POLAC MANAGEMENT REVIEW (PMR)
DEPARTMENT OF MANAGEMENT SCIENCE
NIGERIA POLICE ACADEMY, WUDIL-KANO

THE CONTRIBUTION OF VALUE ADDED TAX TO FEDERALLY COLLECTED REVENUE IN NIGERIA: A TREND ANALYSIS 1994-2022

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Abstract

Public Finance is crucial in national development; however, Nigeria is facing dearth of public finance. Faced with dearth of public finances the Nigerian government introduced Value Added Tax in 1994. The aim and objective of this study is to evaluate the contribution of VAT to total Nigerian government revenue 1994-2022. To achieve this aim and objective, quantitative secondary data on Valued Added Tax allocations to federal, states and local governments and total government revenue is collected from the annual publication of the Central Bank of Nigeria. The collected data is descriptively analysed using tables, figures, charts and percentages to demonstrate the contributions of VAT to total government revenue 1994-2022. Similarly, test of Analysis of Variance was carried out on collected data to statistically determine contribution of VAT to total Nigerian government revenue over the period of the study. Triangulation of optimal taxation and Laffer curve theories guided the conduct of the study. Results from the study revealed that VAT is making contributions to total government revenue over the period of the study. The policy implication is that VAT has actually proven effective in making more revenue available to Nigerian government. Generation of more revenue from VAT by government means VAT is making more funds available to the government to execute developmental projects for national development. Consequently, this study is recommending that VAT should be strengthened to global best practices in terms of the rate, effective and efficient assessments and collections to continue generating more revenue to enhance further national development.

Keywords: Population, Infrastructure, Value Added Tax, Optimal Taxation Theory, Laffer curve theory

1. Introduction

Taxation being the main source of viable and sustainable public revenue keeps changing with emerging realities in societies. There was Bala, a form of property tax in Mesopotamian civilization;cattle and cooking oil tax in the Egyptian civilization; the eisphorataxed on the wealth of the richand metoikion tax for men and women that have no Greek parents in

the Greek civilization. Similarly, there was Tributum tax on material wealth, including land, slaves and goods, Portoria which is an inheritance tax, Vectigalia, a tax on agricultural harvests in Roman civilization. In the Great Britain where the industrial revolutionof the eighteenth century as the precursorof modern civilization started, there was excise duties on export of wool and wine in 1203 and 1275 respectively. Similarly, there was the Poor Law tax in 1572, a land tax in 1692, the Window Tax of 1696 and the British Tax Act of 1798 which compel Britons to pay income Tax to finance the war with Napoleon. In 1944 the government introduced the Pay As You Earn (PAYE) tax which is also considered as the basis of present day PAYE. The income tax act 1798 and the PAYE tax of 1944 are contended to have laid the foundation of modern day taxation (Mohammed, 2019).

In our modern societies of today, various taxes such as Personal Income Tax (PIT), Company Income Tax (CIT), Custom and Excise duties, Road or Toll taxes, Petroleum Profit Tax (PPT) for countries with oil and gas resources, Capital Gains Tax, (CGT) and Value Added Tax (VAT), being the focus of this study among others exists (Jung, 2023; Tait, 1988). Value Added Tax is a tax charged on goods and services, often levied at each stage of a supply chain (The Economic Times, 2024). It is also considered as a tax levied on all sales of commodities and services at every stage of production or service delivery (Ebrill, Keen, Bodin, & Summers, 2002). This tax is acknowledged to have risen to significance in what is described as an unparalleled tax phenomenon that swept the world in some thirty years from theory to practice, carrying along with it academics who were once indifferent about it and countries that once rejected it (Tait, 1988).

Germany and France are said to be the first countries that introduced VAT in a form of general consumption tax during the World War I. Conversely, the variant of modern day VAT was first introduced in the French colony of Ivory Coast in 1954 and in mainland France in 1958following its success in the colony (Helgason, 2017). However, there are literature stating that VAT was first introduced in Albania in 1955 followed by Côte d'Ivoire in 1960, Brazil & Honduras in 1964; Denmark in 1967; France, Germany and Monaco in 1968; then, spreading to other European countries to the extent that it was tagged an affair of European Community (Tait, 1988; Caragher, 2023). This form of taxation was adopted by about 30countries in 1980's; but, as at mid-2023, the number of countries that adopted it has increased to 174 countries; perhaps, this made it to be tagged as 'the most important development in taxation over the last half century' (Organization for Economic Corporation and Development, 2010, p. 50). Indeed, VAT now averagely accounts for about 30% of total tax revenue in countries that have adopted it but is almost 40% in African countries (Slemrod&Velayudahn, 2020).

Nigeria faced with the challenges of rapidly growing population, low government revenue, mounting external and internal debts, unemployment, decaying and deficit infrastructure adopted VAT in 1993 which became effective 1st January 1994 to majorly enhance the revenue of governments (Caragher, 2023; Federal Inland Revenue Service, 1993). Likewise, this study may add value to existing knowledge in the area. This introduction forms section one of the study, section two is devoted to conceptual and empirical literature review, section three is on data and methods, section four is results and discussions, section five is conclusion and section six is on recommendations of the study.

2. Literature Review

2.1 The Structure of the Nigerian Nation

Nigeria is a country practicing federalism which is composed of the federal government at the center, 36 states and 774 local governments. Looking at Nigerian federalism from the perspective of revenue mobilization, the Taxes and Levies (Approved List for Collection) Act No. 2 of 1988 clearly categorized taxes collectable by federal, states and local governments (Taxes and Levies Act, 1988). However, federally collected revenue are pooled into the Consolidated Revenue Fund (CRF) which was provided for in section 80 ofthe 1999 Nigerian constitution for subsequent disbursement to the three tiers of government (The Nigerian Constitution, 1999). Thus, the more revenue accrues to the CRF, the more the share of the three tiers

of governments and the less revenue that accrue into the account, the less revenue is available for sharing. This is perhaps making the mobilization and utilization of revenue a thorny issue in the Nigerian federal system. Therefore, the nature of the Nigerian federal system is embedded with controversies, tensions and agitations on revenue mobilization and utilization (Nkede, Nwali & Oga, 2013).

2.2 Value Added Tax (VAT) in Nigeria

Value added tax was implemented in Nigeria in 1993 through the promulgation of the Value Added Tax Decree No. 102 of 1993; however, it became effective 1stJanuary, 1994 (Federal Inland Revenue Service, 1993; Ugwa & Embuka, 2012). This tax replaces the sales tax introduced in 1986 through the promulgation of Decree No.7 of 1986 (Agbo &Nwadialor, 2020). Three main reasons were advanced for the introduction of VAT which are; one, the base of the Sales Tax as provided in Decree No. 7 of 1986 was narrow covering only nine categories of goods plus sales and services in registered hotels, motels and similar establishments. Two, only locally manufactured goods were targeted by the Sales Tax Decree of 1986, and three; the broad base of VAT is expected to generate more revenue (Federal Inland Revenue Service, 1993). Goods and services subject to and those exempted from VAT charges are provided for in the VAT act 1993 while the rate of VAT was 5% (Value Added Tax Act, 1993). However, the rate has been increased to 7.5% and the tax is now governed by the ValueAdded Tax Act Cap V1, LFN 2004 as amended (Federal Inland Revenue Service, 2024).

Under the 2004 Act as amended,three groups of taxpayers are obligated to deduct VAT at source and remit directly to the tax authority. These are; one, Nigerian companies that are carrying on VATable transactions with non-resident companies within the country; two, government ministries, statutory bodies and other agencies of government; and three; companies operating in the oil and gas sector(Federal Inland Revenue Service, 2024a). These are considered as VATable persons as they trade in VATable goods and services for a consideration and are under obligation to register for VAT. These taxable persons are expected to register for VAT immediately they are registered with Corporate Affairs Commission (CAC) or commencement of business and upon obtaining the Taxpayer Identification Number (TIN), registration and authorization to collect VAT is automatically done(Federal Inland Revenue Service, 2024b).

Taxable persons are expected to one; present evidence of payment such as bank teller, e-ticket, e-acknowledgement etc. from a FIRS designated revenue collecting bank; two, completed VAT Returns Form 002 for individuals, enterprises and companies and three; schedule of VAT collected indicating the Name, Taxpayer Identification Number (TIN) of company or individual on whose transaction the VAT was charged and the related amount (Federal Inland Revenue Services, 2024b). However, the Finance Act 2020 has made relevant amendments on operations of VAT in Nigeria (Nwanko, 2022). Similarly, the Federal Inland Revenue Service has also made amendments on the procedures of VAT filling (PriceWaterCoopers, 2023). The procedure for refund of VAT in Nigeria is guided for by provisions of FIRS (the Federal Inland Revenue Service, 1994). All collected VAT nationwide is pooled and shared in accordance with the prevailing sharing arrangement which was 50% to Federal Government of Nigeria (FGN); 35% to the States; and 15% to Local Government Authorities(LGAs) 1994-1998. With effect from January 1999, the formula was adjusted to FGN 15%, States 50% and LGAs including the local councils of the Federal Capital Territory (FCT) 35%. There are empirical studies on the impact of value added tax on revenue generation by governments reviewed from global to Nigerian perspectives in the ensuing section.

Moroșan-Dănilă (2022) examined the impact of VAT on government revenue in Romania and the European Union being the community area for the period 2017-2020. Quantitative secondary data on VAT collections in Romania and the share of VAT in total government tax revenue is obtained from the Romanian ministry of Finance. Likewise, data on VAT rates of 28-member countries of the European Union (EU) is obtained from the publications of the commission. Collected data is analyzed using descriptive statistical tools of tables and

figures. Results from the study indicated that VAT is making the most significant contribution to government revenue in comparison to other taxes; thus, it is considered a significant source of income to the Romanian government. On rate of VAT within the EU, findings revealed that the lowest rate is 18% while the highest rate is 27% and with a rate of 19%, Romania is among the EU member countries with the lower VAT rate.

Adhikari (2018) examined the contribution of VAT to government revenue in Nepal for the period 2007-2017. Quantitative and qualitative secondary data is collected from published and unpublished books, reports, articles and dissertation on the concerned subject; publication and annual report of Inland Revenue Department (IRD); publications of Central Bureau of Statistics; publications of Ministry of Finance and various departments of VAT. Collected data was analyzed using descriptive statistical tools of tables, charts and diagrams, arithmetical average, and correlation analysis. Though, the study is not guided by any theoretical framework, results revealed that VAT has significant contribution on total government revenue. However, the contribution of VAT to total government revenue showed fluctuating trend on the overall, but the average contribution of VAT to total government revenue is 34.20%. The effectiveness of VAT revenue is 28.40% while VAT from import is dominant with 64.04% while VAT from domestic collection is 35.96%.

Hajdúchová, Sedliačiková, and Viszlai (2015) analyzedthe impact of VAT on the income of the Slovak republic 1993-2015 focusing on VAT rates and the effectiveness of VAT in enhancing government revenue over the period of the study. Data for the study on VAT rates development and effectiveness of VAT is collected from the annual reports of the activities of the Customs administration, annual report of the activities of the Tax administration and annual report on the activities of the Financial administration for the studied years. Descriptive statistical tools of tables and percentages are used to analyze and present results of collected data.From the results, VAT revenue is making significant contribution to total government revenue; although, the share of VAT in total tax revenues after the increase in the VAT rate by one percentage point is not too significant. Similarly, the expenditure towards collecting VAT and duties collection are several times lower than the tax revenues collection expenditure, signifying the effectiveness of VAT revenue.

Similarly, Khan and Shadab (2013) analyzed the impact of VAT on revenue, its buoyancy, and efficiency of states value added tax in major states in India. Data for the study is obtained from the annual reports of Reserve Bank of India, ministry of statistics and programme implementation 2000-2010. However, the period covered is divided into two; pre and post VAT implementation, while 2000-2005 is regarded as pre-VAT period, 20606-2010 is post –VAT period. The study is not underpinned by any theoretical framework. Descriptive statistical tools of figures, charts and percentages were used to analyze and present results from collected data. Results on Compound Annual Growth Rate (CAGR) that measures the growth rate of VAT revealed higher CAGR post VAT than pre-VAT. Similarly, results on buoyancy that indicate whether VAT base is broadening or not revealed that VAT base is broadening further since its inception; thus, making more contributions to revenue base of the states.

Das-Gupta (2012) assessed the revenue impact of state-level VAT in 29 states of India for the period 1993-2009 with the aims of determining the performance of VAT compared to sales tax and the contribution of VAT to an improved revenue performance over the period of the study. To achieve the aims of the study data on pre and post VAT are collected on sales tax and VAT for the first aim. While for the second aim, data is collected on VAT and total revenue receipts of sampled states over the period of the study. Collected data was subjected to pooled regression analyses while the study was not guided by any theoretical underpinning. Results from the study revealed zero enhanced revenue and efficiency gains for the entire sampled states. However, VAT has enhanced revenue generation and efficiency gains in eight of the sampled states.

Olakunbi, Campbell and Adesina (2022) examined the contributory effect of value-added tax on the level of

tax revenue in Nigeria using time series data spanning 2010-2021. To conduct the study, quantitative secondary data on annual total amount of tax collected, contribution of Custom, Imports and Excise Duties to the total and contributions of Value Added Tax to the total are collected from the Statistical Bulletinsof Central Bank of Nigeria (CBN) over the period of the study. The study is guided by the Laffer curve theory found relevant in explaining the relationship between VAT and tax revenue. Collected data is subjected to Auto regressive distributed lag (ARDL) was employed to examine the short and long-run impact of value-added tax on tax revenue in Nigeria. The study presents the description of the data series by evaluating different statistical measures like mean, median, standard deviation, maximum and minimum values, skewness, kurtosis and Jarque-Bera values. Results from the study revealed that VAT contributes negatively to tax revenue in both the short and long run while customs, import andexcise duties (CCIED), and FIRS tax (FTAX) contribute positively to tax revenue in the short and long run.

Odu (2022) conducted this study that investigated the effect of Value-added Tax (VAT) on revenue generation and economic growth in Nigeria. It specifically examined the effect of VAT on Gross Domestic Product (GDP) and the total revenue generated in Nigeria for the period 1994-2018 as well as the trend of VAT in the period under review. To achieve the aim of the study time series research design was adopted and secondary data were employed in the study to run the regression for VAT on total tax revenue and GDP. Collected data was analyzed using the vector error correction and auto regression models. This study was guided by optimal taxation theory. The study found that VAT has a significant effect on total tax revenue with a two-year lag and it increasingly explains changes in total tax revenue with time. The study also shows that VAT has a significant and negative effect on GDP with a one-year lag. The trend in VAT has a positive coefficient, indicating that VAT increases with time.

Efuntade (2020) conducted a study that examined value added tax and its effect on revenue generation in Nigeria by specifically, examining the effect of VAT on total government revenue. To achieve the aim of the study, secondary data was collected from Annual Statistical Bulletin of the Central Bank of Nigeria (CBN), Budget office of the federation and world bank database 1999- 2019.Collected data was analyzed using descriptive statistical tools of mean, standard deviation, kurtosis, and Jargue-Bera test to evaluate the performances of the variable in the study while vector error correction model regression analysis was employed to ascertain the statistical relationship of the variables. No any theory was used in this study and inding from the study revealed the existence of long run relationship between VAT with a p- value of 0.0034 thereby indicating significant relationship between VAT and revenue generation in Nigeria.

Ugwu, Peter and Udoli (2019) examined the effect of value added tax on Nigerian government total revenue 1994-2018. To conduct the study, quantitative secondary data on total government revenue, VAT, inflation, unemployment, and capital utilization is sourced from the Central Bank of Nigeria statistical bulletin and publications of the Federal Inland Revenue Service (FIRS). The study is underpinned by the benefit received theory while collected data was analyzed using multiple regression analysis in STATA software. Finding from the study showed that Value Added Tax has statistically significant effect on government revenue in Nigeria. Similarly, Luqman (2014) studied the impact of value added tax on revenue generation in Nigeria 1994-2012. Data for the study was collected from secondary sources of CBN statistical bulletin on Total Federal Collected Revenue (TFCR), Value Added Tax (VAT), Petroleum Profit Tax (PPT), Company Income Tax (CIT) and Custom and Excise Duty (CED) and other relevant data from journals and textbooks. The collected data was analyzed by means of descriptive statistics and Analysis of Variance (ANOVA). Result of the analysis showed that there is significant relationship between value added tax and consolidated revenue generation in Nigeria.

Relevant empirical literature review is conducted with the aim of identifying literature gaps that justify the conduct of the current study. Literature gaps are simply considered as areas that have not yet been explored or

are under-explored which could be in form of population or sample (size, type, location, etc.), research method, data collection and/or analysis, or other research variables or conditions (National University United States of America, 2024). Studies by Moroșan-Dănilă (2022), Adhikari (2018), Hajdúchová, Sedliačiková, and Viszlai (2015), Khan and Shadab (2013), and Das-Gupta (2012) were conducted in locations different from Nigeria. Thus, there is literature gap of location in addition to time frame of the studies, type of data collected, population of the study, sample, method of data collection and analysis; these gaps justify the conduct of this study. Studies by Olakunbi, Campbell and Adesina (2022), Odu (2022), Efuntade (2020), Ugwu, Peter and Udoli (2019), and Luqman (2014) that are conducted in the context of Nigeria as this study have gaps that justify the conduct of this study. For instance, this study covers 1994-2022 which none of the studies covered, data for this study are collected from one source, similarly, this study uses triangulation of theories in underpinning it and the method of analyzing collected data also differs with previous studies thereby justifying the conduct of the study.

3. Data and Methods

Data for this study is quantitative in nature and it is a time series (1994-2022) secondary data sourced from the annual statistical bulletin of the Central Bank of Nigeria on public finance from which VAT revenue collected over the period of the study is extracted. Although some previous studies (Das-Gupta, 2012; Olakunbi, Campbell and Adesina, 2022; Odu, 2022) have used regression analyses in analysing this type of data, other studies (Adhikari, 2018; Hajdúchová, Sedliačiková, and Viszlai, 2015; Moroșan-Dănilă, 2022) used descriptive statistical tools to analyze such type of data. Descriptive statistics is a means by which large volumes of research data could be numerically or graphically presented in a more sensible way. While the numeric means of descriptive statistics enable researchers to present data by measures of central tendencies and dispersion and is more precise and objective, the graphical data presentations enable identification of patterns in the data. Therefore, it is contended that the two should be combined (Jaggi, 2024); thus, this study employs descriptive statistical tools to analyze collected data.

3.1 Theoretical Framework

Theoretical framework serves as a blue print or guide to the conduct of a study (Fulton, 2010; Kivunja, 2018). This study adopts the triangulation of optimal taxation and Laffer curve theoretical frame works to guide the conduct of the study as depicted in Figure 1

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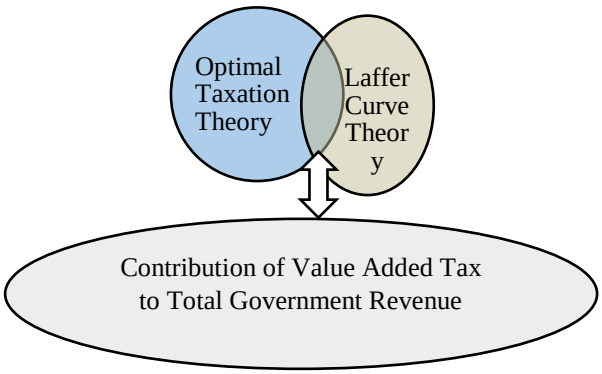

Figure 1: Theoretical Frameworks Underpinning the Study

From Figure 1, the study used optimal taxation and Laffer curve theories to explain the contribution of VAT revenue to total government revenue 1994-2022. Optimal taxation theory posits that a tax system should be chosen in such a way to maximize a social welfare function subject to a set of constraints. This is

premised on the believe that social welfare function in the society is based on the utilities of individuals in the society. Consequently, if faced with commodity taxation as the only line and the social planner must raise a given amount of tax; then, commodities with inelastic demand are taxed most heavily. However, even where labour income tax is the central instrument of taxation as in the developed economies (Mirrlees, 1971), commodity taxes should be set in the presence of an optimal income tax (Atkinson & Stiglitz, 1976). Thus, optimal taxation theory is fundamentally concerned with how various forms of taxation should be designed to collect the optimal revenue that maximizes social welfare. The task here is about proper consideration of the twin taxation objectives of raising revenue-and income distribution. The Laffer Curve suggested an inverted U-shaped relationship between tax rates and the amount of tax revenue collected by governments.The theory argues that if tax rates are too high, they will discourage taxed activities such as consumption and investment, while if tax rates are too low, it will fail in generating sufficient revenue for the government. Therefore, the ideal rate of taxation for an economy is the one that falls right at the top of the inverted U (Sanz-Sanz, 2022; Smith, 2024). Although the theory is posited on effect of tax rates on income tax revenue alone, it affects other taxes such as consumption (Sanz-Sanz, 2022). Therefore, this study is guided by triangulation of optimal and Laffer curve theories.

4. Results and Discussion

Figure 2 is on trend of total government revenue 1994-2022 based on data obtained from the Central Bank of Nigeria

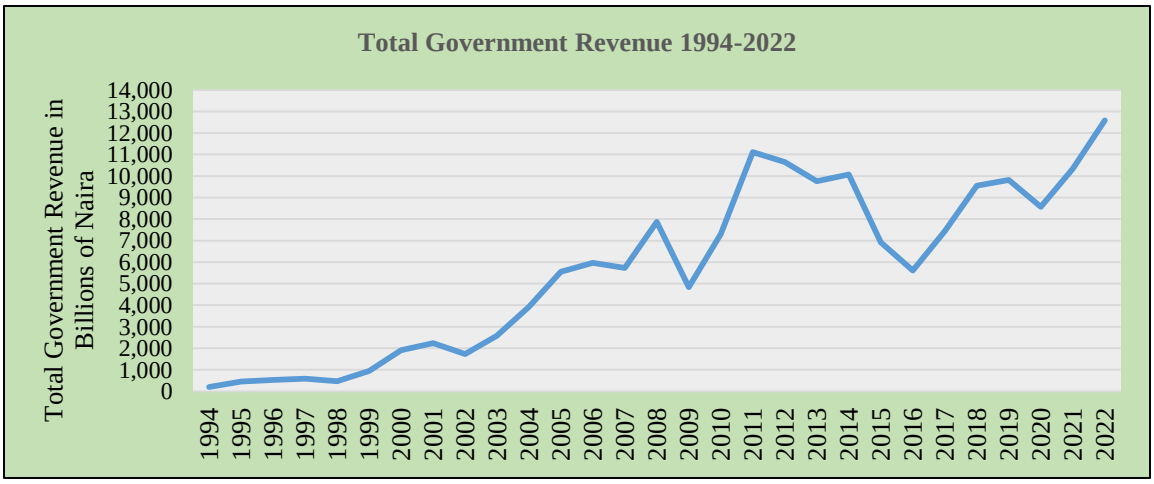

Figure 2: Total Government Revenue Collections 1994-2022

From Figure 1, collected total government revenue in 1994 is ₦202billion which increased to ₦460billion in 1995, which further increased to ₦524billion in 1996. Total government revenue collected in 1997 increased to ₦583billion which however, decreased to ₦464billion in 1998 but this decreasing trend was reversed as revenue increased to ₦949billion. In 2000, total government revenue increased to ₦1,906billion which further increased to ₦2,232billion in 2001 but decreased to ₦1,732billion in 2002. The decreasing trend recorded in 2002 was reversed in 2003 as collected revenue increased to ₦2,575billion which increased to ₦3,921billion in 2004 which further increased to ₦5,548billion in 2005. Total collected government revenue in 2006 increased to ₦5,965billion but decreased to ₦5,728billion in 2007 which was reversed to increasing trend as collected revenue in 2008 is ₦7,867billion. Total government revenue sharply decreased to ₦4,845billion in 2009 but increased to ₦7,304biollion in 2010 which again increased to ₦11,117billion in 2011 which however, decreased to ₦10,655billion in 2012.

Total collected government revenue decreased to ₦9,760billion in 2013 but increased to ₦10,069billion in 2014 which decreased sharply to ₦6,913billion in 2015 which further decreased to ₦5,616billion in 2016. However, in 2017 total government revenue increased to ₦7,445billion which further increased to ₦9,544billion inn2018n which further increased to ₦9,820billion in 2019. Total government revenue in 2020 decreased to ₦8,569billion but this deceasing trend was reversed in 2021 as revenue collections increased to ₦10,343billion which further increased to ₦12,587billion in 2022. Figure 3 broke down total government revenue into two components of revenue from VAT and other revenues 1994-2022.

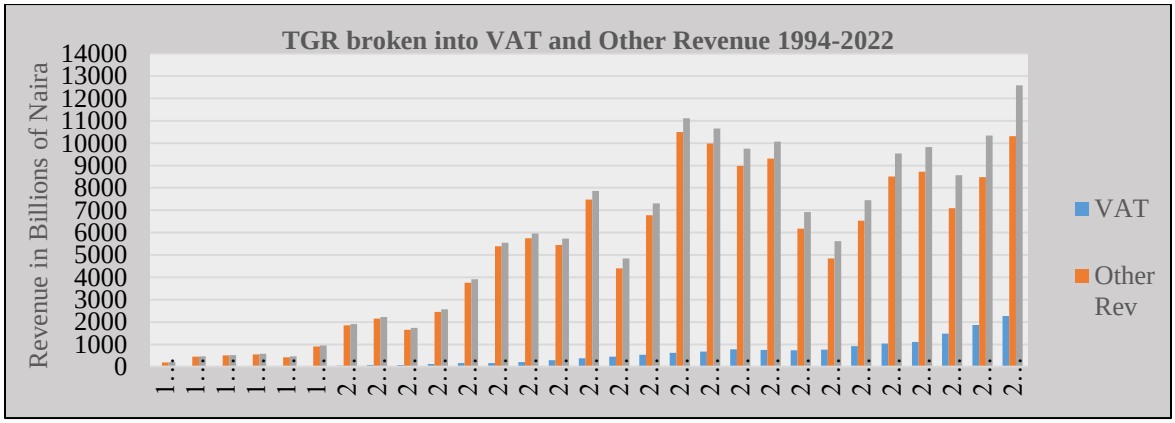

Figure 3: Total Government Revenue broken down into VAT and Other Revenues 1994-2022

Although too negligible to be seen from Figure 3, VAT revenue was ₦8billion in 1994 when revenues from other sources was ₦194billion. Revenue from VAT in 1995 increased to₦15billion while revenue from other sources increased to ₦445billion. Revenue from VAT in 1996, increased to ₦22billion, also revenue from other sources increased to ₦502billion. In 1997, VAT revenue increased to ₦31billion when revenue from other sources also increased to ₦552billion. Revenue from VAT in 1998 increased to ₦40billion while revenue from other sources decreased to ₦424billion. In 1999, VAT revenue decreased to ₦38billion while revenue from other sources increased to ₦911billion. In 2000, VAT revenue significantly increased to ₦51billion, so also revenue from other sources increased to ₦1,855billion. In 2001, VAT revenue collections further significantly increased to ₦75billion; similarly, revenue from other sources increased to ₦2,157billion. Revenue from VAT in 2002 further increased to ₦82billion while revenue from other sources decreased to ₦1,650billion.

Collected VAT revenue in 2003 was ₦121billion; likewise, revenue from other sources increased to ₦2,454billion. Revenue collections from VAT in 2004 further increased to ₦164billion, revenue from other sources also increased to ₦3,757billion. In 2005, collected VAT revenue slightly increased to ₦165billion; likewise, revenue from other sources increased to ₦5,383billion. In 2006, revenue from VAT significantly increased to ₦214billion; similarly, revenue from other sources increased to ₦5,751billion. Revenue from VAT further increased to ₦287billion in 2007 when revenue from other sources showed a declining trend by falling down to ₦5,441billion. In 2008, revenue from VAT significantly increased to ₦384billion so also revenue from other sources increased to ₦7,483billion. Revenue from VAT increased to ₦445billion while revenue from other sources declined to ₦4,400billion in 2009. In 2010, VAT revenue collections further increased to ₦534billion; similarly, revenue from other sources increased to ₦6,770billion. Revenue from VAT in 2011 again increased to ₦617billion; likewise, revenue from other sources increased to ₦10,500billion. In 2012, revenue from VAT increased to ₦674billion while revenue from other sources decreased to ₦9,981billion.

In 2013, VAT revenue further increased to ₦775billion while revenue from other sources decreased to

₦8,985billion. In 2014, revenue from VAT decreased to ₦754billion while revenue from other sources increased to ₦9,315billion. Revenue from VAT further decreased to ₦739billion in 2015; likewise, revenue from other sources decreased to ₦6,174billion. In 2016, revenue from VAT increased to ₦770billion while revenue from other sources further declined to ₦4,846billion. In 2017, VAT revenue further increased to ₦918billion with corresponding increase in revenue from other sources to ₦6,527boillion. In 2018, revenue from VAT further increased to ₦1,035billion with corresponding increase in revenue from other sources to ₦8,509billion. In 2019, revenue from VAT further increased to ₦1,103billion with corresponding increase in revenue from other sources to ₦8,717billion. In 2020, revenue from VAT, further increased to ₦1,483billion however, corresponding revenue from other sources declined to ₦7,086billion. In 2021, VAT revenue again increased to ₦1,866billion and corresponding revenue from other sources increased to ₦8,477billion. In 2022, revenue from VAT further increased to ₦2,270billion; likewise, revenue from other sources also increased to ₦10,317billion. To clearly show the impact of VAT on total government revenue Table I reveals the percentage contributions of VAT to total government revenue 1994-2022.

Table 1: Impact of VAT on Total Government Revenue by means of Percentage Contribution

Years	Value Added Tax in Billions of Naira (₦)	Total Government Revenue (TGR) in Billions of Naira (₦)	% of VAT from TGR
1994	8	202	4
1995	15	460	3
1996	22	524	4
1997	31	583	5
1998	40	464	9
1999	38	949	4
2000	51	1,906	3
2001	75	2,232	3
2002	82	1,732	5
2003	121	2,575	5
2004	164	3,921	4
2005	165	5,548	3
2006	214	5,965	4
2007	287	5,728	5
2008	384	7,867	5
2009	445	4,845	9
2010	534	7,304	7
2011	617	11,117	6
2012	674	10,655	6
2013	775	9,760	8
2014	754	10,069	7
2015	739	6,913	11
2016	770	5,616	14
2017	918	7,445	12
2018	1,035	9,544	11

2019	1,103	9,820	11
2020	1,483	8,569	17
2021	1,866	10,343	18
2022	2,270	12,587	18
Total	**15,680**	**165,242**	

From Table 1, the percentage contribution of VATto total government revenue was 4%. This decreased to 3% in 1995, but increased to 4% in 1996 further increased to 5% in 1997 and to 9% in 1998. Percentage contribution of VAT in 1999 decreased to 4% further decreased to 3% in 2000 and 2001 which however increased to 5% in 2002 and 2003. The percentage contribution of VAT to total government revenue decreased to 4% in 2004 which further decreased to 3% in 2005 and slightly increased to 4% in 2006. Percentage contribution of VAT to total government revenue in 2007 increased to 5% which remains so in 2008, but increased to 9% in 2009. The percentage contribution of VAT to total government revenue in 2010 decreased to 7% which further decreased to 6% in 2011 which remained constant in 2012 but, increased to 8% in 2013. The contribution of VAT to total government revenue in 2014 decreased to 7% but increased to 11% in 2015 which further increased to 14% in 2016 but decreased to 12% in 2017. The percentage contribution of VAT declined to 11% in 2018 which also remained so in 2019, but increased to 17% in 2020. The contribution of VAT in 2021 increased to 18% which remained constant in 2022. The total contribution of VAT to total government revenue of ₦149,562billion is ₦15,680billion which represents 10.48% of the total revenue. Table 2 is on summary statistics and result of ANOVA test with the null hypothesis that there is no difference in the means of contribution of VAT and other revenues to total government revenue 1994-2022.

Table 2: Summary statistics and result of ANOVA

SUMMARY						
Groups		*Count*	*Sum*	*Average*		*Variance*
Column 1		29	15680	540.689		338468.1502
Column 2		29	165241.92	5697.997		15242473.81
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	3.86	1	385668426.8	49.50515	3.02	4.01
Within Groups	4.36	56	7790470.979			
Total	8.22	57				

The summary of the data revealed that there are 29 observations each for VAT and other revenues 1994-2022 subsequent columns are on the sum, average and variances of the two groups of data. The ANOVA result revealed column for the Sum of Squares (*SS*), the degrees of freedom (*df*), the Mean Square (*MS*), the F statistics (*F*), the p-value and the F critical (*F crit*). The null hypothesis is that there is no difference between the means of contribution of VAT and other sources of revenue to total government revenue. The chosen p-value for the study is 0.05; therefore, if the p-value in the table is equal to or less than 0.05, the null hypothesis is accepted and if otherwise it is rejected. Result in the table revealed p-value of 3.02 which is greater than 0.05; thus, the null hypothesis of no difference between the means of contribution of VAT and other sources of revenue to total government revenue is rejected. This means there is difference in

the means of contribution of the two sources to total government revenue.

The overall trend of total government revenue 1994-2022 as depicted in Figure II, showed fluctuating trend although increasing trends occurred in 19 years out of the 29 years covered by the study; thus, there are more of increasing trends than decreasing trends. Total revenue increased in 1995 against 1994 and kept increasing until 1998 which was a year characterized bypolitical uncertainties sequel to attempts by the military head of state to transmute and solely contest for the presidency of the country. Then, came the sudden death of the military head of state and the acclaimed winner of June 1993 presidential election who was incarcerated by the military government for declaring himself president. The sudden death of the military head and the opposition leader, replacement of new head of state and transition to civilian rule have caused havoc on the economy leading to declining government revenue (Marsden, 1998a, 1998b). Another visible decline in total government revenue occurred in 2002 which could be attributed to declining oil production volume which was described as one of the worst (Leadership, 2024).

The declining trend could also be observed in 2009 which could be attributed to the global financial crisis that resulted in global recession (Merle, 2018). Likewise, in 2016, total government revenue showed declining trend, and this could be attributed to combination of declined oil price which closes at $32.26 per barrel in December 2015 but declined to $27.02 per barrel in January 2016. Although the price appreciated closing at $47.12 per barrel in December 2016, Nigeria's low production volume negatively affected inflow of government revenue (United States Energy Information Administration 2024). Another visible declining trend occurred in 2020 which could be attributed to global oil glut due to Covid-19 pandemic which saw oil price fluctuating to as low as $15.18 per barrel with the highest price per barrel of $56.55 in January 2020. Similarly, total production output in the year dropped to 670.85million barrels against 735.24million barrels produced in 2019. Therefore, as in 2016, declining oil price per barrel and production volume resulted in declining revenue in 2020 (Nigerian Upstream Petroleum Regulatory Commission, 2020; Oduu, 2020).

From theoretical perspectives, even though total government revenue showed fluctuating trend 1994-2022, the introduction of VAT could be contended as the right decision towards finding an optimal tax structure for the country. It could be seen most especially from Table I that VAT as consumption tax kept increasing throughout the 29 years covered by the study except in three years of 1999, 2014 and 2015 thereby making more revenue to the givernment in consistence with optimal taxation theory. Similarly, and in consistence with Laffer curve taxation theory, Nigerian government increased VAT rate from 5% to 7.5% in 2020. This resulted in significant increaee of VAT revenue in 2020 against 2019 with the difference being 380billion the highest in all the previous years. The recorded increase in 2021 against 2020 was 383billion which further increased to 404billion in 2022 against 2021. These are depicting the significance of raising the VAT rate towards making more tax revenue for the government. In practice, total revenue is a function of production volume and selling price if costs are maintain at optimum; therefore, fluctuating total government revenue is consistent with decereasing Nigeria's oil production volume and international price per barrel.

Results in Figure 3 and Table 1 have revealed the insignificant contrributions of VAT to total government revenue. Indeed, in Figure 3,the contribution is so low that VAT is not visible 1994-2006; perhaps, became visible 2007 to 2022 while in Table 1, the percentage contributions of VAT fluctuated majorly 3-5% for the period 1994-2006 with the exception of 1998 that was 9%. Although 2007-2022 revealed visible values of the contribution of VAT to total revenue in Figure 3 and improved percentage contributions in Table I with the minimum being 5% and maximum of 18%, the contribution of VAT could still be regarded as insignificant. This is confirmed by results of test of ANOVA statistically confirming the insignificant contribution of VAT to total government revenue 1994-

2022 with a p-value of 3.02. This result revealing that on the overall, VAT revenue is insignificantly contributing to total government revenue in Nigeria is consistent with finding by Das-Gupta (2012) in a study carried out in India. However, the finding contradicts (Moroșan-Dănilă 2022; Adhikari, 2018; Hajdúchová, Sedliačiková, and Viszlai, 2015;Khan and Shadab, 2013;Olakunbi, Campbell and Adesina, 2022;Odu, 2022;Efuntade, 2020; Ugwu, Peter and Udoli, 2019 andLuqman, 2014).

Both optimal taxation and Laffer curve theories could explain finding from this study; the introduction of VAT in the Nigerian tax structure could be adequately explained by optimal taxation theory since VAT is making more revenue contribution to total government revenue. It could be noted that when VAT rate was increased to 7.50% in 2020, more revenue was raised with revenue realized in 2020 giving the highest year in year out difference against 2019 when compared with years pre-2019. This incresase in revenue realization after increasing the VAT rate is bettter explained by the Laffer curve theory signifying that the optimal rate is yet to be attained which is consistent with Nigeria's VAT rate being the lowest in Africa (Galal, 2023). In practice, the effectiveness of public policies like VAT take time; thus, the years 1994-2013 could be regarded as the introduction life cycle of VAT with percentage contributions being in single digit. However, from 2014-2022, the percentasge contribution of VAT is in double digit signifying maturity stage of VAT. Therefore, the insignificant contributions of VAT to total governmenmt revenue could be attributed to the low performances recoded 1994-2013 as the introduction stage of VAT.

5. Conclusion and Recommendations

Based on results in Figure 2 showing low level contribution of VAT to total government revenue against other revenues; results in Table 1 showing the low percentage contribution of VAT to total revenue and results in Table 2 statistically revealing the insignifcant contribution of VAT to total revenue, it could be concluded that the contribution of VAT to total government revenue is insignificant. It could also be concluded that increasing VAT rate has demonstrated potentials for collecting more VAT revenue as signified by the year in year out differentials of 380billion collections in 2020 over 2019 collections, 383billion collected in 2021 against 2020 collections and 404billion collections in 2022 over and above 2021.

Based on the finding of the study, it is recommended that government should pay attention to the call on Nigeria to increase its VAT rate as it is the lowest in Africa. Similarly, it is recommends that more good and services should be identied and be incorporated into VAT chargeable goods and services. Although at the moment VAT started making double digit percentage contributions to total government revenue in the recent past preceisely 2015, it is recoimmends that government should make VAT administrsation to the level of global best practice. This is due to the fact that Nigeria's population is fast growing and VAT being a consumption tax, it may soon be making significant contributions to total government revenue and may even be a viable option to serve as alternative to crisis laden oil revenue.

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