the system of governance in place. Three competing hypotheses have been put forward in literature and the evidence therefrom suggests that these hypotheses have not been robustly tested within the Nigerian context. Using a methodology that segregated the thirty-two year period covered into military (1983-1998) and democratic dispensations (2005-2020). Three direct taxes viz companies income tax (CIT), petroleum profit tax (PPT), and capital gains tax (CGT) and one indirect tax custom and excise duties (CED) were regressed on economic growth using the autoregressive distributed lag (ARDL) regression. The findings revealed that CGT and CED did not have any significant impact on economic growth in both dispensations while CIT and PPT had significant impact on economic growth only in the civilian regime. The findings therefore provide evidence to support the conclusion that the system of governance in place matters in determining the relationship between tax revenue and economic growth in Nigeria. More importantly, this study finds evidence in support of the compatibility perspective on democracy, tax revenue and economic growth. Flowing from the findings, this paper recommends that policy makers should strengthen the existing policies and laws relating to CIT and PPT in particular and also investigate the structure for the utilization of these taxes to address likely leakages or sub optimization and guide against crowding effect of the tax rates on other drivers of economic growth.

Keywords: Democracy, Military Rule, Growth, Developing Country, Taxes, System of Government

1. INTRODUCTION

Taxation is a sustainable and reliable means of revenue to the government. However, there is no agreement on what the ideal tax charge should be to advance development. The majority of sub-Saharan nations, including Nigeria, are faced with a taxation trilemma. First, it is clear that additional revenue is urgently required for nations with limited resources to be able to deliver and sustain most public services. Another reality that does not come as a surprise is that there are not many people with economic and political influence who wish to pay taxes. Third is that those without political power are many, have almost nothing to tax, and do also resist paying taxes (Fjeldstad & Rakner, 2003). Furthermore, the Nigerian economy is heavily dependent on oil revenue that is now not a reliable source of revenue, as a result of its volatility. Consequently, Oriakhi and Ahuru (2014) asserted that there is an urgent need to diversify the economy to have sustainable sources of revenue that would drive the growth process since crude oil earnings alone cannot sustain public expenditure. Both the military and civilian regimes made efforts at diversifying the economy. Several policies and reforms have equally been carried out to increase the tax base and tax revenue of the country.

Democracy and development are intertwined and therefore a democratic regime is expected to perform better economically than the military regime (Harun et al., 2021). However, the nature of the association is not straightforward (Garcia & von Haldenwang, 2016) because a myriad of factors including the structure of the tax system and degree of democratization affect this relationship (Harun et al., 2021).

There are three major competing views on the effect of democracy within the public governance space. The compatibility perspective argues that a democratic setting promotes civil liberties and free & fair political participation which creates an atmosphere that facilitates economic growth and development (Harun et al., 2021). Conversely, the conflict perspective argues that democracy breeds so much liberty that allows various interest groups pursue self-seeking benefits from the government that can be counterproductive to economic growth and development. In order words, undemocratic governments may be in a better position to use “coercion more freely than democratic regimes and may thus have more freedom to raise taxes” (Olson, 1993) which can be used to pursue projects that promote economic growth. Finally, the third perspective is the skeptical school “that claims that there is no systematic relationship between governance and development” (Afolabi, 2019:220).

The empirical literature on tax revenue and economic growth documents a pattern of mixed relationships. While some studies (Akwe, 2014; Ogbonna & Appah, 2012;

and Ugwunta & Ugwanyi, 2015) reported a positive and significant relationship, others such as (Delessa, 2014; Keho, 2013) found a negative relationship between tax revenue and economic growth. We believe that investigating this relationship based on the dispensation of governance may produce new insights. This is in line with the assertion by Siegle et al. (2005) that a democratic regime is expected to perform better than other forms of governance. Ilaboya et al. (2021) noted that the exercise of taxing power in a modern tax system fulfils the essential Musgravian functions of resource allocation, distribution, and economic stabilization and we believe this is better achieved by a regime that is legitimate than one that is by coercion. Therefore, this paper examines the nexus between tax revenue and economic growth taking into cognizance the system of governance in place.

The remainder of the paper is divided into sections. The next section is on literature review and hypotheses development. Immediately after this is the methodology section and result and discussion section respectively. The last section documents the conclusion and recommendations.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Economic Growth

Economic growth involves increasing the capacity of the economy to satisfy the wants and needs of the inhabitants of a nation (Hendrik, 2001). It is the steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income (Todaro & Smith, 2006). From literature, it is clear that economic growth entails a long-term increase in a country's capacity to consistently supply its citizens with sufficient amount of different economic goods for usage. The Gross Domestic Product (GDP) is often used to measure the rise in the productive capacity of a country over a given period.

System of Governance in Nigeria

There are several types of government, but Nigeria since independence, has experienced two forms viz democratic and military regimes. Democracy refers to a system of government in which rulers are chosen via competitive elections (Siegle et al., 2005). It is commonly referred to as a government of the people, by the people and for the people; where majority votes take the lead. Some studies have argued that good democracy is not a by-product of development but a stepping stone (Acemoglu & Robinson, 2006; Chalker, 1991).

The military is generally and popularly conceived as the totality of the armed forces found the world over, which include the army, navy, air force and to some extent the

police (Oyediran & Dudley, 1996). Eminue (2006) sees a military regime as a form of government that is controlled by military leaders. This is consistent with Joseph (1991) who noted that a military regime occurs when the armed forces expand the boundaries of their barracks to include the governance boundaries. It is a form of authoritarian government where the military rule. With the exception of a brief period of additional civilian government from 1979 to 1983, the military held political power in Nigeria for an extensive period, from 1966 to 1999. The military unlike the democratic form of government runs a very centralized form of government. Eminue (2003) argued that poor policies formulation and misuse of the country's wealth during the civilian administration have been put forward by the military as a justification for their intervention in governance. While the military portrayed themselves as “corrective regimes” (Eshikena, 2012), they could not prove to Nigerians that their regimes were better than the civilian regimes as their period was also manned with corruption, poor policy formulation and implementation, and poor infrastructural development.

Review of Empirical Literature

The literature on the nexus between revenue from taxation and economic growth is mixed and provide evidence that the debate is far from settled. The empirical discussion in this area includes the study of Profeta et al. (2013) that examined the link between having a democratic system of governance and tax revenue using data gathered from developing countries in Asia, Latin America, and European Union. Using a robust methodology that controlled for country and regional effects, the overall findings from the study did not provide evidence to support a strong effect between democracy and tax revenue variables except for indirect tax and property tax. Okoh et al. (2016) examined the impact of petroleum profit tax on economic growth in Nigeria. The study's period covered twelve years (2004-2015) and they found that PPT had a positive and significant impact on economic growth.

Focusing on just indirect tax revenue and economic growth, Inyiama and Ubesie (2016) did a study on the effect of value added tax and custom and excise duties in Nigeria using secondary sources of data obtained from the Central Bank Statistical Bulletin and Federal Inland Revenue Service for the period 2000 to 2014. The outcome of the findings reveals that custom and excise duties positively and significantly affects gross domestic product. The findings of their study are consistent with Omondi (2019) that also established a positive and significant relationship between custom and excise duties and gross domestic product in Kenya. Unlike Inyiama and Ubesie (2016), Fasina and Adegbite (2016) restricted their examination on tax revenue to just the impact of capital gain tax on economic growth

in Nigeria. Multiple regression analysis was utilized and the study found a significant positive impact of capital gains tax on economic growth.

Lyndon and Paymaster (2016) investigated the effect of company income tax, value added tax on economic growth in Nigeria for the period 2005 to 2014. The Ordinary Least Squares (OLS) technique was utilized in their analysis. Both company income tax and value added tax were discovered to have a significant positive effect of the growth of the Nigerian economy. Ngu (2020) analyzed the impact of Nigeria's capital gain tax on overall tax income and growth on the economy from 2005 to 2018. The study's conclusion points to an insignificant positive correlation between Nigeria's economic growth and its revenue from capital gains. According to Ngu (2020), capital gains tax has not made a significant contribution to total revenue from taxes or the growth of the economy in Nigeria aligning with the conflict hypothesis since the period covered with during a civilian dispensation.

Investigating the linkage between governance and development from a regional perspective, Afolabi (2019) conducted a study on West African countries between 2002 and 2016. Using a system GMM methodology, the study found evidence in support of the compatibility hypothesis that governance is a significant contributor to economic growth and development. In a similar line of reasoning, Touchton et al. (2020) documented that one way to improve tax collection which in turn leads to the growth of the economy is by instituting a sociopolitical environment premised on democratic institutions that engender citizens' participation in governance. In other words, the system of governance matters for efficient collection of tax revenue and promoting economic growth. Using a survey approach, Touchton et al. (2020) found that having participatory institutions-a significant attribute of democratic regimes, increases the Brazilian government's taxing capacity which in turn can promote economic growth.

Harun et al. (2021) conducted a cross-country comparative investigation on the effect of political regime on tax revenue among developed and developing countries. Using a sample of 30 developed countries and 25 developing countries, they discovered that within a democratic setting, tax revenue is higher for developed countries than for developing countries. Their findings revealed that the conflict perspective on the effect of democracy correctly predicts the democracy-tax-development nexus in developing countries. Adefolake and Omoredo (2022) examined how tax revenue would impact the growth of the Nigerian economy using taxes on petroleum profits (PPT), company income (CIT) and value added tax (VAT) as proxies for tax revenue. The result from the vector error correction model revealed that between 2000 and 2021, PPT and VAT positively contributed to economic growth while CIT negatively

contributed to the Nigerian economy. Their findings provide evidence of a mixed effect of tax revenue on the Nigerian economy. In a similar study with elongated period, Agunbiade and Idebi (2020) found that the shock experienced by the Nigerian economy between 1981 and 2019 was significantly more and larger from direct taxes (VAT) than from indirect taxes (PPT and CIT) suggesting that VAT is a stronger driver of growth within the Nigerian economic environment. Their finding is corroborated by Adeusi et al. (2020) that evaluated the effect of non-oil revenue on the level of economic growth in Nigeria and observed based on the empirical analyses that custom and excise duties and VAT contributed more to the growth of the Nigerian economy than CIT and personal income tax within the period 1994 to 2018. Interestingly, Onoja and Ibrahim (2021) also examined the effect of the revenue from taxes (oil and non-oil) on economic growth using data from 2003 to 2017. Evidence from their findings revealed that despite the high tax rate associated with PPT, the oil revenue did not significantly contribute to the level of growth witnessed in Nigeria, leaving non-oil revenue as drivers of economic growth.

Flowing from the foregoing, we expect tax revenue to have a strong effect on economic growth. Consequently, we hypothesize that:

- 1. Petroleum profit tax (PPT) has a significant impact on economic growth in the military and civilian regimes.*
- 2. Company income tax (CIT) has a significant impact on economic growth in the military and civilian regimes.*
- 3. Capital gains tax (CGT) has a significant impact on economic growth in the military and civilian regimes.*
- 4. Customs and excise duties (CED) have a significant impact on economic growth in the military and civilian regimes.*

3. METHODOLOGY

The ex post facto research design was employed to examine the effect of tax revenue on economic growth in Nigeria. The period covered was 32 years (1983 -1998; 2005-2020). The study employed time series secondary data. The data were gathered from the Federal Inland Revenue Service and the Central Bank of Nigeria (CBN) Statistical Bulletins for relevant years. The specified model for this study was adapted from the model used by Onoja and Ibrahim (2021) in their study on tax revenue and economic growth. The model is presented thus:

$$GDP_t = \beta_0 + \beta_1 VAT_t + \beta_2 PPT_t + \beta_3 CIT_t + \mu \dots\dots\dots (1)$$

Where GDP = Gross domestic product is a measurement for economic growth; VAT=Value Added Tax; PPT=Petroleum Profit Tax; CIT=Companies Income Tax; $\beta_0, \beta_1, \beta_2$ and β_3 are the parameters to be estimated and μ = Stochastic term or error term.

To improve and make the model for this study more robust, we adapted the model by Onoja and Ibrahim (2021) by incorporating elements of CGT and CED that may also affect economic growth. For the purpose of this study, two models were formulated and used. They are stated in equations 2 and 3

$$\Delta LGDP_{Mt} = \alpha_0 + \sum_{i=1}^p \alpha_{1i} \Delta LGDP_{Mt-1} + \sum_{i=1}^q \alpha_{2i} \Delta LPPT_{t-1} + \sum_{i=1}^q \alpha_{3i} \Delta LCIT_{t-1} + \sum_{i=1}^q \alpha_{4i} \Delta LCGT_{t-1} + \sum_{i=1}^q \alpha_{5i} \Delta LCED_{t-1} + \sum_{i=1}^q \alpha_{6i} \Delta LFDI_{t-1} + \varepsilon_t \dots \dots (2)$$

$$\Delta LGDP_{Dt} = \beta_0 + \sum_{i=1}^p \beta_{1i} \Delta LGDP_{Dt-1} + \sum_{i=1}^q \beta_{2i} \Delta LPPT_{t-1} + \sum_{i=1}^q \beta_{3i} \Delta LCIT_{t-1} + \sum_{i=1}^q \beta_{4i} \Delta LCGT_{t-1} + \sum_{i=1}^q \beta_{5i} \Delta LCED_{t-1} + \sum_{i=1}^q \beta_{6i} \Delta LFDI_{t-1} + \gamma ECT_{t-1} + \varepsilon_t \dots \dots (3)$$

Where GDP_M = Real gross domestic product as a gauge of the growth in the economy during the military regime; GDP_D = Real gross domestic product as a gauge of the growth in the economy during civilian rule; PPT= Petroleum Profit Tax; CIT=Companies Income Tax; CGT = Capital Gain Tax; CED = Custom and Excise Duties; FDI = Foreign Direct Investment (control variable); ECT = Error correction term; γ = speed of adjustment parameter; $\alpha_1, \alpha_2, \alpha_3 \dots \alpha_4, \beta_1, \beta_2, \beta_3 \dots$ = short run dynamic coefficients; and ε = Stochastic term or error term.

To estimate the models, the autoregressive distributed lag (ARDL) regression method was used because of the different order of integration observed among the variables. Diagnostic tests such as augmented dickey fuller in ascertaining the unit root of the variables and the bounds co-integration test were employed. The co-integration test was important to enable us ascertain if the explanatory and the dependent variables have a long-run relationship.

4. RESULTS AND DISCUSSION

From Table 1, it can be seen based on the average values that the level of economic growth as well as the revenue generated was higher in the civilian era. PPT contributed the highest to economic growth in Nigeria as indicated by the statistics for the military era (M= 28.013, Max= 64.30) and the statistics for the civilian era (M= 1860.856, Max= 3201.32) while CGT is the poorest contributor with statistics for the military era (M= 3.060, Max= 12.213) and the statistics for the civilian era

(M= 13.398, Max= 99.403). A likely reason for this may be due to the high petroleum profit tax rate and the relatively higher profit levels of companies operating in the industry. During the military era, the highest revenue collected as PPT (N64.3b), CIT (N33.3b), CGT (N12.21b), and CED (N63b) were in 1997, 1998, 1997, and 1997 respectively while the highest collected as PPT (N3201.32b), CIT (N1604.69b), CGT (N99.40b), and CED (N884.76b) in the civilian regime were in 2012, 2019, 2016, and 2020 respectively.

Table 1
Descriptive statistics

	Mean	Max	Min	Std. Dev.	Mean	Max	Min	Std. Dev.
	Panel A ^a				Panel B ^a			
GDP	18142.5	22332.870	13779.260	2882.209	58458.270	71390.000	37474.950	11828.980
PPT	28.013	64.300	3.747	21.413	1860.856	3201.320	939.412	722.626
CIT	9.268	33.300	0.403	10.744	854.595	1604.699	170.200	435.355
CGT	3.060	12.213	0.299	3.217	13.398	99.403	1.037	23.5318
CED	19.083	63.000	1.616	21.025	438.194	884.760	177.700	192.470
FDI	9642.761	42879.680	144.700	11745.10	831070.5	1360300.	237287.9	271372.4

Note
Panel A = Military Era, Panel B = Civilian Era
^a n = 16
GDP = Economic Growth, PPT = Petroleum Profit Tax, CIT = Company Income Tax, CGT = Capital Gains Tax, CED = Customs and Excise Duties, FDI = Foreign Direct Investment

Source: Authors' extraction from Eview 10 software (2023)

In time series data analysis, it is essential to determine the presence or absence of unit roots in the variables in order to ascertain if their variances and means are constant over time. The whole essence is to prevent spurious results. In this study, the Augmented Dickey-Fuller (ADF) unit root test was conducted and from Table 2, it is observed that none of the variables during the military era was stationary at level. However, at first difference, all of the variables became stationary as their test statistics were greater than the critical value at 99%, 95%, or 90%. In addition, only GDP and CGT were stationary at levels during the civilian regime, others (PPT, CIT, CED, FDI) became stationary at first difference. Since all the variables are at least stationary at levels or first difference, test for cointegration among the variables was carried out.

Table 2
Augmented Dickey Fuller (ADF) Unit Root Test

Panel A						
Military Era			Civilian Era			
	Test Statistics	95% Critical Value	Remarks	Test Statistics	95% Critical Value	Remarks
GDP	-0.452873		Not Stationary	-4.585616*		Stationary
PPT	-1.534912		Not Stationary	-2.228439		Not Stationary
CIT	2.764720	-3.081002	Not Stationary	-1.321331	-3.081002	Not Stationary
CGT	-3.044344		Not Stationary	-3.717734*		Stationary
CED	3.170165		Stationary	1.292320		Not Stationary
FDI	-2.141722		Not Stationary	-2.341530		Not Stationary

Panel B						
Military Era			Civilian Era			
	Test Statistics	95% Critical Value	Remarks	Test Statistics	95% Critical Value	Remarks
GDP	-3.907897**		Stationary	N/A		Stationary@ levels
PPT	-2.933656***		Stationary	-3.455611**		Stationary
CIT	-3.009390***	-3.098896	Stationary	-4.961576*	-3.098896	Stationary
CGT	-4.689488*		Stationary	N/A		Stationary@ levels
CED	-3.028224***		Stationary	-3.405966**		Stationary
FDI	-4.284227*		Stationary	-3.156973**		Stationary

Note

Panel A = Test @ levels, Panel B = Test @ first difference

* p < .01. ** p < .05. *** p < .010.

Source: Authors' extraction from Eview 10 software (2023)

Before cointegration can be performed, appropriate lag length must be selected. Relying on the Akaike information criterion presented in Table 3, the appropriate lag length for the variables during the military era and the civilian era is one (1). This was subsequently used in conducting the cointegration tests.

Table 3
VAR Lag Order Selection Criteria

Panel A						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-464.0628	NA	6.68e+19	62.67504	62.95826	62.67203
1	-361.2629	109.6533*	1.45e+16*	53.76839*	55.75093*	53.74727*

Panel B						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-728.4536	NA	1.36e+35	97.92714	98.21036	97.92413
1	-622.3478	113.1795*	1.90e+31*	88.57971*	90.56225*	88.55859*

Note

Panel A = Military Era, Panel B = Civilian Era

* indicates lag order selected by the criterion (each test at 5% level)

LR: sequential modified LR test statistic; FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion

Source: Authors' extraction from Eview 10 software (2023)

The likelihood of cointegration among the variables was tested using the bounds test. From panel A in Table 4, the F-statistic is 0.420210 and it below the critical bound values at 10%, 5%, and 1% levels of significance. Therefore, this reveals that there is no cointegration among the variables during the military era. The implication is that only a short run relationship exists among these variables. Still on Table 4 but from panel B, the F-statistic is 5.882488 and it greater than the critical bound values at 10%, 5%, and 1% levels of significance. Therefore, this reveals that there is cointegration among the variables during the civilian era. This implies that there is a long-term relationship between all of these variables.

Table 4
Bounds Cointegration Test

Panel A			Panel B		
Test Statistic	Value	k	Test Statistic	Value	k
F-statistic	0.420210	5	F-statistic	5.882488*	5
<u>Critical Value Bounds Significance</u>					
		10 Bound	11 Bound		
	10%	2.26	3.35		
	5%	2.62	3.79		
	1%	3.41	4.68		

Note

Panel A = Military Era, Panel B = Civilian Era

* $p < .01$. ** $p < .05$.

Source: Authors' extraction from Eview 10 software (2023)

The results of the Autoregressive Distributed Lag (ARDL) regression are presented in Table 5. These figures are for the short run period. Focusing on panel A (military era), the R-squared is approximately 0.96 while the adjusted R-squared is 0.93. These reveal that all the explanatory variables jointly account for the systematic variation in economic growth to a tune of 93% when adjusted for the degree of freedom. In addition, the F-statistic of 33.74 ($p < .05$) indicates that the predictive power of the model is sound and the results can be used for policy recommendations. With respect to the t-statistics of the explanatory variables, PPT has an insignificant negative relationship ($t = -0.550422$) with GDP at 5% level of significance. Therefore, we conclude that petroleum profit tax has no significant impact on growth of the economy during the military dispensation. CIT also has an insignificant negative relationship ($t = -1.431254$) with GDP at 5% level of significance. Therefore, we

conclude that company income tax has no significant impact on growth of the economy during the military dispensation. CGT has a non-significant negative relationship ($t = -0.071774$) with GDP at 5% significance level. Therefore, we conclude that capital gains tax has no significant impact on growth of the economy during the military dispensation. Lastly, CED has an insignificant positive relationship ($t = 1.159108$) with GDP at 5% level of significance. This leads us to conclude that custom and excise duties also has no significant impact on growth of the economy during the military dispensation.

Table 5
Short-run Analysis for Military and Civilian Era

Variable	Panel A		Panel B	
	Coeff.	t-Statistic	Coeff.	t-Statistic
GDP(-1)	1.015600	3.735680*	0.738649	9.583658*
PPT	-9.650307	-0.550422	0.017556	4.528024*
CIT	-74.24662	-1.431254	0.110771	6.700139*
CGT	-9.377291	-0.071774	-0.003010	-0.632873
CED	42.45249	1.159108	-0.069776	-4.167683*
FDI	0.000807	0.058007	0.014095	4.089555*
C	467.7011	0.117877	2.070648	2.983040**
R-squared	0.9619		R-squared	0.9986
Adjusted R-squared	0.9334		Adjusted R-squared	0.9976
F-statistic	33.7421*		F-statistic	1005.782*
Prob(F-statistic)	0.0001		Prob(F-statistic)	0.0000

Note
Panel A = Military Era, Panel B = Civilian Era
* $p < .01$, ** $p < .05$, *** $p < .10$

Source: Authors' extraction from Eview 10 software (2023)

Still on Table 5 but now looking at panel B, the adjusted R-squared is 0.99. This is 6 units higher than that of panel A and it reveals that all the independent variables jointly account for 99% systematic variation in economic growth when adjusted for the degree of freedom. The F-statistic of 1005.782 ($p < .05$) indicates that the predictive power of the model is sound and the results can equally be used for policy recommendations. With respect to the t-statistics of the explanatory variables, both PPT ($t = 4.528024$) and CIT ($t = 6.700139$) have positive and statistically significant relationship with GDP at 1% level of significance. CGT has a non-significant negative relationship ($t = -0.632873$) with GDP. However, CED has a significant negative relationship ($t = -4.167683$) with GDP at 1% significance level. The result of the cointegration test suggests that while the relationships between the explanatory

variables and the predicted variable during the military regime are short run relationships, the relationships during the civilian regime are long run in nature.

Table 6
Long-run Analysis for Civilian Era

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PPT)	0.017556	0.003877	4.528024*	0.0019
D(CIT)	0.110771	0.016533	6.700139*	0.0002
D(CGT)	-0.003010	0.004756	-0.632873	0.5445
D(CED)	-0.069776	0.016742	-4.167683*	0.0031
D(FDI)	0.014095	0.003447	4.089555*	0.0035
CointEq(-1)	-0.261351	0.077074	-3.390918*	0.0095
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PPT	0.067173	0.022529	2.981627**	0.0176
CIT	0.423841	0.067235	6.303839*	0.0002
CGT	-0.011517	0.021484	-0.536075	0.6065
CED	-0.266980	0.141381	-1.888373***	0.0957
FDI	0.053931	0.026669	2.022256***	0.0778
C	7.922864	0.432187	18.332025*	0.0000

Note

* p < .01, ** p < .05, ***p < .10

Source: Authors' extraction from Eview 10 software (2023)

The findings of the long-term connection between the explanatory variables and the dependent variable are presented in Table 6, along with the rate of adjustment whenever there is short-term disturbance. CointEq(-1), which is also the error correction term is signed correctly (-0.261351) and significant. The ECT implies that about 26% of the disturbances in the short run are corrected for annually. Hence, the adjustment speed is fairly slow. The t-statistics of the explanatory variables in the long-run, reveal that PPT has a positive and statistically significant relationship (t= 2.981627) with GDP at 5% level of significance. CIT also has a significant positive relationship (t= 6.303839) with GDP at 1% significance level. Therefore, we conclude that petroleum profit tax and company income tax both have significant impact on growth of the economy during the civilian dispensation. CGT has a non-significant negative relationship (t= -0.536075) with GDP at 5% significance level. Therefore, we conclude that capital gains tax has no significant impact on growth of the economy during the civilian dispensation. Lastly, CED has a significant negative relationship (t= -1.888373) with GDP at 10% level of significance leading us to

conclude that custom and excise duties has a weak significant impact on growth of the economy during the civilian dispensation.

Various diagnostic tests were carried out to make sure the results were reliable. This study satisfies the regression assumption of homoscedasticity, the normality of residuals, and serial correlation. The results of the diagnostic tests are shown in Table 7.

Table 7
Regression Diagnostic Tests

Assumption	Test	Result-Military	Result-Civilian	Remark
Homoscedasticity	Breusch-Pagan Godfrey	$F(6, 8) = 0.457; p .821$	$F(6, 8) = 1.652; p .249$	Satisfied
Normality of residuals	Histogram	JB: 3.336; $p .188$	JB: 0.257; $p .879$	Satisfied
Serial correlation	Breusch-Godfrey LM	$F(2, 6) = 0.858; p .470$	$F(2, 6) = 1.815; p .241$	Satisfied

Source: Authors' extraction from Eview 10 software (2023)

Discussion of Findings

The study found that PPT contributed significantly in affecting the level of economic growth during the civilian dispensation than in the military era. The finding on the non-significance of PPT→GDP in the military dispensation supports the study of Omojumite and Iboma (2012) that also found an insignificant relationship between PPT and economic growth but disagrees with the position of Ilaboya and Eiya (2014) and Onaolapo et al. (2013). In addition, the findings on the significance of the long run PPT→GDP in the civilian dispensation agrees with the study of Ogbonna and Ebimobowei (2012) that investigated the impact of petroleum profit tax on the economic growth of Nigeria and found the existence of a long run equilibrium relationship between economic growth and petroleum profit tax.

While there was no significant impact of company income tax on growth of the economy during the military dispensation, company income tax had a significant impact on growth of the economy during the civilian era. This result is at variance with popular findings but a likely reason might be because of a sub optimization and low growth contribution maybe due to tax avoidance or loopholes in tax administration. The finding of this study is in agreement with the finding of Lyndon and Paymaster (2016) that examined the impact of companies' income tax, value-added tax on economic growth (proxy by gross domestic product) in Nigeria, and found that both company income tax and value-added tax have positive impact on economic growth. However, it conflicts with the finding of Dang and Bala (2018)

that investigated the contributions of tax revenue to the growth and development experienced in Nigeria and found that CIT had an insignificant contribution.

The study also found that there is no significant impact of capital gains tax on growth of the economy during the military and civilian dispensations. In terms of significance, the finding on the civilian dispensation in this study is in disagreement with Fasina and Adegbite (2016) that assessed the effect of capital gain tax on growth of the economy in Nigeria and discovered that it impacted significantly in Nigeria. However, it supports the finding of Ngu (2020) that examined the effect of capital gain tax on economic growth in Nigeria and found an insignificant positive relationship between capital gains tax and total economic growth in Nigeria, thereby concluding that capital gains tax has not significantly contributed to economic growth in Nigeria.

Lastly, the study found there is no significant impact of custom and excise duties on growth of the economy during the military and civilian dispensations at 5% significance level. This is contradictory to the finding of Okafor (2012) that empirically investigated the impact of income tax revenue on Nigeria's economic growth and discovered among others that custom and excise duties (CED) stimulates economic growth. This is also at variance with Awa (2020) that investigated the relevance of tax revenue to economic growth and found that tax revenue including CED has statistically significant effect on the economic growth of Nigeria. In addition, the finding on CED→GDP in the military dispensation agrees with the findings of Agunbiade and Idebi (2020) that observed from the investigation on the effect of tax on economic growth in Nigeria that CED has insignificant effects on economic growth in both the short and long run.

5. CONCLUSION AND RECOMMENDATIONS

This study was conducted to investigate the impact of tax revenue on the growth of the Nigerian economy and identify if this impact differs for the military and civilian regimes. To achieve this objective, four hypotheses were evaluated using the autoregressive distribution lag estimator (ARDL). Data were gathered from the Federal Inland Revenue Service and the Central Bank of Nigeria (CBN) Statistical Bulletins. In an attempt to establish the effect of tax revenue on the growth of the economy pre and post military era in Nigeria, data for the period 1983 to 2020 were obtained and analysed. The period covered was divided into two: Military dispensation (1983-1998) and Civilian dispensation (2005-2020). From the findings, it was observed that tax revenue was more significant in affecting economic growth in the civilian dispensation than in the military dispensation. The study concludes

that only petroleum profit tax and company income tax have significant impact on the growth of the Nigerian economy. This study also finds evidence in support of the compatibility perspective on democracy, tax revenue and economic growth. This paper recommends policy makers should strengthen the existing policies and laws relating to PPT and CIT and also investigate the structure for the utilization of these taxes to address likely leakages or sub optimization and guide against crowding effect of the tax rate on other drivers of economic growth. Similarly, tax administrators should intensify efforts aimed at increasing revenue generated from CED as this will help improve GDP. Future studies can extend this investigation using other revenue sources such as value added tax (VAT) and personal income tax that were not captured in the current study. In addition, since Nigeria ranks in the bottom quadrant of corrupt nations in the world, the level of corruption and misappropriation of funds may affect the tax revenue-economic growth nexus. Therefore, future studies can consider how corruption serves as a moderator or intervening variable in the relationship between tax revenue and economic growth.

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