

Impact of Tax Laws and Reforms on Revenue Generation in Nigeria: 1994 to 2019

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ABSTRACT

It is widely believed in many quarters that taxation remains the most veritable tool policy makers can use to generate more revenue to meet economic sustainable growth and development objectives. However, the issue of tax revenue leakages remains a major source of concern in developing economies like Nigeria. This has made many scholars to verge into the subject matter more holistically. Premised on this, the present study empirically investigated the extent to which tax policies and tax law has affected tax revenue generation in Nigeria from 1994 to 2019. Various tax policy/laws variables considered include petroleum profit tax, corporate income tax, value added tax and custom and exercise duties while revenue generation was measured by federally generated tax revenue. The study adopted the Autoregressive Distributed Lag Model. Judging by the F-statistics, all the tax policy variables were statistically significant and positively related to federally generated tax revenue. However, on individual basis, only custom and exercise duty affected revenue generation immensely both in the short and long run. Hence, we conclude that amidst high petroleum profit tax; Value Added Tax alongside the decreased corporate income tax, the Nigerian economy is yet to fully experience outstanding federally generated tax revenue, as reports from various authorities are showing that the tax to GDP ratios stands at 6%! Again, we conclude that custom and exercise duty is the surest way to experience outstanding federally generated tax revenue. On this premise, we recommend, amongst others, that the federal government must ensure timely collection and remittance to the Federation Account of custom and excise duties as it contribute immensely to federally generated revenue.

Keywords: *Tax Policies, Revenue Generation, Policy Makers, Federally Generated Tax Revenue.*

1.0 Introduction

One of the major challenges facing most developing countries is the diversification of their sources of revenue. Nigeria is not left out, though richly endowed with crude oil among other solid mineral resources, her age-long over dependence on oil revenue as a major source of government revenue, at the expense of other possible non-oil sources of revenue,

has left much to be desired (Obi, 2018). The unsustainability of crude oil revenue in financing government expenditure became increasingly glaring during the recent downturn in international oil price (between late 2014 to mid-2017), which eventually plunged the nation into recession (Obi, 2018). Most oil consuming nations, such as the United States, have systematically reduced their

demand for Nigeria's crude oil over the last few years by investing on new energy policies and several synthetic products which on a long run may eventually displace or drastically reduce their dependency on crude oil (Oriakhi & Ahuru, 2014). This development underscores the inescapable need for Nigeria to make adequate moves towards diversifying her revenue sources, especially through taxation.

Tax is an important source of government revenue. Government requires tax revenue to augment its non-tax revenue for the coverage of public expenditures so as to maintain high provision of expected public infrastructures and social services. According to Nwaiwu and Okoro (2018), the ultimate aim of any government's tax system is to achieve its legitimate projected revenue to finance the country's expenditure which can only be immensely realized if all taxpayers willingly comply with the tax laws. Most developed countries rely solely on taxation as their major source of government revenue and have fared better because tax provides a more stable and predictable flow of income in meeting governments' expenditure needs (Ofoegbu, Akwu & Oliver, 2016). However, since tax is a compulsory payment for which the taxpayers receive nothing directly in return, individual and businesses (especially in developing countries) often device means of decreasing their tax liabilities, either by legal or illegal means (Baryeh & Ezeka, 2013).

In this regard, countries including Nigeria have embarked on series of tax reforms and policies, which simply means a series of action taken by government to promote the tax system (Appah & Oyandonghan, 2011) or the process of changing the way tax revenues are collected or managed by the government in order to enhance total tax revenue (Ebi & Ayodele, 2017). The onus of tax reforms is basically to broaden the tax base, reconcile multiplicities of

taxation among different tiers of government, restore the confidence of taxpayers on the tax system, and promote voluntary compliance. In general, the intrinsic goal of tax reform is the improvement of publicly generated revenue (Eze, Iorwuese & Abba, 2016).

Despite the several tax reforms in Nigeria, studies (such as Aminu & Eluwa, 2014) still suggest that government has not achieved its full potentials in terms of tax revenue generation which is among the objectives towards which the tax reforms are focused. Most existing studies pertaining to tax policy reforms in Nigeria (such as Abdulrahman and Isik, 2016; Adereti, Sanni and Adesina, 2011; Akwu and Oliver, 2016; Ebieri and Ekwueme, 2016; Jelilov, Ofoegbu have all focused on its impact on economic growth (GDP), howbeit with divergent outcomes. Only few (such as Asaolu, Dopemuand & Unam, 2015; Oriakhi & Ahuru, 2014, Ogbonna and Ebimobowei, 2012; Okafor, 2012; Onakoya and Afintinni, 2016) have examined its impact on federally collected revenue. Both studies examined the impact of tax reforms on government revenue generation in Nigeria between 1999-2012 and 1981-2011, respectively. However, despite their findings towing towards same direction (i.e. that tax reform enhances government generated revenue), the former focused only on Lagos state while the latter limited its data to as far as 2011, thereby creating an information gap (i.e. from 2011 till date) which can be closed by replicating similar study using the most current economic data. The likelihood that the implementation of newer tax reforms, like the unique Taxpayer's Identification Number (TIN), automated tax system and e-payment system, could twist the outcome of recent studies is highly probable.

This paper builds on the methodology of Oriakhi and Ahuru (2014) to further consider the impact of tax policies on revenue

generation in Nigeria using several tax revenue generation sources like Petroleum Profit Tax (PPT), Companies Income Tax (CIT), Value-Added Tax (VAT) and Custom and Excise Duties (CED) as proxies for tax policies. By covering annual time series data spanning twenty-five years (1994 to 2019), it is expected that the outcome of this paper would be resourceful to policy makers especially now that several new reform policies such as the automated e-tax payment systems is being integrated and promoted by tax authorities at the Federal and states levels. The specific objectives of the study include to:

- i. examine the impact of petroleum profit tax (PPT) on federally generated revenue in Nigeria.
- ii. analyze the impact of companies income tax (CIT) on generated revenue in Nigeria.
- iii. ascertain the impact of value-added tax (VAT) on federally generated revenue in Nigeria.
- iv. identify the impact of custom and excise duties (CED) on federally generated revenue in Nigeria.

2.0 Literature Review and Hypotheses Development

2.1 Tax Reforms in Nigeria

According to Ebieri and Ekwueme (2016), tax reforms are “deliberate and continuous actions by government and its agencies to alter the existing tax laws and policies to positively impact on the tax administration and collection process with minimal cost”. Ebi and Ayodele, (2017) also defined tax reforms as “the process of changing the way taxes are collected or managed by the government in order to enhance tax revenue”. For the purpose of this paper, tax reforms can be seen as purposeful attempts by government or tax authorities in fine-tuning the fiscal imbalances in existing tax strategies in order to achieve the broad objective of increased tax yield. The outcome of a reform may give birth to an entirely new tax, a new rate, a new legal clause, a new

assessment system (Somorin, 2010). Thus, irrespective of how tax reform is described, the underlying expectation is to boost the existing revenue generation of a government via legislative proceedings and legal backings. Through periodic tax reforms, the government attempts to amend existing deficiencies and loopholes in existing tax structures by developing a more precise method of tax assessment and collection; a more resilient and responsive fiscal institutions to propel existing tax administration and making them more accountable, ensuring that what is expended in pursuing increased collection does not exceed what is eventually collected; and more importantly, promoting voluntary compliance among tax payers (Ebieri & Ekwueme, 2016).

In respect to the motives of engaging in tax reforms, Nwaiwu and Okoro (2018) are of the view that its success lies with the government, tax authorities, tax practitioners and most importantly, the taxpayers. The reason being that the individual taxpayers’ willingness to comply with whatever reforms and strategies the authority throws at them can be dependent on their perception of the level of fairness of the tax systems as well as the level of government sincerity in judiciously utilizing the tax proceeds. Earlier studies by Feld and Frey (2007) asserts that taxpayers can willingly cooperate with the tax authorities even when they perceive they are not enjoying enough public goods commensurate to the taxes they are paying, insofar as the political process is fair and lawful. Ebieri and Ekwueme (2016) also note that no matter how robust the tax reform and its capacity to enhance revenue generation, the reform would not by itself influence the quality of public goods, if governments lack the will-power to judiciously apply the generated revenues on viable projects that would provide the required incentives to trigger voluntary compliance.

Asuquo (2014) noted that Nigeria's tax system has undergone several reforms geared towards enhancing tax administration and collection with minimal enforcement cost. Eze et al (2016) summarized and categorized the recent tax reform efforts of the federal government of Nigeria from 2001 to date into two major groups, the 2001 and 2004 tax reforms. Such notable reforms in Nigeria include Establishment of Federal Inland Revenue Service (FIRS) in 1992 through the Finance (miscellaneous taxation provisions) Act No. 3 and Decree No.104. With the passage of this Act, the FIRS was granted administrative and fiscal autonomy from civil service bureaucracy in respect to funding, personnel and material resource management (FIRS, 2014). Other prominent tax reforms include the introduction of value added tax (VAT) in 1993 which was powered by the articulation of the group led by Dr. Sylvester Ugoh whose recommendations on indirect taxation prompted the imposition of 10% and 2.5% levy on banks' excess profits and on building and construction companies respectively (Olajide & Associates, 2013).

Other recent tax reforms include the introduction of the unique Taxpayer's Identification Number (TIN) which became effective as of February 2008. The idea behind TIN is to capture individual taxpayers in an electronic system which permanently identifies each taxpayer for life. It generates a unique number which gives the taxpayers the ability to manage their account anywhere in the country. Other related reforms included Automated Tax System, E-payment system and self-assessment. The idea of the automated tax system is to facilitate the tracking of tax positions and issues by individual taxpayers. The e-payment system is expected to enhance smooth payment procedures by reducing incidences of tax touts (Asuquo, 2014). Another notable reform, according to Somorin (2010), is the FIRS Establishment Act of 2007 which saw the establishment of Tax

Appeal Tribunal (TAT). Under the improved collection mechanism of the new leadership of the revenue authorities, the tax agency can sanction self-serving tax officials who formally allowed concessions, exemption, and unwarranted waivers. It also involves the training of tax officials the computerization of tax offices in line with the current trend of globalization and ICT.

In order to create the basis for the empirical nature of this paper, the researchers focuses on four major tax revenue sources of the federal government (which have also formed part of several tax reforms and amendments in Nigeria), according to Nwosu (2010). They include Companies income tax (CIT), Petroleum profit tax (PPT), Value-added tax (VAT) and Custom and Excise duties. These four tax revenues made-up the independent variables of the study in line with Okafor (2012); Onakoya and Afintinni (2016); and Oriakhi and Ahuru (2014).

2.1.1 Companies income tax (CIT)

When incorporated organizations in Nigeria make profits from their business ventures, they pay tax on such gains, and that tax is known as 'Companies Income Tax (CIT)' of corporate tax. It also encompasses the tax on the profits of non-resident companies carrying out businesses in Nigeria. Company income tax (CIT) was introduced in 1961 and has been amended many times and is currently codified as the Company Income Tax Act 1990 (CITA) (Odusola, 2006). The Federal Board of Inland Revenue, whose operational arm is the Federal Inland Revenue Services (FIRS), is engaged to oversee the administration of the tax. Previous studies (such as Adegbe & Fakile, 2011; Onakoya & Afintinni, 2016) found that Company income tax increases Real GDP by 40% in Nigeria between the 1980's and 2010's. Hence, we expect CIT to have a positive significant impact on federal

generated revenue. This led to the first hypothesis stated in a null form below:

Ho1: There is no significant effect of CIT on federal generated revenue in Nigeria.

2.1.2 Petroleum profit tax (PPT)

This is a tax on profits of companies engaged in 'petroleum operations in Nigeria. It is taxable under the Petroleum Profits Tax Act (PPTA) and it's solely administered by FIRS. The Petroleum Profit Tax is subjected to any resident company or corporate entity in charge of a non-resident company who are exploring for petroleum or producing it. This also includes any liquidator, receiver, or agent of liquidator or receiver of any company carrying on petroleum operations in Nigeria. According to Ebieri and Ekwueme (2016), the petroleum profits tax act 1990 as amended in 2004 placed different rates of assessment of tax on the chargeable profits of companies depending on the level of production of crude oil (petroleum operations) and the production sharing contract. Odusola (2006) posit that the petroleum profit tax is applicable to upstream operations in the oil sector. It is especially identified with rents, royalties, margins and profit-sharing elements associated with oil mining, prospecting and exploration leases. It is the most critical tax in Nigeria in terms of its impact on aggregate income, contributing to about 78% of foreign trade profit and government total revenue based on available statistics from 1986 to 2013 (Ebieri & Ekwueme, 2016). However, considering that the administration have commenced the much needed shift from total reliance on petroleum-related revenues due to its volatility, recent statistics suggests that the contribution of oil revenue to total government revenue is beginning to plummet due to the appreciation of other sources of government revenue such as agriculture. For example, The Chairman of Federal Inland Revenue Service (FIRS), Babatunde Fowler recently noted that Nigeria's revenue from oil stood at N2.24

trillion, N2.29 trillion, N1.16 trillion and N1.52 in 2014, 2015, 2016 and 2017 respectively (Premium Times, 2018). Comparing that to the total tax revenue collection in same period (which is 4.69 trillion, 3.7 trillion, 3.3 trillion and 4 trillion respectively), it means that income from oil (petroleum profit) accounted for about 46% (on average) of the total revenue in those periods taken together. Hence, we expect a positive (coefficient sign) and no-effect of PPT on government revenue. The second null hypothesis is stated thus:

Ho2: Petroleum profit tax (PPT) has no significant effect on federal generated revenue in Nigeria.

2.1.3 Value-added tax (VAT)

Value Added Tax (VAT) in Nigeria is a consumption tax (payable on the goods and services consumed by any person, whether government agencies, business organizations or individuals) that was established by the Value Added Tax Act of 1993. It is a Federal Tax which is managed by the Federal Inland Revenue Service (FIRS) of Nigeria. The adoption of the value-added tax (VAT) through the VAT Act No. 102 of 1993 was a vital point of interest in tax reforms in Nigeria. Notwithstanding, its execution really started in January 1994 to replace the sales tax Decree No. 7 of 1986. VAT is a form of indirect tax paid majorly by end-users for the consumption of goods and services. There are several goods and services that are exempted such as food items, drugs, educational materials, agric equipments such as fertilizers and veterinary medicines, baby products, religious services, and so on (Adeyemo, Adeniran, Imoleayo & Egbide, 2017). Thus, unless the item consumed is specifically exempted by law, the consumer is liable to the value added tax. According to Ola (2001), the value added represents the difference between the increase in the value of goods or services in the process of their production of delivery. Findings from most

recent studies (Adeyemo et al, 2017; Oseni, 2017; Apere & Durojaiye, 2016) show that VAT has significant positive impact on total revenue generated in Nigeria. However, not all the studies found it significant when matched with economic growth and development (e.g. Adeyemo et al, 2017; Ebieri & Ekwueme, 2016). Hence, we can expect a positive effect of VAT on total federal revenue. Our third hypothesis is this stated:

Ho3: There is no significant effect of VAT on federal generated revenue in Nigeria

2.1.4 Custom and Excise duties (CED)

Customs duty is the tax charged most times on the value of goods or upon the weight, dimensions, or some other criteria that will be determined by the government on imports by the customs service of Nigeria to raise revenue for the country and also to save domestic and infant industries from cut-throat competition. Customs and excise duties are the oldest forms of modern taxation and are otherwise known as import duties which are charged either as a percentage of the value of import or a fixed amount on specific quantity (Fasoranti, 2013). Previous studies such as Ebiringa and Emeh (2012); Onakoya and Afintinni (2016) found that customs and excise duties was negatively related to gross domestic product which implies that an inverse relationship existed between customs excise duties and economic growth in Nigeria. Ikebujo, Ibanichuka, and Akani (2016); and Inyama and Ubesie (2016) found it has positive significant impact, while Ebieri & Ekwueme (2016) found it statistically insignificant in explaining variations in total government revenue and economic development. Hence, we expect a positive coefficient sign on the CED variable, leading to our fourth hypothesis.

Ho4: Custom and Excise duties (CED) have no significant effect on federal generated revenue in Nigeria.

2.2 Empirical Review

Many studies from researchers in different part of the country have utilized diverse techniques in examining the impacts of laws on different national fiscal outcomes, most especially on economic growth and development in Nigeria. However, only few have looked at the contribution of different types of tax revenues (as proxy for tax reforms) on total government generated revenue.

Pibowei (2021) examined the impact of petroleum profit taxes on economic growth in Nigeria from 1981 to 2020. The study adopted an interval scale of measurement and the preceding year basis of sampling, with a sample size of nine (9) years from 2010 to 2018. The result findings revealed that PPT has no significant relationship on PCI and that PPT has no significant relationship with job. Also in 2012, Udezo & Onuora examined the effect of tax reforms on revenue performance in Nigeria. They employed the descriptive statistics, Augmented Dickey Fuller (ADF) statistics, cointegration test and multiple regression model analysis. Their findings revealed that value added tax (VAT) and the PIT tax (PPT) reforms have significant positive effects on income performance. Also, it showed that the VAT reforms have been significantly positive. In spite of the positive but negligible impact on Nigerian revenue performance in the reform in the corporate income tax (CIT).

In 2018, Oluyombo & Olayinka studied impacts of tax compliance on government revenue growth in Nigeria with emphasis on non-oil revenues collected from the federal government. Data was obtained from the management bulletin of the Federal Inland Revenue service. This was analysed using ordinary least-squares regression. Findings revealed that tax compliance has a major impact on boosting tax revenue generation and

a significant difference in government revenues can occur as a result of tax failure. Again, Charles, Ekwe & Azubike in 2018 carried out a study on federally collected tax revenue and economic growth of Nigeria: A time series analysis. The study employed a causal method of descriptive data research from 2000 to 2016 using the Johansen co-integration test for data analysis. Their results showed a meaningful long-term relationship between Nigeria's tax reform and its GDP. Essentially, gross domestic product is caused by custom and excise duties (CED) and vat (VAT) Granger (GDP).

Furthermore, Ebi & Ayodele (2017) carried out a study on impact of tax reforms and tax yield in Nigeria. It employed the Time series data from 1981 and 2014. Error correction mechanism (ECM). Their findings revealed that All the tax reforms (PIT,VAT) significantly improve tax revenues by positive coefficients. Again, Oti and Odey (2016), examined tax reforms and revenue Trend in Nigeria: The Dyadic Interact, the study made use of the time series data from 1981 to 2014. It used the Vector Error Correction Model (VECM) and findings were that the various income taxes were statistically significant and have positive relationship with total federally collected revenue. Apere and Durojaiye (2016) also carried out a study on the impact of vat on government revenue generation in Nigeria. They used secondary data for a time frame of 1994 and 2014, and employed the simple regression analysis. Their results showed a long-run significant positive relationship between value added tax (VAT) and each of government total revenue.

Again Asaolu, Dopemu and Monday in 2015 carried out a study on impact of tax reforms on revenue generation in Lagos state, using the time series approach, between 1999 and 2012. The OLS regression was employed and their findings revealed a long run relationship

between the tax reforms and revenue generated in Lagos State. Also, Oriakhi and Ahuru (2014) studied the impact of tax reform (PPT, CIT, CED and VAT) on federal revenue generation in Nigeria using the time series data (1981-2011) they employed Vector Error Correction Model (VECM). It was revealed that the four income taxes studied were statistically significant and has positive relationship with federally collected revenue. Also, the study of Aminu and Eluwa (2014) was on impact of tax reform policy (PIT, CED, & CIT) on revenue generation of the federal government of Nigeria, using variance method and the Scheffe's Multiple Comparison techniques. Their study findings revealed that tax reform policy have significant impacts on the personal, company and custom duty tax revenues of the Federal government while the comparison test showed that taxes from both company and custom duty exceeded personal income tax. (see appendix for a summary of these previous studies as particularly related to this current study).

2.3 Theoretical Review

There are quite a number of theories underlining the concept of taxation and tax reforms. However, this paper is anchored on the Socio-Political theory of taxation as advocated by Adolph Wagner (1883). The theory states that both social and political objectives should be among the major factors to be considered in selecting or amending taxes applicable for revenue generation and collection. Adolph Wagner advocated that a tax system should not be fine-tuned to satisfy certain individual members of the society but should be deployed in curing the ills of society as a whole (Wagner, 1883). In other words, the propagator of the theory was apparently advocating for a more broad-minded approach to tax reforms where societal welfare and an all-encompassing political gain should be the motivating factor. Thus, Wanger was specifically in support of tax policies that

fosters proportional income redistribution and reduced income inequalities. In Nigeria, for instance, in recent times, some states government's tax reforms and policies have generated a lot of public concern. Anecdotal evidence shows that the recent property tax bill in Lagos state and not-long-ago in Edo state generated a lot of public resistance. There are two possible explanations for such scenario, its either the taxpayers are deploying means of avoiding the new tax laws, or that social and political implications of such taxes were not the main motivation for the reform in line with the provision of the Socio-Political theory of taxation. This idea by Adolph Wagner has been much criticized at a time but beginning to appear as the hallmark of fiscal policies of modern states.

3.0 Methodology

The use of regression analysis was employed in order to lend empiricism to this study; the total federally collected tax revenue was regressed on several tax revenue sources (petroleum profit tax, value added tax, custom and excise duties). The time series variables were obtained from the published journal of the above scholars as extracted from several issues of the Central Bank statistical bulletin. The scope encompasses data from 1994 to 2019 making a total sample observation of twenty-five (25).

The study employed the Autoregressive Distributed Lag Model (ARDL). However, due

$$\Delta \log FGR_t = \alpha_0 + \alpha_1 \Delta \log FGR_{t-1} + \sum_{i=0}^m (\Delta PPT) + \sum_{j=0}^n (X_j \Delta \log VAT_{t-j}) + \sum_{k=0}^p (\partial k \Delta \log CED_{t-k}) + \sum_{k=0}^q (\partial k \Delta \log CIT_{t-k}) + \Omega ECT_t - 1 + \xi_t$$

The *a priori* expectation of the slope coefficient is expected to have positive impacts on federally collected tax revenue. Thus, $B_i > 0$ where $i = 1, 2, 3, 4$.

4.0 Results and Discussions

4.1. Data Analysis

to the dangers in running the regression using non-stationary time series variables (because there is high tendency that economic time series variables are non-stationary at levels but may become stationary only after first or second differencing, we employed the augmented dickey fuller (ADF) preliminary test in ascertaining the stationarity state of the time series variables. Before the regression result proper, the model was subjected to normality test, Serial-Auto correlation Test and Heteroskedasticity test.

3.1 Model Specification

The paper adopted the Oriakhi & Ahuru (2014) model which hypothesized that federally collected revenue (GOVREV) depends behaviorally on the various incomes taxes - *Petroleum Profit Tax (PPT)* *Corporate Income Tax (CIT)*, *Value Added Tax (VAT)*, and *Custom and Excise Duties (CED)*. Thus, such behavioural relationship was given in the equation below.

$$FGR = F(PPT, VAT, CED, CIT) \text{-----} (Eq.1)$$

Equation (1) can be re-specified in a mathematical form as given below:

$$FGR = \beta_0 + \beta_1 PPT + \beta_2 CIT + \beta_3 VAT + \beta_4 CED + U_{1t} \text{-----} (Eq.2)$$

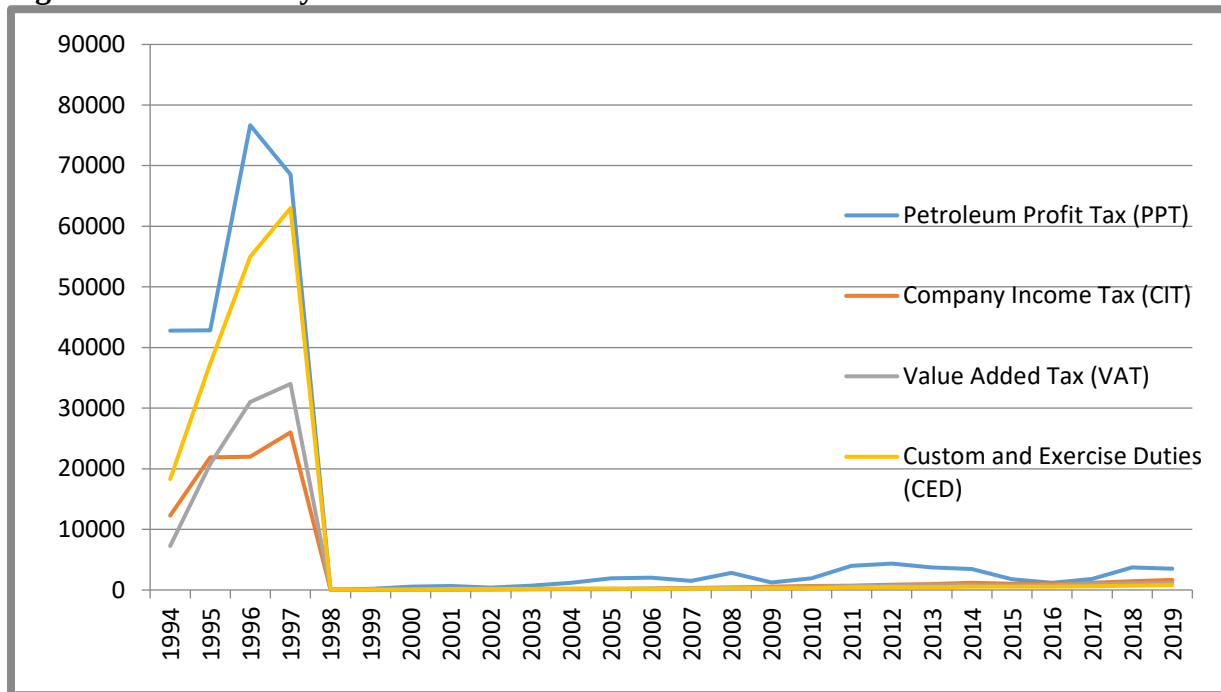
Where U_{1t} is the Gaussian white noise;

To fit our model in ARDL form, we restated it as:

Where $GOVREV$ is the repressed and is the observations of yearly federal generated revenue, PPT_t , CIT_t , VAT_t , and CED_t denotes the yearly observations of Petroleum Profit Tax, value added tax, Companies Income Tax and Custom and Excise Duties, respectively.

The sourced data was analyzed using trend analysis, correlation analysis, stationarity test, and ARDL Bound Test

Figure 1: Trend Analysis on Tax Proxies from 1994 to 2019.

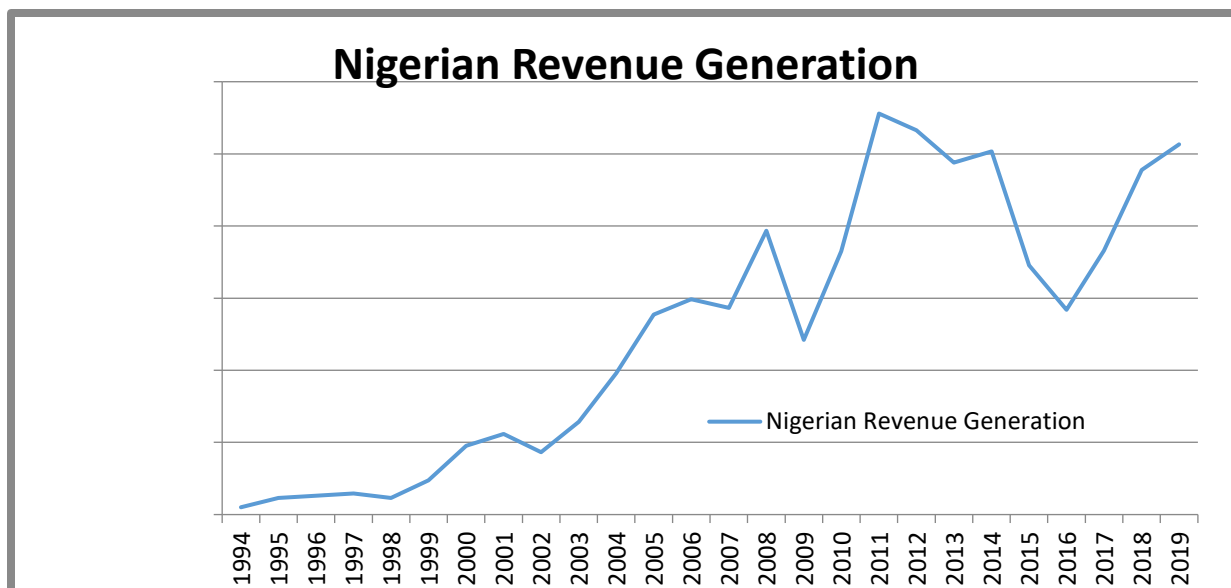


Source: Central Bank of Nigeria Statistical Annual Report (2019)

Figure 1 revealed that the study covered a study period of 1994 to 2019. The trend analysis for tax policies suggests a complete downward curve. This was evident in 1998 as all taxation proxies dropped completely from then till date. Also, series of short falls were noticed as well. More so, the 2008 economic meltdown, opened up abnormal functioning in tax laws proxies, inefficient tax laws administration alongside other tax loopholes and sharp practices contributed to the sharp deviations and reductions in tax rates and earnings within that period.

Evidently, between 2009 and 2010 crude oil price dwindling in the global oil market also disrupted the revenue collection process as Nigeria being a major exporter and producer of crude oil in the world also face the brunt. This again adversely contributed to the alarming reduction in tax revenue. Apere & Durojaiye (2017) submitted that the dwindling crude oil price in the global oil market created lacuna in the global oil market in that it depreciated the Nigerian currency and also increased the country's foreign debt burden.

Figure 2: Trend Analysis on Revenue Generation from 1995 to 2019.



Source: Central Bank of Nigeria Statistical Annual Report (2019)

Figure 2 revealed that the study covered a study period of 1994 to 2019. The trend analysis for revenue generation suggests an upward-downward curve. The possible factor that led to this disappointing curve lies in the 2008 economic meltdown, dysfunctionality

encountered in tax policies proxies, inefficient tax laws administration alongside other tax loopholes and sharp practices contributed to the sharp deviations and reductions in tax rates and earnings within the study period.

4.2.2. Stationarity Test

This test tries to check whether the study variables are stationary or not. Specifically, the test results are tabulated below:

Table 1: Summary of ADF test

ADF TEST @ LEVEL				Order of Integration	Conclusion
Study Variables	ADF Test Statistics	Mackinnon Critical Value @ 5%	P-Value		
FGR	-1.421343	-2.991878	0.5549	1(0)	Non-Stationary
PPT	-2.797549	-2.986225	0.0729	1(0)	Non-Stationary
CIT	-2.224896	-2.986225	0.2029	1(0)	Non-Stationary
VAT	-4.894751	-2.991878	0.0007	1(0)	Non-Stationary
CED	-2.441206	-2.986225	0.1413	1(0)	Stationary
ADF TEST @ FIRST DIFFERENCE				Order of Integration	Conclusion
Study Variables	ADF Test Statistics	Mackinnon Critical Value @ 5%	P-Value		
FGR	-5.563688	-2.998064	0.0002	1(1)	Stationary
PPT	-5.091673	-2.991878	0.0004	1(1)	Stationary
CIT	-5.003760	-2.991878	0.0005	1(1)	Stationary
VAT	-7.707373	-2.998064	0.0000	1(1)	Stationary
CED	-4.834560	-2.998064	0.0008	1(1)	Stationary

Source: Econometric Views Version 9.0 (2020)

The result above depicted that a mixed in that while attained Customs and Exercise Duties attained stationary at level $I(0)$, the rest study variables were stationary at first differencing

($I(1)$). This justifying the need for ARDL bound test instead of Johanson cointegration test. The result is presented below:

Table 4.6: ARDL Bounds Test		
Date: 06/01/21 Time: 06:30		
Sample: 1994 2019		
Included observations: 25		
Null Hypothesis: No long-run relationships exist		
F-statistic	7.849036	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
5%	2.62	3.79

Source: Econometric Views Version 23.0 (2021)

Since the F-statistic estimated 7.849036 are higher than the critical value upper bound at 5% significant (3.79), we therefore concluded that there is long run relationship between the independent variables and the dependent variable. Hence, we conclude that tax policies

have a long run effect on revenue generated by the federal government.

4.2. Regression Result

Before the regression result proper, the model was subjected to normality test, Serial-Auto correlation Test and Heteroskedasticity test.

Figure 2: Normal Distribution Test

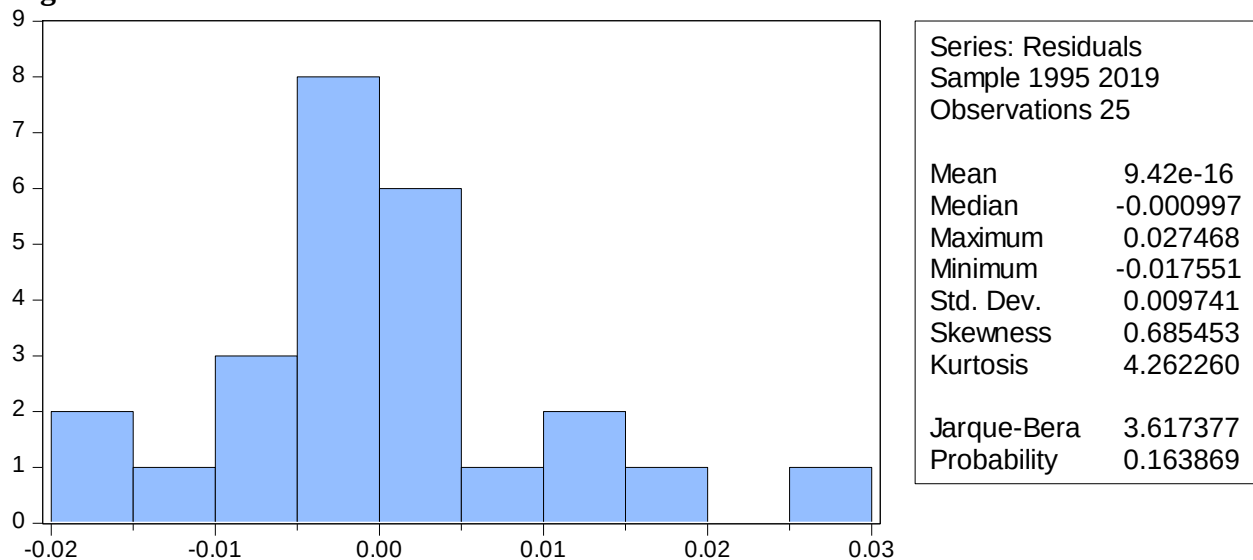


Table 2: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.1383	Prob. F(1,17)	0.7146
Obs*R-squared	0.2017	Prob. Chi-Square(1)	0.6533

Table 3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.9373	Prob. F(6,18)	0.3540
Obs*R-squared	12.3679	Prob. Chi-Square(6)	0.5402
OScaled explained SS	10.4580	Prob. Chi-Square(6)	0.1066

Source: Econometric Views Version 9.0 (2021).

Based on the fact that the probability values of the normality test, Serial Correlation LM Test and Breusch-Pagan-Godfrey are greater than 5%, we therefore conclude that the model is

normally distributed not serially correlated and is Homoskedastic (equally spreads out). Hence, we proceed immediately to the regression result proper.

Table 4: Autoregressive Cointegrating and Long Run Form

Dependent Variable: RGDP

Selected Model: ARDL(1, 0, 0, 0, 0)

Date: 06/06/21 Time: 10:57

Sample: 1994 2019

Included observations: 25

Cointegrating Form				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PPT)	0.0037	0.0136	0.2748	0.7866
D(CIT)	-0.0690	0.0472	-1.4620	0.1610
D(VAT)	0.1247	0.0713	1.7500	0.0971
D(CED)	0.0165	0.0073	2.2540	0.0369
CointEq(-1)	-0.1037	0.0424	-2.4490	0.0248
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PPT	0.0359	0.1367	0.2630	0.7955
CIT	-0.6649	0.5830	-1.1404	0.2691
VAT	1.2024	0.7695	1.5625	0.1356
CED	0.1587	0.0600	2.6477	0.0164
C	4.5836	0.1613	28.4127	0.0000
R-squared	0.9976	F-statistic		1243.937
Adjusted R-squared	0.9968	Prob.(F-statistic)		0.0000
Durbin-Watson stat	1.8342			

Source: Econometric Views Version 23.0 (2021)

The regression analysis showed a R^2 of 99.76%. To further attest to this, the adjusted

R^2 is used to explain the goodness of fit. Therefore, since it is about 99%, it implies that

about 99.68% changes in FGR are jointly explained by the regressors. This depicts that the model has a high predictive power. The F – statistics is 1243.937 with a probability value is 0% shows that the model is significant and has a high goodness of fit. Meanwhile, the Durbin Watson test revealed that the model is not serially correlated. As expected, the cointegration equation was found to be negatively signed and statistically significant. This signpost that short run deviation in the regressed can be quickly corrected. Furthermore, the individual contributions of the study variables are discussed in the remaining paragraphs:

It was also discovered that petroleum profit tax and value added tax exerted direct statistical insignificant effect on federal generated revenue both in the short and long run. This is because their beta coefficient values are positively signed (0.0037 and 0.1247-short and Long run PPT coefficient value & 0.0359 1.2024- short and Long run VAT coefficient values) while their p-values weigh higher than 5% (0.7866 and 0.7955- short and Long run PPT p-value & 0.0971 and 0.1356- short and Long run VAT p-value). The positive signs recorded support the A priori expectation of this study. Meanwhile, the positive insignificant result suggests that though petroleum profit tax and value added tax induce the federally generated tax revenue, but its impact is still minimal up to the very moment. This result seems not to be surprising, reason being that notwithstanding the over reliance on oil (petroleum products'), yet the federally generated tax revenue is still minimal. Other possible factors which support this argument include corrupt practices, mismanagement of public funds, and the likes. Hence, one may only expect this variable to only increase whereby it does not affect federal generated revenue significantly.

Furthermore, the ARDL test result above revealed that corporate income tax (CIT)

exerted non-linear yet insignificant impact on federal generated revenue in Nigeria both in the short and long run. Evidently, it reported coefficient values of at -0.0690 and -0.6649. Further, their respective p-values are higher than 5% significant level. This revealed that CIT is a weak revenue generation tool.

Lastly, custom and exercise duties exerted positive statistically significant effect on federal generated revenue in Nigeria both on the short and long run. Evidently, the study reported coefficient estimates of 0.016467 and 0.158745. This supports the apriori expectation of this study. This revealed that 1% rise in custom and exercise duties will increase the Nigerian economy by 1.65% and 15.87% both in the short and long runs. Meanwhile, the significant value suggests that custom and exercise duties are reliable revenue generation tools. This implies that for the revenue generated by the federal government to be effective, the policies and programmes of the Nigerian government must think in such direction.

On the overall, our findings support the findings of Ebi & Ayodele (2017); Oti & Odey (2016); Apere & Durojaiye (2016); Asaolu, Dopemu & Monday (2015); Oriakhi & Ahuru (2014); Aminu & Eluwa (2014) in terms of positive values but deviate in terms of their p-values which was different.

5.0 Conclusions and Recommendations

It is widely believed in many quarters that taxation remains the most veritable tool policy makers can use to generate more revenue, meet economic growth, and developmental objectives. However, the issue of tax revenue leakages remains a major source of concern. This has made many scholars to verge into the subject matter more holistically. Premised on this, the present study empirically investigated the extent to which tax laws and reforms have affected the Nigerian economy from 1994 to

2019. Various tax laws and reforms variables considered include petroleum profit tax, corporate income tax, value added tax, and custom and exercise duties while revenue generation was measured by federally generated tax revenue. Sequel to the findings of the study, we conclude that amidst high petroleum profit tax, Value Added Tax alongside the decreased corporate income tax, the Nigerian economy is yet to fully experience outstanding federally generated tax revenue. Again, we conclude that custom and exercise duty is the surest way to experience outstanding federally generated tax revenue. Based on the above, we recommend thus:

1. In the dwindling prices of petroleum products, the federal government must embark on economic diversification programme and must not also relent in her fight against corruption.
2. The Nigerian Government agencies should reduce its corporate tax rate rather than eliminate it entirely. This is because high corporate tax rate was found to have detrimental effect to federally generated tax revenue.

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3. Efforts should be made to ensure that government agencies also make timely payment of custom and excise duties as that also contributes immensely to federally generated tax revenue, as reported in the findings of the study.
- Beyond doubt, if all the cited recommendations are adhered to, this will help to sail the Nigerian economy to land of affluence, which would ensure sustainable economic growth and development.
- 6.0 Contribution to knowledge**
- This study contributes to knowledge by the capture of the implementation of newer tax reforms, like the unique Taxpayer's Identification Number (TIN), automated tax system and e-payment system. Using data from Nigeria as a country and not on a specific State compared to the study of Asaolu, Dopemu & Monday (2015). Also, the study provided more current findings as it employed a twenty-five (25) year data for the study. Thus providing a more current and recent update on tax laws reform and revenue generation in Nigeria.
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APPENDIX I:

Summary of Recent Empirical Studies by Nigerian Authors

Author(s)	Topic/Core Objective(s)	Methodology	Major finding(s)
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Pibowei (2021)	Impact of petroleum profit taxes on economic growth in Nigeria from 1981 to 2020	The study adopted an interval scale of measurement and the preceding year basis of sampling, with a sample size of nine (9) years from 2010 to 2018.	The study found that PPT has no significant relationship on PCI and that PPT has no significant relationship with JOB.
Udezo & Onuora (2021)	Effect of Tax Reforms on Revenue Performance in Nigeria. Effect of Tax Reforms on Revenue Performance in Nigeria.	The statistical test of parameter estimates was conducted using descriptive statistics, Augmented Dickey Fuller (ADF) statistics, cointegration test and multiple regression model analysis	Value added tax (VAT) and the PIT tax (PPT) reforms have significant positive effects on income performance. The VAT reforms have been significantly positive. In spite of the positive but negligible impact on Nigerian revenue performance in the reform in the corporate income tax (CIT).
Oluyombo & Olayinka (2018)	Impacts of tax compliance on government revenue growth in Nigeria with emphasis on non-oil revenues collected from the federal government.	Information was obtained from the Management Bulletin of the Federal Inland Revenue Service. Data were analysed using ordinary least-squares regression.	Tax compliance have a major impact on boosting tax revenue generation and a significant difference in government revenues can occur as a result of tax failure.
Charles, Ekwe & Azubike (2018)	Federally collected tax revenue and economic growth of Nigeria: A time series analysis.	The study employed a causal method of descriptive data research from 2000 to 2016. The Johansen Co-Integration Test was used to analyse data	There is a meaningful long-term relationship between Nigeria's tax reform and its GDP. Essentially, Gross Domestic Product is caused by Custom and Excise duties (CED) and VAT (VAT). Granger (GDP).
Ebi & Ayodele (2017)	Impact of tax reforms and tax yield in Nigeria.	Time series data from 1981 and 2014. Error correction mechanism (ECM)	All the tax reforms (PIT,VAT) significantly improve tax revenues by positive coefficients.
Oti & Odey (2016)	Tax Reforms and Revenue Trend in Nigeria: The Dyadic Interact	Time series data from 1981 to 2014. Used Vector Error Correction Model (VECM)	Found that the various income taxes were statistically significant and have positive relationship with total federally collected revenue
Apere & Durojaiye (2016)	Impact of VAT on government revenue generation in Nigeria.	Using secondary data from 1994 and 2014. Employed simple regression analysis.	There is a long-run significant positive relationship between value added tax (VAT) and each of government total revenue.
Asaolu, Dopemu & Monday (2015)	Impact of Tax Reforms on Revenue Generation in Lagos State: A Time Series Approach	Time Series quarterly data between 1999 and 2012. Employed OLS regression	There was a long run relationship between the tax reforms and revenue generated in Lagos State.
Oriakhi & Ahuru (2014)	Impact of tax reform (PPT, CIT, CED and VAT) on federal revenue generation in Nigeria.	Time series data (1981-2011). Employed Vector Error Correction Model (VECM)	The four various income taxes were statistically significant and have positive relationship with federally collected revenue
Aminu & Eluwa (2014)	Impact of Tax Reform Policy (PIT, CED, & CIT) on Revenue generation of the Federal Government of Nigeria.	Used Variance Method and the Scheffe's Multiple Comparison techniques.	Tax reform policy have significant impacts on the personal, company and custom duty tax revenues of the Federal government while the comparison test showed that taxes from both company and custom duty exceeded personal income tax.

Source: Researcher's compilation (2021)