Journal of Global Accounting
8 (2) July, 2022.
https://journals.unizik.edu.ng/joga

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TAX INCOME AND GOVERNMENT REVENUE GENERATION IN NIGERIA: A COMPARATIVE ANALYSIS OF POST AND PRE IFRS ADOPTION

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ABSTRACT:

The need for an effective tax revenue mobilization as an alternative means of funds to the Nigerian Government has come to stay especially against the backdrop of uncertainty around global Oil prices raising the imperativeness of regular evaluation of how Tax income has contributed to resources available to Government for the benefit of her citizen, Flowing from this necessity, this study evaluates the impact of Tax income on Revenue Generation in Nigeria during the pre and post IFRS adoption. The period of the study comprises Eighteen years from 2003-2020 allowing a Nine year each for pre and post IFRS periods. Taxation is proxied by Value Added Tax and Petroleum Profit Tax, while Total Government Revenue represents Government Revenue. The data were obtained from the Federal Inland Revenue Service Tax Statistics and the Central Bank of Nigeria statistical Bulletin (2020). The study adopts a Three-model approach for clarity and concise presentation and analysis. The data were pretested with the aid of Descriptive Statistics, Pearson Correlation and Data normality test. The hypotheses were tested with the aid of Ordinary Least Square Regression method. The result shows that there is a significant difference between the impacts of Value Added Tax and Petroleum Profit Tax on Government Revenue in Nigeria during the dichotomous periods studied. The study recommends that the Tax Authorities should increase effort so that income from Tax should form a more substantial part of revenue accruing to the Government under the IFRS implementation in Nigeria.

Key words: *Government Revenue, International Financial Reporting Standard, Petroleum Profit Tax, Tax Income, Value Added Tax.*
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CITE THIS PAPER: Audu, F., Ekpa, F. & Uba, H.O. (2022). Tax Income and Government Revenue Generation in Nigeria: A Comparative Analysis of Post and Pre IFRS Adoption, *Journal of Global Accounting*, 8(2), 103 - 119. Available at: https://journals.unizik.edu.ng/joga

1. INTRODUCTION

In a nation's economy, taxation and revenue are inseparable variables. The majority of global economies are based on one kind of taxation or another. Taxation has always existed, and it is necessary for economic development and growth. Countries around the world have different fiscal policies based on this premise, allowing them to explore and impose different kinds of taxes on their citizens in order to increase revenue generation, economic regulation, and governance. As one of these nations, Nigeria's government has legislative authority to levy any type of tax at any rate it deems appropriate (Ofoegbu *et al*.,2016).Dwindling revenue generation, which results in a lack of funds for economic growth and development, is a serious issue facing developing and underdeveloped economies. In light of the current economic situation, it is clear that in order for the

government to fulfill its constitutional obligations, it must diversify its revenue sources in order to increase its base of revenue. Onaolapo *et al* (2013) state that a government's financial capacity is influenced, among other things, by the fiscal resources it has at its disposal and how these resources are generated and used. Therefore, it is the responsibility of the government to effectively raise potential revenue across the nation to support development and economic activities. Taxation has historically been one of the most dependable means by which governments have been able to raise funds for their programs. There are direct and indirect types of taxes. According to Aguolu (2010), direct taxes are taxes that are imposed on the income of an individual, a group of individuals, or a business and are paid directly by the person or people on whom they are imposed. Personal income tax, company income tax, capital gain tax, petroleum profit tax, and capital transfer tax are all examples of direct taxes. In contrast, indirect taxes are taxes imposed on expenditures, such as goods and services. When consumers or end users purchase goods and services, these taxes are included in the payment. The third party typically bears the consequences of this kind of tax. The categories of indirect taxes are as follows: Value Added tax, import duties, and export duties (Yunusa, 2003). Ofoegbu *et al* (2016) point out that a country's tax structure and the tax collectors' ability to effectively and efficiently assess, collect, and account for taxes determine how much revenue is generated through taxes to support essential economic infrastructure. According to Chigbu and Njoku (2015), taxes are a tool of fiscal policy that affect macroeconomic indices because they affect income distribution and aggregate demand, narrowing the wealth gap.

Petroleum Profit Tax (PPT), Company's Income Tax (CIT), Customs and Excise Duty (CED), Capital Gain Tax (CGT), Value Added Tax (VAT), Stamp Duties (SD), and other taxes are all collected and administered by the Nigerian federal government. The Federal Inland Revenue Services (FIRS) is the federal government agency in charge of the administration and collection of these taxes, with the exception of Customs and Excise Duties. The Customs Service is in charge of collecting excise and customs duties (Abiola & Asiweh, 2012).It is important to note that, despite the fact that the Federal Inland Revenue Services are in charge of managing VAT, the majority of the proceeds are distributed to state and local governments. The Personal Income Tax (PIT) is the tax that affects the average person immediately and directly. The administration and collection of PIT is handled by its own distinct machinery in each state. According to Eden and Okoi (2014), the only Personal Income Tax revenue that the federal government can collect is from residents of the Federal Capital Territory (FCT), members of the armed forces, and diplomatic mission staff. In many developing nations, Value Added Tax (VAT), also known as sales tax, is a major source of revenue. Some nations in Africa, like the Benin Republic According to the Federal Inland Revenue Service (FIRS), VAT is a consumption tax that has been adopted by many nations worldwide. It is relatively simple to administer and difficult to evade. There is evidence to suggest that VAT revenue is already a significant source of revenue for Nigeria. For instance, actual VAT revenue for 1994 was N8.189 billion, 36.5 percent more than the N6 billion that was anticipated for the year. While the contribution of VAT as a source of revenue in Nigeria is encouraging in terms of contributions to total federally collected revenue, it is necessary to systematically assess its impact on the economy. According to Ajakaiye (2013), the decision to implement VAT in Nigeria in January 1994 was clearly influenced by this remarkable achievement of VAT in almost all countries where it has been implemented.

The Petroleum Profit Tax Act of 1959, as amended by the Petroleum Profit Tax Act of 2007, governs the Petroleum Profit Tax. Despite the fact that the initial law was enacted in 1959 to regulate the first oil export made in that year, Companies in Nigeria that are involved in petroleum operations are required to pay tax on their chargeable profits under the Petroleum Profit Tax Act. Oil tasks under the PPTA is the triumphant or getting oil in Nigeria by or for an organization for its record by any penetrating, mining, removing or other like activities or cycle, excluding refining at a processing plant, over a business carried on by the organization participated in such activities, and all activities coincidental thereto and any offer of or any removal of chargeable oil by or for the

organization (Nwezeaku, 2005).According to Section 8 of the Petroleum Profit Tax Act as amended, every company involved in the petroleum industry is required to submit a return along with an appropriately audited annual account and computations within a predetermined amount of time following the conclusion of its accounting period. According to Gbegi and Adebisi (2017), the Petroleum Profit Tax Act of 1959 was enacted with the intention of regulating the activity of the sector and providing a means of increasing government revenue for the sectorial and overall growth of the nation. The Petroleum Profit Tax is a federally collected charge imposed on profits derived from petroleum operations.

The total amount of money paid to the Nigerian federal government each year is known as "Government Revenue," and it is primarily comprised of both oil and non-oil revenue. The income that comes from sources other than the sale of petroleum products makes up the Non-Oil revenue. Taxes, which now account for a significant portion of the budget of the Nigerian government, make up the majority of non-oil revenue. According to Ahmed (2010), a government's "revenue generation" is the total sum of money it receives from all sources during a specific time period. According to Okoye and Akenbor (2014), the need for quality and uniformity in the preparation and presentation of financial statements led to the creation of International Financial Reporting Standards as a result of the globalization and internationalization of business. The International Financial Reporting Standards (IFRS) are regarded as a global Generally Accepted Accounting Principles and a set of principles-based and globally accepted standards published by the International Accounting Standards Board (IASB).The International Financial Reporting Standard was adopted in September 2010 and was structured so that all first-tier companies listed on the stock exchange that are of public interest were required to implement it by 2012, other companies of public interest that were not listed on the stock exchange were required to implement it in 2013, and all small and medium-sized entities were required to implement it in January 2014 (Edogbanya & Kamardin, 2014). Tax accounting was a topic that was extensively covered by the IFRS.
The study's issue stems from the fact that crude oil and gas sales from domestic and international markets are currently Nigeria's primary source of government revenue. Sadly, the Federal Government's other sources of revenue have not been even remotely comparable to oil revenue. The government's ability to carry out its constitutional duties has been negatively affected by this development. Because of how heavily reliant the economy is on oil revenue, other revenue sources like taxes, proceeds from agriculture, manufacturing, exports, and others have been overlooked. In order to encourage economic growth and lessen the country's reliance on oil, there have been calls for the government to diversify the economy's revenue base at various points in its history. This highlights the necessity of regularly assessing the impact of tax revenue on Nigeria's total government revenue.

Practically, in 2003, the year this study began, Value Added Tax (VAT) generated N136.41 billion, while Petroleum Profit Tax (PPT) generated N432.6 billion, or only 22% of the N2.575 trillion in total government revenue.N3.729.15T, or 33.5% of the total government revenue (N11.167T), was contributed by VAT (N659.15bn) and PPT (N3.071tn), when the Federal Government generated the highest revenue in this study's eighteen years—N11.12tn—in 2011.When major corporate entities in Nigeria first implemented the International Financial Reporting Standard (IFRS) in the subsequent year (2012), the percentage contributions of VAT (N710.55 billion) and PPT (N3.201 trillion) totaled N3,911.55 trillion and accounted for approximately 37% of the N10.655 trillion in government revenue. PPT's contribution to total revenue, which was 30% in 2012, began to decline in 2013 when it was N2.667tn and fell to N1.158tn in 2016, when Government total revenue amounted to N9.759tn and N5.616tn respectively. The year 2020 was when COVID 19 pandemic ravaged the economy and it adversely affected both the tax income in the total Government revenue. For instance, revenue from PPT fell from N2.111tn in 2019 to N1.520tn 2020. VAT which as a consumption tax was however, less susceptible to the effect of the pandemic rose from N1.189tn in 2019 to N1.530tn in 2020, while Government total revenue fell from N10.262tn in 2019 to N9.303tn

in 2020. There is therefore the need to investigate the contribution of these taxes (VAT and PPT) on government total revenue in the face of these fluctuations in tax income for the periods preceding and after IFRS implementation in Nigeria.

1.1 Objectives of the Study

The main objective of the study is to evaluate the Impact of Tax income on Revenue Generation in Nigeria: A comparative analysis of the Pre and Post International Financial Reporting Standard (IFRS) implementation, while the specific objectives are to:

i. investigate the difference between the impacts of Value Added Tax on Total Government Revenue in the Pre and Post IFRS implementation in Nigeria.
ii. examine the difference between the impacts of Petroleum Profit Tax on Total Government Revenue in the Pre and Post IFRS implementation in Nigeria.

1.2 Hypotheses

In order to achieve the set objectives of the study, the following null hypotheses are formulated to be tested.

i. There is no significant difference between the impacts of Value Added Tax on Total Government Revenue in Nigeria during the pre and post IFRS implementation.
ii. There is no significant difference between the impacts of Petroleum Profit Tax on Total Government Revenue in Nigeria during the pre and post IFRS implementation;

2. LITERATURE REVIEW

2.1 Conceptual Framework

The conceptual framework of this comprise an independent variable (Taxation) proxied by Value Added Tax and Petroleum Profit Tax and a dependent variable (Revenue Generation) which was represented by Total Government Revenue. The framework is diagrammatically represented below.

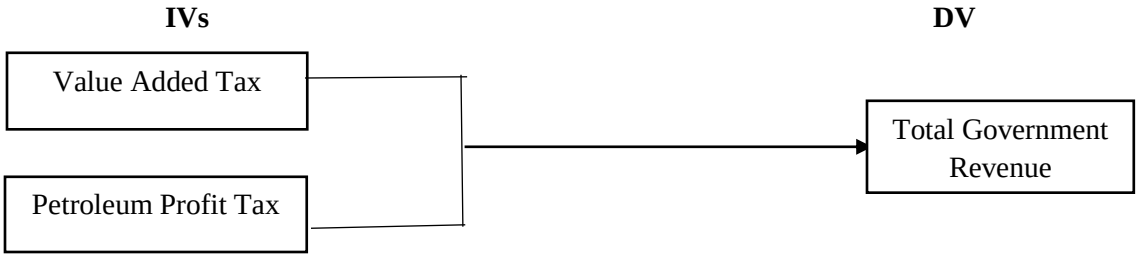

Figure 1 Framework of the study adapted from Ogenyi and Agada (2020)

2.1.1 Concept of Taxation

According to Ogundele (2009), taxation is "a process or machinery by which communities or groups of people are made to contribute in some agreed quantum and method for the purpose of the administration and development of the society," implying that the payment of tax will, in turn, benefit the entire citizenry. According to Nzotta (2007), taxes are important sources of revenue for the federation account, which is shared by the federal, state, and local governments. He argues that the tax system offers itself as one of the most effective means of mobilizing a nation's internal resources and lends itself to creating an environment conducive to the promotion of economic growth. According to Aguolu (2010), despite the fact that taxation may not be the most significant source of revenue for the government in terms of magnitude, it is the most significant source of revenue for the government in terms of its consistency and certainty. According to Adebisi and Gbegi (2013), paying taxes is a civic duty that the government imposes on her subjects and businesses in order to enable her to finance public utilities and fulfill other social responsibilities. According to Obaje (2012), taxation is a fiscal tool used to stimulate the economy in order to achieve a specific micro and macroeconomic goal, which may be expansionary or contractual.

According to Samuel and Simon (2011), taxation is the government's system of levying a compulsory tax on all income, goods, services, and property of individuals, partnerships, trusteeships, and companies. According to Afuberoh and Okoye (2014), taxation is a cost that every citizen must pay in order to support their government because the government must carry out certain tasks for the benefit of its subjects..

2.1.2 Revenue Generation

Ogenyi and Agada (2020) characterize income age as the means through which monetary assets to meet the commitments of the public authority are determined taking note of that income age is vital in the administration of any economy regardless of its size or level of advancement. When taxes are levied on the income, profits, and properties of individuals and businesses, they are considered to be direct, whereas when taxes are levied on goods and services rendered and the burden is transferred to the final consumers in whole or in part, they are considered to be indirect. The primary objective of taxation, according to Ihenyen and Mieseigha (2014), is to generate revenue for the government to cover its expenses and provide social services and welfare to the populace. According to Ahmed (2010), a government's revenue generation is the total sum of money it receives from all sources during a given time period. According to Soyode and Kajola (2006), the government can use revenue generation strategies to raise funds for building resources outside of other economic sectors. In addition to oil and non-oil bases, there are other revenue sources that the government can use to fund its activities. According to Okwori and Sule (2016), various forms of revenue generation include taxes, gifts, fines, fees, grants, mining, license and internal revenue, interest and repayment, and rent on government property.

2.1.3 Value Added Tax and Revenue Generation

According to Okoye and Gbegi (2013), "a multi-stage tax imposed on the value added to goods and services through various stages of production and distribution and services as they are rendered" is the definition of value added tax. This tax is eventually paid by the final consumer but is collected at each stage of the production and contribution chain. According to Ugwu and Embuka (2012), Value Added Tax (VAT) is a consumption tax imposed at every stage of the transaction but ultimately borne by the final consumer of such goods and services. It is defined as a tax on consumption imposed at every stage of the transaction. According to Bird (2005), a value added tax is a multi-stage tax that is imposed on the value added of goods and services as they move through various stages of production and distribution. The final consumer is ultimately responsible for paying the tax, but it is collected at each stage. Value Added Tax is a consumption tax that was initially levied at 5% until February 2021, when it was raised to 7.5 percent on all chargeable goods and services. This tax has a very large base because it is based on general consumer behavior (IFRS, 2021).

2.1.4 Petroleum Profit Tax and Revenue Generation

Ibrahim *et al*. (2018) define Petroleum profit tax as an indirect tax levied by the government on the activities of companies that operate in the upstream subsector of the petroleum industry, adding that this tax is specifically associated with rents, royalties, margins and profit sharing elements from activities relating to oil mining, prospecting and exploration contract agreements. Odusola (2006) views Petroleum Profit Tax as tax applicable to upstream operations in the oil industry. However, Petroleum operation as defined in the Petroleum Profit Tax Act of 1959 basically involves petroleum exploration, development, production activities. Concisely, PPT is one of the most essential tax in Nigeria in terms of its share of contribution to the total government revenue and foreign exchange earnings that is 70 and 95 percent respectively (Onaolapo *et al*., 2013). Nwala and Gimba (2020) state that Petroleum profit tax is a tax applicable to upstream operations in the oil industry and it relate specifically to rents, royalties, margins and profit sharing elements associated with oil mining, prospecting and exploration leases.

2.2 Theoretical Review

2.2.1 Sumptuary Theory

This theory was propounded by Solum (1960) who asserted that the purpose of a tax should be to control and limit private expenditure on what is considered unnecessary, extravagant and uneconomical, all of which are not in the best interest of the community. These gave rise to the introduction of taxes such as purchase tax, value added tax among other.. Proponents of this theory advocate tax as controlling and limiting factor which should be manipulated in a way that private expenditure considered unnecessary and extravagant should be reduced to the barest minimum in the interest of the state economy. The sumptuary theory of taxation takes into cognizance, the fact that for government to address its objectives, using tax an instrument, the certainty of the amount of the tax to be paid, the time, place and method of payment, ought to be dear to the prospective taxpayer. In other words, there should be clear guidelines, leaving no doubt in the tax payer's mind, because the sumptuary theory takes care of this. This study adopts the Sumptuary theory because the study agrees with the fact that tax is an instrument used by government to discourage the consumption of certain goods and therefore control individual expenditure and protect the economy. The study also aligned with the theory assertion that the process of tax administration must be such as is convenient to the tax payer and economical to the government.

2.3 Empirical Review

Using time series data from 1991 to 2018, Udezo and Onuorah (2021) investigated the effect of taxation on Nigeria's revenue performance. Petroleum Profit Tax (PPT), Company Income Tax (CIT), Value Added Tax (VAT), and Personal Income Tax (PIT) reform were used to measure tax reforms and their impact on Nigeria's revenue performance. Total federal collection revenue was used to represent revenue performance. The investigation was guided by four hypotheses, and descriptive statistics, Augmented Dickey Fuller (ADF) statistics, the cointegration test, and multiple regression model analysis with E-view 8 were used to test parameter estimates. The study's data came from the Federal Inland Revenue Service (FIRS), the Central Bank of Nigeria (CBN) statistical bulletin, and the National Bureau of Statistics. An ex-post facto research design was used. Value Added Tax (VAT), Personal Income Tax (PIT), and Petroleum Profit Tax (PPT) all have a significant positive effect on revenue performance, while Company Income Tax (CIT) has a positive effect on revenue performance in Nigeria, but it is insignificant, using data from 1991 to 2018 at the 0.05 level of significance. To make a significant contribution to the total revenue collected by the federal government in Nigeria, the study recommends closing tax administration loopholes.

Lanem *et al* (2020) investigated the impact of taxation on Nigeria's revenue generation. The social political theory served as the primary foundation for the study. To accomplish the goals of the study, the ex post facto research method was used. Personal income tax, petroleum profit tax, value added tax, and company income tax are the four types of taxes that are the subject of the study. The Federal Inland Revenue Services and the National Bureau of Statistic were the primary secondary sources of data used in the study. The connection between taxation and revenue generation was tested using the Engel-Granger method of cointegration. Petroleum Profit Tax, Personal Income Tax, Company Income Tax, and Value Added Tax all have a positive and statistically significant relationship with revenue generation in Nigeria. This suggests that Nigeria generates more revenue as tax revenues rise from various sources. The study suggests, among other things, expanding the tax base in order to generate more revenue.

Fasina and Adegbite (2019) investigated how taxation affects Nigeria's ability to generate revenue. Using secondary data from 1970 to 2017, the study also looked at the direction of causality between taxation and revenue generation using the Johansen co-integration method and the Granger causality tests. The findings demonstrate that the Petroleum Profit Tax has a significant positive impact on revenue. Value Added Tax, Corporate Tax, and Custom and Excise Duty all have a positive and significant impact on revenue, with Custom and Excise Duty having the least impact both in the

short term and over time.PPT, Value Added Tax, Corporate Tax, and Custom and Excise Duty together, Granger-cause Revenue, demonstrate bidirectional causality with government revenue in Nigeria. The study suggests that the government should provide regulatory authorities with additional support and authority to enforce compliance on taxpayers and bring tax evasion and avoidance into the tax net in order to generate additional revenue for the government's fiscal responsibilities.

Nwala and Gimba (2019) investigated the impact of taxation on Nigeria's revenue generation. With time series data spanning 31 years, from 1986 to 2017, the study employs the ex-post facto research design. For the purpose of analysis, data were obtained from the annual reports of the National Bureau of Statistics and the CBN statistical bulletin. Petroleum Profits Tax (PPT), Companies' Income Tax (CIT), and Value Added Tax (VAT) served as proxy taxes for the tax, while total federally collected revenue served as a proxy for revenue generation. For the purpose of analysis, the study makes use of descriptive statistics, the Augmented Dickey fuller unit root test, the ordinary least square (OLS) regression, the heteroskedasticity test, and the Variance Inflation Factor. According to the findings, tax revenue, specifically VAT and PPT, has a positive statistically significant effect on revenue generation in Nigeria, whereas CIT has a negative statistically significant effect. According to the study, the income tax, value-added tax, and petroleum profits tax ought to be reviewed in such a way that it will combat the hydra-headed monster of multiple taxation and encourage accountability and transparency in government operations in order to reestablish taxpayer confidence in the tax system.

Olaoye and Ajayi (2019) used data from the Central Bank of Nigeria's (CBN, 2016) Statistical Bulletin to examine the impact of taxes on revenue generation in Nigeria from 1981 to 2016, a period of thirty-five (35) years. Total federally collected revenue, labor, gross capital formation, company income tax, petroleum profit tax, personal income tax, value added tax, custom and excise tax, and direct and indirect tax are the variables used as proxies for revenue generation. The fully modified ordinary least squares (FMOLS) method was used to ascertain the impact magnitude and direction. According to the impact of direct taxes on revenue generation in Nigeria, Petroleum Profit Tax discourages revenue generation while Company Income Tax and Personal Income Tax increase it. Additionally, the model of how indirect tax affects revenue generation reveals that the two variables used as indirect tax variables- Value Added Tax and Custom and Excise Duty—have a positive and significant impact on Nigerian revenue generation. According to the study, it is essential to implement tax policies that are both efficient and effective in order to guarantee sufficient growth-related revenue, including the imposition of severe penalties for tax evaders. The government ought to base its taxes on indirect taxes because doing so will not impose any additional costs on the general public and will result in increased revenue.

Samuel and Tyokoso (2014) looked at how taxation affects revenue generation in Nigeria, with a focus on the Federal Capital Territory and a few selected states. In order to present and analyze the data for the study, primary and secondary data sources are used. SPSS version 17.0 was utilized for the Ordinary Least Squares regression analysis used in the hypotheses testing. The study reveals, among other things, that taxation has a significant impact on the generation of revenue, that taxation has a significant impact on GDP, and that tax evasion and tax avoidance have a significant impact on the generation of revenue in Nigeria. The study recommends, among other things, that the Federal, State, and Local Governments establish a well-equipped database of tax payers in order to identify all possible sources of tax payers' income for tax purposes, that the tax collection processes should be free of corruption and embezzlement, and that people who evade and avoid tax payments should face severe penalties in order to increase tax revenue.

Onaolapo *et al* (2013) investigated the effect of Nigeria's value-added tax on revenue generation. The Chartered Institute of Taxation of Nigeria Journal, the Federal Inland Revenue Service Annual

Reports, and the Central Bank of Nigeria statistical Bulletin (2010) served as sources for the secondary data. Stepwise Regression Analysis was used for the data analysis. The results indicate that the Value Added Tax has a statistically significant impact on Nigeria's revenue generation. According to the findings, the government should make every effort to improve the method by which value added tax is collected, and all VAT agents should demonstrate dedication and apparent honesty in relation to the collection and payment of VAT.

2.4 Gap in the Literature

From literature reviewed, this is the first study that compares Taxation and Government Revenue in Nigeria using pre and post IFRS implementation as a yardstick and that is the widest gap the study fills. Secondly, this study fills the literature gap created by the absence of studies that incorporated Critique which would have given the authors the opportunity to express their observations and personal opinions of the studies they reviewed. This study is also the first work on taxation and Government revenue in Nigeria to include 2020 data of this particular set of variables selected for the study namely: Value Added Tax, Petroleum Profit Tax and Total Government Revenue. Finally, this study adopts a Three-model approach for comprehensive comparative analysis and discussion of findings which has not been done by any of the studies reviewed. In summary, the comparison of findings based on pre and post IFRS implementation, the inclusion of critique, the inclusion of 2020 data for currency of findings and the adoption of a three-model approach for clarity of presentation constitute the gaps in literature this study fills.

3. MATERIAL AND METHOD

This study adopts *ex-post facto* research design which is research method that is conducted after the fact, which is the case with this study that is using historical data from past economic activities. The population of this study comprises the Eight (8) Tax heads federally collected in Nigeria namely: Value Added Tax, Petroleum Profit Tax, Company Income Tax, Capital Gains Tax, Stamp Duty, Education Tax, Nigeria Information Technological Development Fund Tax and Construction Tax. The sample size of this study consists of Two (2) of the Tax head namely: Value Added Tax and Petroleum Profit Tax. The sampling technique adopted for this study is Purposive sampling method as the samples of the tax heads were selected for meeting the purpose of the study which views these two tax heads as the most prominent contributors to tax revenue in Nigeria and that results obtained can be of adequate representation of the entire tax revenue. The data for this study were from a secondary source obtained from the Federal Inland Revenue Service publications (IFRS, 2020) and Central Bank of Nigeria statistical bulletin (2020). The data were pretested for means and standard deviation with Descriptive Statistics, Pearson Correlation Matrix for detecting the presence or otherwise of multicollinearity and Shapiro-Wilk data normality test to ascertain whether the variables were symmetrically (normally) of asymmetrically (abnormally) distributed around their means, The analysis was conducted done with the aid of Ordinary Least Square (OLS) which is efficient in analyzing Time series data as used in this study.

Table 1 Variable Definition and Justification

Table 1: variables used in study.

Variable	Type	Definition	Justification
Total Government Revenue (TGR).	Dependent	Total Revenue for the Federal Government from all sources annually	Ogenyi and A gada (2020); Olaoye and Ajayi (2019); Ogidiaka and Igwe (2016
Value Added Tax	Independent	Tax Revenue from Value added (VAT). on goods and services.	Udezo and Onuorah (2021); Lanem *et al*. (2020); Luqman (2014).
Petroleum Profit	Independent	Total Tax Revenue from operations.	Udezo and Onuorah (2021); Nwala and Gimba (2019); Odoemelam, (2018).

Source: Researcher's Compilation (2022).

3.1 Model specification

Due to the comparative nature of this study, a Three-model approach is adopted for comprehensive analysis, interpretation of results and discussion of findings. Model I captures the relationship between Tax revenue and Government Total revenue during the Nine years Pre- IFRS implementation in Nigeria years (2003-2011), while, Model II captures the Nine years post IFRS implementation from 2012-2020. Model III becomes imperative as a result of scarcity of previous studies that compare effects of Taxation on revenue generation Nigeria with pre and post IFRS implementation. The results of from this model were used for discussion where a literature matrix was included to reveals those studies that the findings of this study agree with or disagree with.

Pre IFRS.

Specifying the functional linear equation of model I, the relationship is shown below.

Pre_TGR = *f*(Pre_VAT + Pre_PPT)

Econometrically, the above equation is represented as:

$Pre_TGR_t = \beta_0 + \beta_1 Pre_VAT_t + \beta_2 Pre_PPT_t + €_t$. ……model I

Post IFRS

This captures the tax revenues and their impact to Government Total Revenue after the implementation of IFRS in Nigeria (2012) is specified in a functional relationship as follows:

Pst_TGR = *f*(Pst_VAT + Pst_PPT).

Expressing the above functional linear equation in an econometric form, it becomes:

$Pst_TGR_t = \beta_0 + \beta_1 Pst_VAT_t + \beta_2 Pst_PPT_t + €_t$…… Model II

Model III

This captures the normal relationship between Taxation and Revenue generation in Nigeria during the Eighteen (18) years (2003-2020) of this study without the influence of IFRS Implementation.

The specified linear equation of Model III as used by Ogenyi and Agada (2020) and Olaoye and Ajayi (2019) is presented below:

TGR = *f*(VAT + PPT)

The econometric form of the Model I specified linear equation above is written as:

$TGR_t = \beta_0 + \beta_1 VAT_t + \beta_2 PPT_t + €_t$. ……...Model III.

Where:
β = Constant
β_1- β_2 = Coefficient of the independent variables;
TGR = a predictor representing Total Government Revenue (Dependent Variable proxy);
VAT = a predictor representing Value Added Tax (Independent variable proxy);
PPT = a predictor representing Petroleum Profit Tax (Independent variable proxy);
Pre_TGR = a predictor representing pre-IFRS Total Government Revenue;
Pre_VAT = a predictor representing pre-IFRS Value Added Tax revenue;
Pre_PPT = a predictor representing pre-IFRS Petroleum Profit Tax revenue;
Pst_TGR = a predictor representing post-IFRS Total Government Revenue;
Pst_VAT = a predictor representing post-IFRS Value Added Tax revenue;
Pst_PPT = a predictor representing post-IFRS Petroleum Profit Tax revenue;
f = represents the functional relationship;
t = periods; and
€ = Error term (Combine effect of the unused variables).

4. RESULT AND DISCUSSIONS

The dataset used for this study which comprises Three (3) variables namely Value Added Tax (VAT), Petroleum Profit Tax (PPT), and the measure of the dependent variable - Total Government Revenue for the Eighteen (18) years period split between pre IFRS implementation (2003-2011) and post IFRS implementation (2012-2020) is attached as appendix A.

4.1Data Analysis

4.1.1 Descriptive Statistics

Table 2 below shows the summary of the descriptive statistics of the variables used in this study.

Variable	Obs	Mean	Std. Dev.	Min	Max
preTGR	9	6096.38	2473.655	2575.096	11116.85
pstTGR	9	8841.622	1748.085	5616.4	10654.75
preVAT	9	806.072	9.88e+07	312.6	2.33e+08
pstVAT	9	968.3851	266.9638	710.5551	1534.76
prePPT	9	4461.082	5 .94e+08	939.4122	1.35e+09
pstPPT	9	2043.214	705.4497	1157.808	3201.32

Source: STATA 13 software output (2022).

Results from Table 2 above reveals that Total Government Revenue (TGR) pre_IFRS implementation has the highest amount during the Nine (9) year period in 2011 with a value of N11.117T, while, the post IFRS period has its higher Total Government revenue in N10.654tn in 2012. Pre_TGR has a mean of N6.096tn compared with post_TGR mean of N8.842tn which implies that Government got more tax revenue during the post IFRS implementation period. Value Added Tax (VAT) during the post IFRS implementation period has higher means (N968.39B) compared with the pre IFRS period when its mean was N806.07bn.indicating VAT revenue was higher during the post IFRS implementation period compared with the period prior. However, Petroleum Profit Tax (PPT) has its higher mean of N4461.08B during the period preceding IFRS implementation compared with N2043.21bn for the post IFRS period of implementation which indicates that more petroleum Profit revenue were collected during the pre IFRS period.

4.2 Correlation Matrix for Multicollinearity

Table 3 below presents correlation coefficients of the variables using Pearson Correlation matrix. The decision rule it to regard a correlation coefficient higher than 0.85 between two independent

variables as evidence of the existence of multicollinearity which means that the variables involved lack independence and interfere with one another's value. The implication of the presence of multicollinearity in a model is that the Coefficient of determination could be overstated.

Table 3 Pearson Correlation Matrix

	preTGR	pstTGR	preVAT	pstVAT	prePPT	pstPPt
preTGR	1.0000					
pstTGR	0.6108	1.0000				
preVAT	0.7705	0.3454	1.0000			
pstVAT	0.6345	0.5783	0.4429	1.0000		
prePPT	0.4857	0.5984	0.7546	0.7120	1.0000	
pstPPT	0.5005	0.5386	0.1991	0.4895	0.4632	1.0000

Source: STATA 13 software output (2022).

Table 3 above reveals that there is no multicollimearity within the model since there are instance(s) of where two variables correlate above 0.85. The highest correlation coefficient exists between preVAT and prePPT at 0.7546.

4.3 Data Normality Test

Below is Table 4 which shows the results of the Data Normality Test conducted with the aid of Shapiro-Wilk normality method which is recommended for small sample size as in this study. The decision rule is that any variable with p-value lower than or equals to 0.05 was not normally (asymmetrically) distributed around its mean, while the variable with p-value greater than 0.05 was normally (symmetrically) distributed..

Table 4 Shapiro Data Normality Test

Variable	Obs	W	V	z	Prob>z
pretgr	9	0.95432	0.671	-0.635	0.73744
psttgr	9	0.87143	1.889	1.139	0.12736
prevat	9	0.76699	3.423	2.386	0.18537
pstvat	9	0.85550	2.123	1.368	0.08563
preppt	9	0.74456	3.753	2.598	0.46901
pstppt	9	0.93158	1.005	0.009	0.49651

Source: STATA 13 software output (2021).

Table 4 above indicates that during the 18 year period of this study all the variables were normally distributed having p-values greater than 0.05. The normality of the data distribution satisfies one of the basic assumptions of Ordinary Least Square (OLS) regression which assumes that data must be normally distributed before adopting the method. Ordinary Least Square (OLS) Regression method was therefore adopted for testing the hypotheses.

4.4 Regression Analysis

4.4.1 Model I

Table 5 below shows the result of the Model I regression analysis conducted with the aid of Ordinary Least Square method.

Table 5 Model I Regression Analysis

preTGR	Coef.	Std. Err.	t	P>|t|
preVAT	.2103	.1869	1.13	0.532
prePPT	.4406	.1650	2.67	0.013**
_cons	1.5822	1.1721	1.35	0.309
Adj. R.sqd	0.6242			
F-statistics	88.17			
Prob> F	0.021			

Note: ** = 5% significance level.
Source: STATA 13 output (2021).

Result from Table 5 above reveals that the model has an adjusted R squared (adjusted for the degree of freedom) of 0.6242 which is approximately 62%. This result indicates that in the Nine years period preceding the implementation of IFRS in Nigeria, VAT and PPT jointly accounted for 62% of Total Government Revenue. Table 5 above also reveals an F-statistics of 88.17 and p-value of 0.021 (significant at 5% level) indicating that the model is fit. The table further reveals that Value Added Tax (VAT) has an insignificant (0.532) positive impact on Government Total Revenue during the Nine years period prior to the implementation of IFRS in Nigeria, while, Petroleum Profit Tax has significant (0.013) positive impact.

4.4.2 Model II

Table 6 below shows the result of the Model II regression analysis conducted with the aid of Ordinary Least Square method

Table 5 Model II Regression Analysis

pstTGR	Coef.	Std. Err.	t	P>|t|
pstVAT	.04153	.0138	3.00	0.003***
pstPPT	.0357	.0301	1.19	0.543
_cons	68.377	55.632	1.22	0.561
Adj. R.sqd	0.7838			
F-statistics	67.33			
Prob>F	0.000			

Note: *** = 1% and ** - 5% significance levels
Source: STATA 13 output (2021).

Result from Table 6 above reveals that the model has an adjusted R squared (adjusted for the degree of freedom) of 0.7838 which is approximately 78%. This result indicates that in the Nine year period after the implementation of IFRS in Nigeria, VAT and PPT jointly accounted for 78% of Government Total Revenue. Table 6 above also reveals an F-statistics of 67.33 and p-value of 0.000 (significant at 1% level) indicating that the model is fit. The table further reveals that post IFRS

implementation VAT has a significant (0.003) positive impact on Total Government revenue, while, PPT has an insignificant (0.543) positive impact on Government revenue.

4..4.3 Model III

Table 7 below presents the regression analysis for Model III which captures all the variables for combined periods of the pre and post IFRS implementation for the purpose of the discussion of findings.

Table 7 Regression Analysis for Model III

TGR	Coef.	Std. Err.	t	P>|t|
VAT	0.0824	0.0212	3.89	0.000***
PPT	0.0645	0.0306	2.11	0.043**
_cons	274.09	249.9925	1.10	0.307
Adt. R-sqd	0.8141			
F- statistics	71.58			
Prob>F	0.0000			

Note: *** = 1% and ** = 5% significance levels.
Source: STATA 13 output (2021).

Table 7 above reveals that the model III has an adjusted R squared (adjusted for the degree of freedom) of 0.8360 which is approximately 84%, indicating that in the Eighteen (18) years period comprising Nine (9) years before and Nine (9) years after the implementation of IFRS in Nigeria, VAT and PPT jointly accounted for 81% of Government Total Revenue. Table 7 above also reveals an F-statistics of 71.58 and p-value of 0.0000 (significant at 1% level) meaning that the model is fit. The Table further reveals that during the Eighteen years period covered, without differentiating into pre and post IFRS implementation, VAT and PPT both have significant (0.000 and 0/043 respectively) positive impact on Government Total revenue,

4.5 Test of Hypotheses

The test of hypothesis considers the results from Models I and II for comparison as dictated by the objectives. The decision rule is to accept the null hypothesis if the variable during the two different periods have the same type of impact (significant or insignificant) on Government total revenue.

4.5.1 Hypothesis One

Ho_1: There is no significant difference between the impacts of Value Added Tax on Total Government Revenue during the pre and post IFRS implementation in Nigeria.

Table 8 Result Regression Analysis

Variable	Coefficient	Std. Error	t. value	Prob
preVAT	.2103	.1869	1.13	0.532
pstVAT	.0415	.0138	3.00	0.003***

Source: Tables 3.5 and 36 above.

Table 8 above reveals that preVAT have an insignificant impact on Total Government Revenue with a p-value of 0.523, while, postVAT has a significant impact on Total Government Revenue

with a p. value of 0.003 (significant at 1% level). This result means that *there is a significant difference between the impacts of Value Added Tax on Total Government Revenue during the pre and post IFRS implementation in Nigeria*. Based on the decision rule, the Hypothesis One (Ho_1) is rejected.

Table 10a: Summary of findings

Hypothesis	Statement	Decision
Ho_1:	There is no significant difference between the impacts of Value Added Tax on Total Government Revenue during the pre and post IFRS implementation in Nigeria.	Rejected

Sources: Tables 5

This finding tallies with those of Udezo and Onuorah (2021); Lanem *et al*. (2020); Fasina and Adegbite (2019) and Luqman (2014) who reported that Value Added Tax has a significant impact Government revenue. The finding, however, contradicts those of Olaoye and Ajayi (2019); Olatunji and Ayeni (2018); and Odoemelam (2018) who observed that VAT has an insignificant impact on Government Revenue.

4.5.2 Hypothesis Two

Ho_2: There is no significant difference between the impacts of Petroleum Profit Tax on Total Government Revenue during the pre and post IFRS implementation in Nigeria.

Table 9 Result Regression Analysis

Variable	Coefficient	Std. Error	t. value	Prob
prePPT	.4406	.1650	2.67	0.013**
pstPPT	.0357	.0301	1.19	0.543

Source: STATA software poutput

Table 9 above reveals that prePPT have a significant impact on Total Government Revenue with a p. value of 0.013 (significant at 5% level), while, postPPT has an insignificant impact on Total Government Revenue with a p. value of 0.543. This result means that *there is a significant difference between the impacts of Petroleum Profit Tax on Total Government Revenue during the pre and post IFRS implementation in Nigeria*. Based on the decision rule, the Hypothesis Two (Ho_2) is rejected.

Table 10b: Summary of findings

Hypothesis	Statement	Decision
Ho_1:	There is no significant difference between the impacts of Petroleum Profit Tax on Total Government Revenue during the pre and post IFRS implementation in Nigeria.	Rejected

Sources: Tables 6.

This finding agrees with those of Udezo and Onuorah (2021); Nwala and Gimba (2019) and Odoemelam (2018) who reported that Petroleum Profit Tax has a significant impact on Government revenue.

CONCLUSION AND RECOMMENDATIONS

From the findings of this study, it can be concluded as follows.

The implementation of the International Financial Reporting Standard (IFRS) in Nigeria witness an increase in government revenues derivable for Value Added Tax which means that some globally accepted practices initiated through the reporting standard help to minimize leakages, enlarge the tax net and increase the tax yield. Petroleum Profit Tax failed to respond to the implementation of IFRS in Nigeria which started in 2012 as more revenue were generated during the Nine (9) years of the pre IFRS period (with mean revenue of N4.461tn) compared to the Nine (9) years post IFRS period with mean revenue of N2.043bn. On the whole, the period of the implementation of IFRS in Nigeria witnesses more tax revenue than the period prior covered by this study.

Based on the findings, the following recommendations are made.

The Nigerian Tax Authority responsible for the administration and collection of Value added tax should ensure a continuous adherence to guidelines stipulated by the International Financial Reporting Standard regarding VAT for more efficient collection processes as the tax revenue has a positive significant difference under IFRS implementation compared to the period before. Also, the Federal Inland Revenue Service in charge of administration and collection of Petroleum Profit Tax in Nigeria should be strengthened to respond to the globally accepted standard relating to taxation in the Insurance industry for increase revenue so that a significant positive difference will exist between PPT revenue in the post IFRS implementation period relative to the period prior.

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