The Supremacy of Indirect Taxes in Generating Revenue in Nigeria: The Case of the Local and State Governments.

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Abstract
The massive diversion from direct taxes to indirect taxes such as value added tax (VAT) was mostly as a result of the key claim made by advocates of the VAT as an effective way of raising tax revenue. The 1990s witnessed unprecedented scrambling for the adoption of VAT. The VAT was dignified by one of its advocates who argues that "purely from a revenue point of view, VAT is probably the best tax ever invented, This study is therefore set at vindicating or otherwise the popular argument in the case of the VAT in Nigeria especially at the local and state government levels.. An econometric model was used to evaluate the significance of VAT allocation to local and state government from its inception in 1994 to 2013. The dependent variables were total collected revenue (TCR) and total revenue (TR) for local and state governments respectively. VAT was the major independent variable while the internally generated revenue (IGR) of the local and state governments were the control independent variables. The model for the local governments revealed that VAT was significant at 1% in determining the total collected revenue (TCR). Also the model for the state governments revealed that the VAT was also significant at 1% in determining the total revenue (TR). The findings are implicative of VAT as a force to reckon with in revenue generation stability for both local and state governments in Nigeria. Part of the recommendations was that the Local and State Governments should not be complacence with VAT boom but intensify strategies, with little or no burden or incidence on the poor, to improve the internally generated revenue.

Key Words*: Indirect Taxes, Internally Generated Revenue, Total Collected Revenue, Value Added Tax.*

1.0 Introduction

The scrambling for the value added tax (VAT), by marry countries witnessed an unprecedented increase by the 1990s. Many countries might had been dissatisfied with their existing tax structure, especially the sales taxes, and the revenue generation expectation of other taxes not being able to march up with the economic development of those countries. The key claim made by advocates of the VAT is that it is a particularly effective way of raising tax revenue: Cnossen (1990), for example, argues that "purely from a revenue point of view, VAT is probably the best tax ever invented, VAT has been a force behind the fiscal consolidation of governments' public budget at a short or a medium term plan. The major objective of VAT therefore, was to generate revenue to sustain governance, at least in the Nigerian context. To many countries which adopted VAT, it is generally defined as broad based tax leveled on sales embedded with a process of systematically effecting VAT on input against VAT due on output.. It is a multi-stage tax levied on the value added at each stage and not only on gross sales. Whether or not the VAT has lived up to its reputation as a

"money machine" is analyzed by Keen and Lockwood (2006a, b) for, respectively, a wide range of countries and the OECD in particular.

The VAT was adopted in Nigeria in January 1993 by the VAT Act No102, but was not implemented until January 1994 at a standard rate of 5 percent. This represented one of the lowest rates in the world along with fewer other countries like Canada, Japan and Panama as at 2009. For example, Denmark, Norway and Sweden set their VAT rate up to 25 percent and above. While Bulgaria, China, Finland, Madagascar (Malagazy), Samoa and Singapore were contemporaries with Nigeria in 1994, France Urugua, Sweden, Ecuador and Norway Started since 1948, 1968, 1969, 1970 and 1970 respectively. The global spread of VAT is presented in Table 1.

Many other countries in West Africa, both Franco-or-Anglo-phones have embraced VAT. For example countries like Benin Republic, Cameroon, Cote d'Ivoire, Ghana, Guinea, Liberia, Mali, Senegal and Togo (ITD, 2005; KPMG, 2009). Table 1 shows the spread. of VAT across the globe while Table 2 shows the High Income and Other countries that had introduced and been operating VAT since 1980 up to 2009.

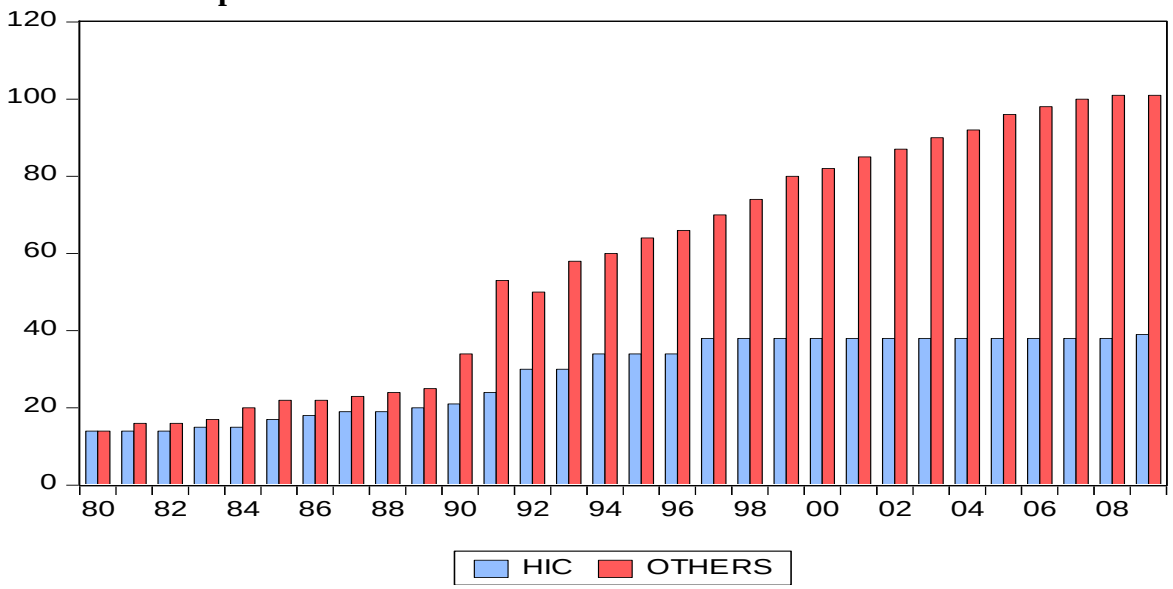
Table 1. Global Spread of VAT- Continental and Sub Continental Analysis.

Regions 1/	Sub-Saharan Africa	Asia and Pacific	EU15 plus Norway and Switzerland	Central Europe and FSU	North Africa and Middle East	Americans	Small Island 3/
Percent 2/	77%	75%	100%	96.42%	43%	88.46 %	33.3%
Total	33(43)	18(24)	17(17)	27(28)	9(21)	23(26)	9(27)
1996 – present	18	7	0	6	2	1	3
1986 – 1995	13	9	5	21	5	6	6
1976 – 1985	1	2	0	0	2	6	0
1966 – 1975	0	0	11	0	0	10	0
Before 1965	1	0	1	0	0	0	0

Sources: ITD (2005)

1. Regions defined as in Ebrill and others, 2001, except Serbia and Montenegro included in Central Europe
2. Figure in parenthesis is number of countries in the region
3. Island economies of fewer than 1 million, plus San Marino.

Table 2 : The Spread of VAT IN HIC and Other Countries 1980-2009



- Source: Carter (2013:16) and IMF Data
- Note: Figure shows the number of countries with a VAT at each date. The original data was a Composite Bar Chart Presentation, but here, adjusted to Multiple Bar Chart Presentation.
- The shorter bars are the High Income Countries (HIC) and longer bars are for "Others".

Value added tax had been the right policy in the right direction and a laudable landmark in tax reform in Nigeria. It was originally imposed on 17 categories of goods and 24 service categories (Odusola, 2006) VAT has become a major source of revenue in Nigeria that the amount of VAT revenue generated in the first year of implementation was 36.5 percent higher than the projection and accounted for 4.0 percent of the total revenue (Ajakaiye, 2000). The revenue contributory significance of VAT in its early years surpassed all projections as statistics (from minister of finance budget speech from 1994 to 2000) showed that N8B, N21B, N32B, N34B, N37B and N47b from 1994 to 1999 respectively. The income budgeted exceeded projections according to the Guardian (2000),. This relative success was expressed by Sanni (2012) to have "surpassed the expectation of all skeptics including the International Monetary Fund. This positive performance is not just commonplace as Smith and Islam (2011) lamented the stagnant revenue from VAT in Bagladesh despite the initial satisfactory performance. VAT eventually replaced the sales tax. The VAT Act No 102 of 1993 (as amended) repealed the sales tax Act of 1986. The VAT Act is now popularly referred to as Value Added Tax Act, Cap VI LFN 2004. Presently, the proceeds are shared between the three tiers of government Federal, state and local government in the ratio of 15:50:35 respectively. VAT is designed to tax consumption of goods and services irrespective of the socio-economic status of the consumer of the taxable (vatable) goods and services. The values of vatable goods and service (section 5.1 part1) are determined as follows:

1. If the supply is for money consideration; its value is deemed to be the amount which with the addition of VAT chargeable, is equal to the consideration and
2. If the supply is for a consideration not consisting of money, the value of the supply shall be deemed to be the market value.

There had been the argument whether VAT satisfy the principles of taxation, a progressive tax rather than regressive. This brought about exceptions limited to basic health, education and financial services, but then these exemptions are also enjoyed by all. Whatever

reason(s) adduced for selected exemptions, the consumer of vatable goods, is intrinsically, within the distributional equality of vatable goods and services. The goods and services exempted, were in first schedule (Section 2 and 3) of the Act, summarized below

The consequences of exemptions are complex and generally adverse because they violate the common sense of VAT. The complexity, as explained in Table 8 is re-introducing cascading, with associated production distortions-when an exempted good is a input into another good-thereby rendering tax credit un-claimable and more so confusing..

1.1 Goods and Services Exempted

Table 3 Goods and services exempted

S/N	**PART** I
	Goods Exempted
1.	All medical and pharmaceutical products
2.	Basic good items
3.	Books and educational materials
4.	Baby products
5.	Fertilizers, locally produced agricultural and veterinary medicine farming transportation equipment
6.	All exports
7.	Plant and machinery imported for use in the export processing zone.
8.	Plant, machinery and equipment purchased for utilization of gas in downstream petroleum operations.
9.	Tractors, ploughs, agricultural equipment and implements purchased for agricultural purposes.

S/N	**PART** II
	Services Exempted
1.	Medical services
2.	Services rendered by community banks, people's bank and mortgage institutions
3.	Plays and performances conducted by educational institutions as part of learning
4.	All exported services.

Source: VAT Act Cap VI LFN 2004.

1.2 Objectives of the Study

This study aims at assessing the revenue generation significance of VAT to the local and state governments and the impact generally on the Nation's Economic Growth (GDP). Specifically:

i. to calculate the percentage of VAT and (IGR) relative to the total collected revenue (TCR) and total revenue (TR) of the local and state governments RESPECTI.

ii. to present a graphical relationship that would appreciate the revenue stability attributes of VAT.

iii. to analyze the econometric models of the relationship between the dependent variables TCR and TR for local and state governments respectively, and the independent variables – IGR and VAT.

2. Theoretical and Conceptual Issues

Concept of Value Added

The difference between the turnover and the related production costs of materials, components, and services within an accounting year is the gross profit (or revenue). The gross profit is adjusted by adding financial income and other incomes like income on operating lease, sale of scrap and gain on disposal of fixes assets and deducting such expanses on bought-in material and services (either local and/or imported) to arrive at the value added. The cumulative value added of an industry is a direct contribution to the gross domestic product.

Value added is the outcome of the collective efforts of human and material resources in an organization and therefore is nearly the most important. Value added statement represents the distribution of the wealth (**Value Added**) can be appropriated among four principal stakeholders-namely the workers (for wages, salaries, pensions and related expenses) the financiers (for interest on loans and dividend on shareholders), the government (for company income tax) and the business (for maintenance of assets and for expansion-depreciation and retained profits).

2.1 Definition of VAT.

The multifarious dimensions of VAT in different countries, especially the tax base and the type of economic activities volatility, have made a globally accepted definition of VAT a mirage. The International Tax Dialog (ITD) Conference on VAT in 2013 rose up to propose a definition of VAT in Carter (ed)(2013:13) as "a broad based tax levied on sales with systematic offsetting of the tax charged on inputs against that due on outputs". The Centre for Tax Policy and Administration in its Working Paper for the Organisation for Economic Cooperation and Development (OECD) in CTPA (2011) was more of explanatory ,than definition, that VAT is consumption tax collected by businesses, levied on a broad base (as opposed to e.g., excise duties that cover specific products). And businesses should not bear the burden.

In the Haryana Institute of Public Administration, Gurgaon, Verma (2002) opined that VAT stands for value added tax and it is the difference between sale and purchase of a business and is a tax charged on retail sales collected in stages He stressed that VAT is nothing but a form of sales tax only and is charged at each stage of sale on the value added to goods. These few definitions/description would guarantee a conceptual view of value added tax in this study.

Retreating nearer home, Nigeria, the VAT Act of 1993 CAP VI LFN 2004 neither attempted to define VAT nor any VAT definition is contained there-in in those early Information Circulars issued by the Federal INLAND Revenue Service (FIRS, 1993)

Generally, VAT is a multi-stage tax levied at each stage of the value addition chain, with a provision to allow input tax credit (ITC) on tax paid at an earlier stage, which can be appropriated against the VAT liability on subsequent sale. VAT is intended to tax every stage of sale where some value is added to raw materials, but taxpayers will receive credit for tax already paid on procurement stages. One of the many reasons underlying the shift to VAT is to do away with the distortions that characterized the sales taxes. Thus, VAT will be without the problem of double taxation as prevalent in the earlier Sales tax laws

2.2 Tax Rate.

Tax rate is very important considering ideal tax system. One of such is equitability of the tax system. Tax must not only be fair, it must also be seen to be fair, if the taxpaying public is to find them acceptable. Otherwise there is a greater tendency for tax evasion.

Tax evasion is an illegal act of intentionally reducing accrued taxes or complexity skipping the payment of such taxes by under reporting income, over stating expenditure items, deductions or exceptions or avoidance. Tax avoidance does not involve legal violent but

using strategic on professional tax plan to exploit loopholes in both tax laws and tax administration to reduce tax liability, the tax payer is always on the safe side to reduce taxable income to the extent of the minimum possible charged within the law.

Tax evasion is an index of faulty tax system and not the tax payer. The Laffer (2004) curve in figure 1 explains the relationship between tax rate and tax revenue. The empirical estimation of the curve in Upender (2003) is based on the equation.

$$Y = b_0 + b_1 X_1 - b_2 X_1^2 \quad \text{eq. 1}$$

Where Y = tax revenue and

X_1 = tax rate.

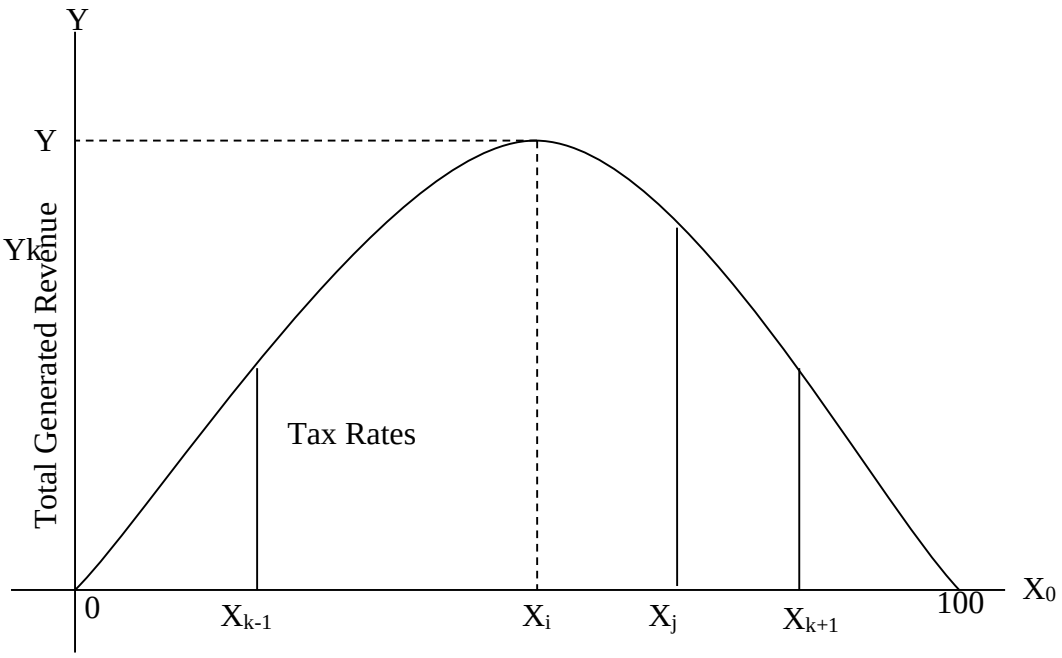
The curve considers the amount of tax revenue raised at the extreme tax rate of zero percent and 100 percent. At the point $dy/dx_1 = 0$, the optimum tax rate and revenue is established. This are points Y_1 and X_1. At a 100 percent rate, revenue is zero because incentive to earn income is also zero. A zero tax rate, that is, the absence incentives makes tax revenue also zero.

The VAT is not exempted from this attack.. A case nearly in mind was the opposition and serious pressure from the organized private sector to oppose increment in VAT rate from 5 percent to 10 percent in 2005 fiscal year. There was another failed attempt in 2007. Increasing the vat rate for whatever excuse is a mis-mark for the government. What is more important is to increase our patriotism and abhor corruption. All eyes are on the present Buhari's admiration in fighting corruption to a significant level.. Any attempt to increase vat rate correspondingly increase already saturated poverty market in the country.

The curve represents a normal curve without intercept which is symmetrical about X_1. This is why Yk was generated at the rate $X_{K-1.}$ The implication is that a marginal VAT rate for optimal revenue generation is derived from finding the first and second degree derivatives of the Laffer curve. Any rate beyond Xi, e.g. Xj, tax evasion, strong opposition and/or pressure from payers are possible alternatives with the. This was why James and Nobles (2008) advocated tax policy that would guarantee outcomes that would be geared towards achieving overall goals and objectives.

Laffer (2004) is a theoretical guide only. The present Nigerian situation may not

Figure 1. The Laffer Curve



accommodate empirically derived tax rate. Under the present VAT rate of 5 percent, maximum opportunity has not been harnessed because for the past three decades oil revenue has continue to take the lion share (about 80%) of total revenue. This mis-placed thrust has concealed a meaningful transformation or diversification of such a large VAT base. The abortion of an impressive expectation from VAT has made Odusola's (2006 :) to lament strongly on the traditional tax revenue that has never assumed a strong role in the country's management of fiscal policy. The discovery of the crude oil has made fiscal management merely a transition, from one primary product-based revenue, to another. This resulted in neglecting the non-oil tax revenue making the economy to be tied to the apron of the fluctuations of international oil market.

VAT rate of 5 percent in Nigeria is one of the lowest in the world. The spread of VAT is across the globe. An analysis of the VAT rate was presented globally in Table 4 below.

Table 4. Global Vat Rate*

VAT Rate	No of countries	Percent
0 – 5	4	2.76
6 -9	6	4.14
10 – 14	34	23.45
15 – 19	71	48.96
20 – 24	27	18.12
25 & above	3	2.07
Total	145	100

Source: ITD (2005:4-6) and KPMG (2009:13-14).

*Lists, Frequency distribution and percentages compiled by the author.

About 145 countries around the globe were involved. . As at 2009, only four countries (Canada, Japan, Nigeria and Panova) operate on 5 percent VAT rate. Denmark, Norway and Sweden operate VAT rate at 25 percent and above.

2.2 Basic VAT Principles and Procedure

This section reviews the operations of VAT. Nigeria's VAT rate is one of the lowest rate in the globe (with Canada, Japan and Panama). It is a single rate tax as against multiple rates practiced in some countries like Suriname that started in 1999 with multiple tax system of 10% and 8% under the disguise of reducing vat regressively etc. The single rate of VAT makes it easier to operate in Nigeria. Another merit of VAT in Nigeria is that it has a large tax base in the limited exemptions. All imports are Vatable but exports are zero rated. A zero-rated goods or services pay/incurs input VAT but no VAT on output. One feature of VAT that has been attracting complaints for the organized private sector is that it is multistage; this implies that multi stage VAT uses INPUT-OUTPUT method. The input VAT should not be treated as part of production cost and VAT should not be conceived as additional increase to selling price. Input VAT is summed up and deducted from output VAT. Tax ability to be remitted is the difference. The advantage of this is that revenue is secured by being collected throughout the process of production (unlike sales tax) but without distorting production decision. A simple example can clarify this:

The hypothetical scenario is that of three firms operating when VAT was not in existence and compared with the implementation of VAT. Exe sells its product to Wye for a price of N1000 and Wye sells to Zed at N1500 and Zed sells to final consumers at N2500. There is nothing special in these simple business transactions. Now with VAT, Exe would sell to Wye at N1050, (produced using no input for simplicity), remitting N50 to FIRS as VAT. Wye sells, to Zed at N1575, charging VAT of N75 and remitting N25 (N75 – N50) to

FIRS. Also, Zed sells to final consumer at N2625 with VAT of N125. Zed will remit N50 (N125 – N75) of VAT to FIRS. The FIRS has collected N50 from Exe, N25 from Wye and N50 from Zed totaling N125 Multi stage collection.

The revenue stability of VAT was a striking feature of changes in tax system in most countries of the world as presented in Table 8

2.3 Calculating VAT

A tabular analysis of the simple scenario of multi-stage VAT collection between Exe, Wye and Zed companies is in Table 5 below.

Table 5. Methods of Calculating Value Added Tax

METHODS	EXE Primary Producer (Flour)	WYE Confectionary Business	ZED Retail Sale (To final consumer)	TOTAL
Subtraction Method	N	N	N	N
Sales	1000	1500	2500	
Purchases	0	1000	1500	
Net Receipts (Value Added)	1000	500	1000	
VAT @ 5%	50	25	50	125
Tax Credit (or Invoice) Method				
VAT Due on Sales	50	75	125	
Less VAT Paid on Purchases	0	50	75	
VAT @ 5%	50	25	50	125

2.4 Zero Rated Goods

Zero rated goods include "All Exports". Such firms will be due a full refund of VAT paid on inputs. The "destination" principle makes exports leave Nigeria without any form of VAT. It is an international norm in indirect taxation, "with total tax paid on a good being determined by the rate levied in the jurisdiction of its final sale and revenue accruing to that jurisdiction" (ITD, 2005:8). Zero rated supplies in Nigeria according to OTN (2012) includes non-oil exports, goods and services purchased by diplomats, goods purchased for use in humanitarian donor-funded projects.

2.5 Distribution of Proceeds from VAT.

Notwithstanding any formula that may be prescribed by any other law, the revenue accruing by virtue of the operations of the Act shall be distributed as follows: (VAT Act, 2004:Section 40).

a. 15% to Federal Government
b. 50% to State Government and the Federal Capital Territory Abuja.
c. 35% to Local Government

Table 6 shows the sharing formula of VAT since 1994

Table 6. VAT Sharing formula

Year	FIRS	FGN	State	L. Govt.
1994	20% of Gross Proceeds		80% of Gross proceeds	

1995 (Jan – Mar)		50%	20%	25%
1995 (April – Dec)		40%	35%	25%
1996 – 1997		35%	40%	25%
1998		25%	45%	30%
1999-2014		15%	50%	35%

2.6 Problems Facing Optimal VAT Collection.

There are various problems inhibiting optimal collection of VAT. Some of these problems are enumerated bellow:

2.6.1 Faulty Multistage Collection Ripples

The treatment of input VAT as a production cost is an aberration of the principles of multi-stage collection. The multi-stage collection/multi-stage confusion led to a cascade of the ripples hypothetically explained in cases A to E bellow and presented in Table 8a-e. In all the cases, let us use the following data.

Table 7: Data for Computation for Tables 8a-8e

1. VAT Rate	= 5 percent
2. Input Cost with VAT	= N52500
3. Input Cost less VAT (i.e. N50000÷ 1.05)	= N50000
4. VAT (Input)	= N2500
5. Industry [profit] Mark-Up	= 40 percent.
6. Industries' Selling Price (i.e, N50000× 1.40) + Output VAT	= N73500
7. VAT (Output)	= N3500

Tables 8a to 8e: Ripples in Multi Stage Collection

Case A

The company understands the multi-stage VAT procedure, takes tax credit [i.e .Output VAT less Input VAT] and remits net VAT to FIRS, or claim tax refund from FIRS if input VAT is more than output VAT. The input VAT was neither added to production cost nor the output VAT merged with sales price. No ripples manifested..

The ripples are manifested in Cases B to E where VAT is treated as production cost and/or merged with sales price of vatable goods and services.

. Table 8a Case A

S/N	PARTICULARS	N'000
1	**Input Cost with VAT**	**52,500**
2	**Net Input Cost (N52500/1.05)**	**50,000**
3	**VAT (Input)**	**2,500**
4	**Sales Price (N50000 + 40% = N50000 + profit of N20.000) + VAT(output)**	**73,500**
5	**Sales (Net) = (N73500/1.05)**	**70,000**
	VAT (Output)	**3,500**
6	**Remittance to Federal Inland Revenue Service (FIRS)**	**1,000**

Case B - The company: 1. Treated input VAT as production cost but make adjustment for tax credit of output VAT less input VAT.

2. Increased production cost reduces the mark-up to 33.33 percent from the industrial mark-up of 40 percent to be able to sell at industry's price of N73500. Incurred loss of (N20000 – N17500) N2500.

Table 8b Case B

S/N	PARTICULARS	N'000
1	**Input Costs (including VAT)**	**52,500**
2	**VAT (Input)**	**2,500**
3	**Sales Price (N52,500+ 33.33% = N52,500 + profit of N17,500) + VAT(output)**	**73,500**
4	**Sales (Net) (73,500/1.05)**	**70,000**
5	**VAT (Output)**	**3,500**
6	**Remittance to FIRS (N3500 – 2,500)**	**1,000**

Case C - The company: 1. Treated VAT as production cost

2. Reduces mark-up to 33.33 percent and incurred loss as in Case B
3. The company did not take tax credit of Output VAT less Input VAT but remitted output VAT of N3500 to FIRS.
4. Lost tax credit of N2, 500.

Table 8c Case C

S/N	PARTICULARS	N'000
1	Input (Production) Cost	52,500
2	Sales Price (N52,500 + 33.33% = N52,500 + profit of N17,500) + VAT(output}	73,500
3	Sales (Net) (N73,500/1.05)	70,000
4	VAT (Output)	3,500
5	Remittance to FIRS (N3,500- 0)	3,500

Case D - The Company: 1. Treated VAT as production cost

2. Takes tax credit of N2, 500
3. Charges mark-up of 40 percent (instead of on production cost of N52500
4. This results in increase in sales price from the competitive industry's price of N73500 to N77175
5. Overcharge final consumer at an amount of N3675.
6. VAT overpaid by final consumer by (N3675- N3500) is 175.

Table 8d Case D

S/N	PARTICULARS	N'000
1	Input Production Cost	52,500
2	VAT (Input)	2,500
3	Sales Price (N52,500 + 40% = N52,500 + profit of N21,000) + VAT(output)	77,175
4	Sales (Net) (N77175/1.050	73,500
5	VAT (Output)	3,675
6	Remittance to FIRS (N3675-2500)	1175

Case E - The Company 1. As in Case D above but did not take tax credit.

Table 8e Case E

S/N	PARTICULARS	N'000
1	Input Production Cost	52,500

2	VAT (Input)	2,500
3	Sales Price (N52,500 + 40% = N52,500 + profit of N21,000) + VAT(output)	77,175
4	Sales (Net) (N77175/1.050	73,500
5	VAT (Output)	3,675
6	Remittance to FIRS (N3675-0)	3675

2.6.2 Theoretical observation on ripples

The ripples discussed in cases B to E above are all against the company expected to pay VAT. The invoice method of VAT is self-monitoring and enforcing businesses would demand for invoice from suppliers so that it does not lose the tax credit from purchases of goods and services not exempted from VAT. The issue of evasion is still a popular discourse but cannot be compared to single –stage tax. A situation where the tax can totally be evaded is if all the firms in an industry or a production to distribution to final consumers collided with the objective of sabotage towards concealing facts on sales. VAT evasion is a bit complex and better be conceived as situations of non-compliance, where businesses expected to register for VAT failed to do so or was able to operate successfully outside VAT net. The economic implications of Cases C to E in a highly elastic demand markets with substitutes is a sharp decrease in demand for their goods and services, since most necessity goods and services are already under VAT exemption.

If every taxable person understand VAT as the company in Case A in Table 8 above , VAT would have been an ACE among other taxes in Nigeria especially at this transitional period when the bride, the crude oil, has divorced the country. This is a crucial period when FIRS would wake from its slumbers.

The VAT has also been challenged of regressivity. Brederolt (2007) submitted, after some arguments, that there is some element of regressivity in developed economies.. Faridy and Sarker (2011) defended VAT progressivity in Bangladesh, an example of a developing country with an empirical evidence. A critical assessment of the two propositions are somehow theoretically appealing but the costs would be more than benefits for practicability.

The value Added tax is not without its benefits. In addition to the charging of VAT system tax at each stage of sale on the value added to the goods, the main benefits of the VAT system: include: 1.VAT system mitigates cascading effect and economic distortions. 2. There is a greater fairness and uniformity in this system. 3. There is a better tax compliance being less chances of tax evasion. 4. There is complete transparency of tax incidence in the sale of goods. 5. VAT system is simpler than the present system of taxation as there would be no dispute regarding taxable stage of sale and classification of goods taxable at a particular rate of tax and there would be minimum requirement of declaration forms.

2.7 VAT and Revenue Assurance for Governance.

The value added tax has attained a status of national economic attention in generating revenue for the three tiers of governance in Nigeria. The proposition to increase vat rate to 10% is not really a welcomed development. What is needed is for FIRS to harness all the opportunities surrounding VAT to reduce evasion to the minimum. A vast number of SME's expected to register do not and were able to operate conveniently outside the VAT net. Only few VAT complaints would bear the burden. Table 8 shows that VAT was highly above the Internally Generated Revenue (IGR) of the local governments; and also very substantial for the state government. The percentages calculated in columns ***b*** and ***c*** relative to column ***a,*** for states and columns ***i*** and ***j*** relative to column ***h*** for local government respectively showcase this focus.

Table 8 States and Local Government Finances 1994-2013 [N' Billion]

STATE GOVERNMENT FINANCES						LOCAL GOVERNMENT FINANCES				
TRSG (a)	IGRSG (b)	VATSG (c)	[d]* a÷ *b*	[e]* a ÷ *c*	YEAR [f]	TCRLG (g)	IGRLG (h)	VATLG (i)	[J]* g÷ *h*	[k]* g÷ *i*
49.5	10.9	5.0	2202	10.10	1994	19.2	1.2	00	6.7	00
69.6	17.0	6.3	24.43	9.05	1995	24.4	2.1	3.6	8.6	0.147
89.5	19.5	11.3	21.79	12.63	1996	23.8	2.2	3.3	9.2	14.3
97.0	27.1	13.9	27.94	14.33	1997	31.3	2.5	7.6	8.4	24.6
141.2	29.2	16.2	18.20	11.47	1998	44.9	3.3	10.2	7.35	22.72
169.0	34.1	23.8	20.18	14.08	1999	60.8	4.7	9.6	7.73	15.79
359.1	37	30.6	10.53	8.52	2000	151.9	7.2	13.9	40.74	9.15
573.5	59.4	44.9	10.36	7.83	2001	171.5	6.0	20.1	3.49	11.72
669.8	89.4	52.6	13.36	7.85	2002	172.2	10.4	18.7	6.O4	10.86
855.0	118.8	65.9	13.89	7.71	2003	370.2	20.2	39.6	5.46	10.70
1113.9	134.2	96.2	12.05	8.64	2004	468.3	22.4	46.0	4.78	9.82
1419.6	122.7	87.4	8.64	6.16	2005	597.2	24.0	55.8	4.02	9.34
1543.8	125.2	110.6	8.11	7.16	2006	674.3	23.2	75.9	3.45	11.79
2065.4	305.7	144.4	14.80	6.99	2007	832.3	21.3	105.1	2.56	12.63
2934.8	441.1	198.1	15.04	6.75	2008	1379.0	23.1	135.9	1.67	9.85
2590.7	461.2	229.3	17.80	8.85	2009	1069.4	26.1	157.4	2.44	14.72
3162.5	757.6	275.6	23.96	8.71	2010	1359.2	26.2	189.1	1.93	13.91
3410.1	509.3	318.0	14.94	9.33	2011	1636.2	31.6	218.2	1.93	13.33
3572.6	548.1	347.7	15.34	9.72	2012	1648.3	26.6	238.6	1.61	14.48
3836.9	505.9	389.5	13.19	10.15	2013	1810.1	29.3	267.3	1.62	14.77
28723.5	4353.2	2467.3	15.16	8.59	TOTAL	12544.5	313.6	1615.9	2.49	12.88

Summary of State and Local Government Finances [TR, TCR, IGR and VAT]

Source: CBN Statistical Bulletin [2012: 101-104], [2013: 83-87]

- **Percentages calculated by the author**

2.7.2 .Graphical Relationships

[a] State Government Variables

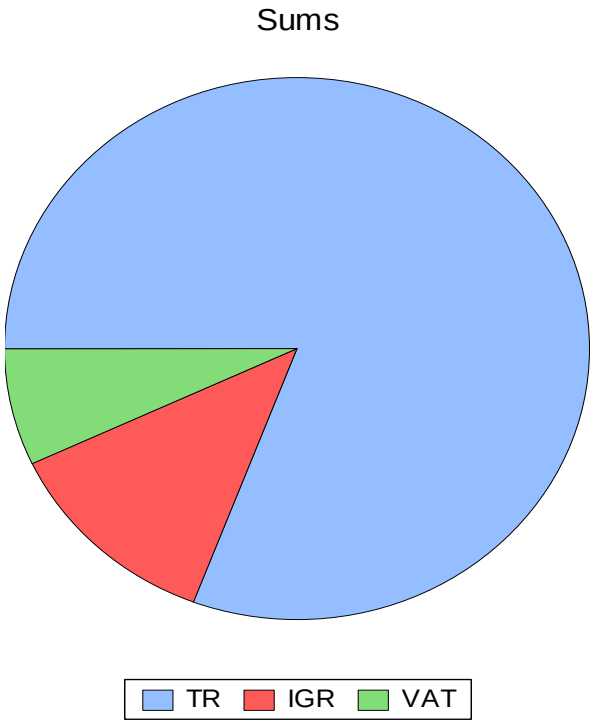
The Pie chart below shows the total of TR_{SG}(Total Revenue), IGR_{SG}(Internally Generated Revenue) and VAT_{SG}(Value Added Tax) from 1994-2013 in Table 5 above.

The TR_{SG} = 28723.5
IGR_{SG} = 4353.2 (15.16% of TRSG)
VAT_{SG} = 2467.3 (8.59% of TRSG)

The VAT_{SG} is the smallest followed by IGR_{SG} in the pie chart in figure 2.

The line graph also shows the relationship between TR_{SG}, IGR_{SG} and VAT_{SG} in columns[a], [b] and [c] from 1994-2013 of Table 5 above

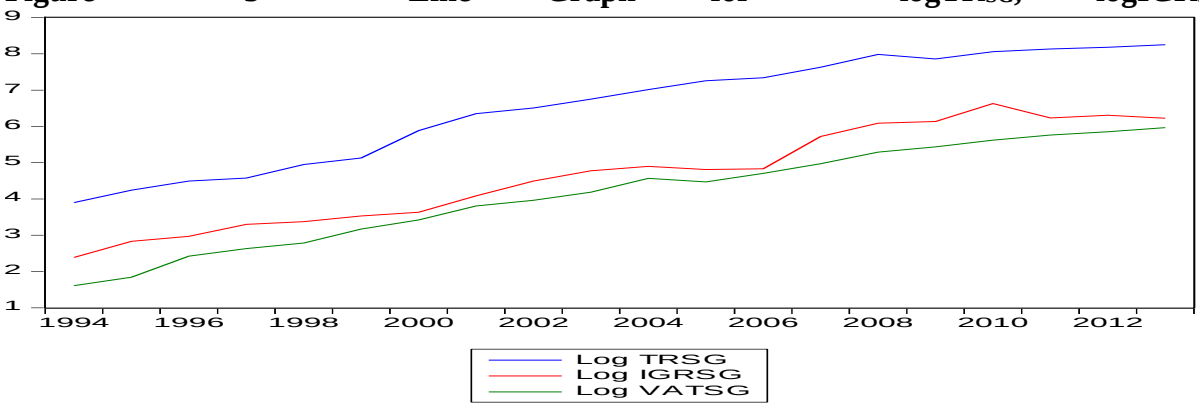
Figure 2 Pie Chart for TRSG, IGR_{SG} and VAT_{SG}



Line Graph for State Govt. Variables [TR_{SG}, IGR_{SG} and VAT_{SG}]

The log of the variables was used for relative comparison. The numerical magnitude of the variables was reduced to a common log base. At the state government level, VAT_{SG} was maintaining a trend with but marginally not up to the IGR_{SG} The lower line is logVAT_{SG}, middle line is logIGR_{SG} and upper line is logTR_{SG}.

Figure 3 Line Graph for logTR$_{SG}$, logIGR$_{SG}$ and logVAT$_{SG}$



[b] Local Government Variables

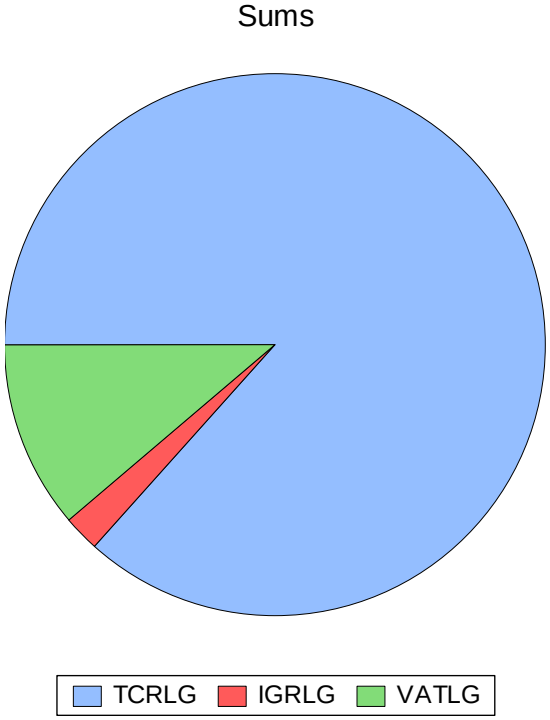
The Pie chart below shows the total of TCR_{LG} (Total Current Revenue), IGR_{LG} (Internally Generated Revenue) and VAT_{LG} (Value Added Tax) from 1994-2013 in Table 5 above. The average contribution of IGRLG WAS 2.49% compared to VATLG of 12.88% of TCRLG

The TCR_{LG} = 12544.5
IGR_{LG} = 313.6 (2.49% of TCRLG)
VAT_{LG} = 1615.9 (12.88% of TCRLG)

The IGR_{LG} is the smallest followed by VAT_{LG} in the pie chart in figure 4.

The line graph also shows the relationship between TCR_{LG}, IGR_{LG} and VAT_{LG} in columns[g], [h] and [i] from 1994-2013 of Table 5 above. The subscript $_{LG}$ indicates local government variables.

Figure 4 Pie Chart for TCR_{LG}, IGR_{LG} and VAT_{LG}



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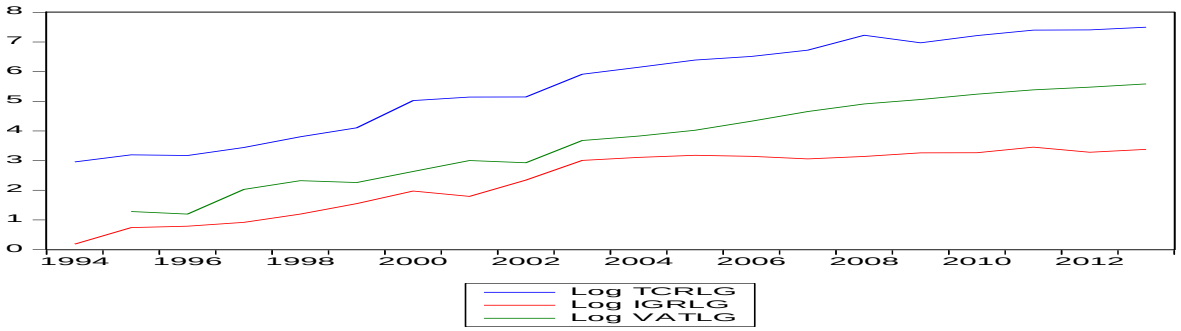
Line Graph for Local Government Variables [TCR_{LG}, IGR_{LG} and VATLG]

The log of the variables was used for relative comparison. The numerical magnitude of the variables was reduced to a common log base. At the local government level, VAT_{LG} was maintaining a trend higher than the IGR_{LG}. As from 2002, VAT_{LG} was steadily increasing and reached about 300% by the end of 2013. A close observation will also reveal that VAT was increasing nearly in parallel with the TCR_{LG}. These VAT features in the local government level is symbolic of the revenue assurance power of VAT.

Figure 5 Line Graph for $logTCR_{LG}$, $logIGR_{LG}$ and $logVAT_{LG}$



3.0 Methodology

3.1 Data Collection

A time series data covering the period of 1994--2013 on Total Revenue [TR], Internally Generated Revenue [IGR] and VAT and Total Current Revenue [TCR], Internally Generated Revenue [IGR] and VAT for States and Local Government respectively shall be used. Data are collected from the CBN (2013) Statistical Bulletin, CBN (2013) Annual Reports and various issues of both. An OLS econometric model is designed to assess the impact of IGR and VAT on the dependent variables TR and TCR for state and local governments respectively. The data are in Table 8 above.

3.2 Model Specification.

1. $\boldsymbol{TCRLG = \beta_0 + \beta_1 IGRLG + \beta_2 VATLG + \varepsilon_i}$

where

TCRLG = Total collected revenue by the local governments in the country. This is the dependent variable. The TCR_{LG} is the total revenue from federal allocations and from about 20 different taxes (and levies) collected by the various local governments in Nigeria

IGRLG = This is an independent variable representing the revenue collected from taxes, levies, rates, fines and other properties, investments and revenue generating assets. About 20 different taxes (and levies) are collected by the various local governments in Nigeria.

VATLG = This represents the 35% share of the VAT pool from the federation accounts

εi = the error term.

$\beta 1, \beta 2 =$ the coefficients of IGR_{LG} and VAT_{LG} respectively.

$\beta 0 =$ the constant or intercept

$\beta_1, \ \beta 2 \geq 0$ a priori proposition for non-negativity

2. $\boldsymbol{TR_{SG} = \alpha_0 + \alpha_1 IGR_{SG} + \alpha_2 VAR_{SG} + u_i.}$

Where

$\boldsymbol{TR_{SG}}$ = Total collected revenue by the state governments in the country. This is the dependent variable. The TCR_{SG} is the total revenue from federal allocations and from about 12 different taxes (and levies) collected by the various state governments in Nigeria

$\boldsymbol{IGR_{SG}}$ = This is the revenue collected from taxes, levies, rates, fines and other properties, investments and revenue generating assets. About 12 different taxes (and levies) are collected by the various local governments in Nigeria

VATSG = this represents the 50% share of the VAT pool from the federation account.

u_i = the error term

α_1, α_2 = the coefficients of IGR_{SG} and VAT_{SG} respectively

α_0 **= the constant or the intercept**

α_1 , $\alpha_2 \geq 0$ is a priori proposition for non-negativity

4. Results and Discussion

4.1 The Theoretical Significance of the graphical and Parameter Estimate

The graphical documentations (the pie charts and line graphs) for both the local governments (LG) and state governments (SG) are symbolic vindication that VAT provides revenue stability for the two-tier of government.. In fact, it was more interesting (or rather embarrassing?) to note the ridiculous amount of IGR compared with revenue from VAT in Local Governments.

Table A-1 and Table A-2 reported the Ordinary Least Square multiple regression results for the study. According to the results, IGR and VAT have positive coefficients and are significant at the 5% and 1% level respective for the local governments. At the state government, IGR and VAT are significant at 5% and 1% respectively. . This result suggests a direct relationship between the dependent and independent variables for both LG and SG. . If a variable is significant, it is a reflection that it has deep rooted influence and effect on the dependent variable..

4.2The coefficients of the independent Variables-The interpretation of the positive coefficients for LG indicates that a unit increase in IGR will increase the TCR by about 12 percent and a unit increase in VAT will increase TCR by about 5.8 percent. The coefficient of IGR was 0.9685 compared with VAT coefficient of 8.255 for SG. A unit increase in IGR results in less than 1 percent of TC while a unit increase in VAT results in about 8 percent of TC at the state government level .These results are consistent with the a priori proposition. Notwithstanding that VAT was not up to IGR value for the state, VAT has been the major determinant of revenue stability for the state governments.

The statistical significance of the parameter estimate is verified by the adjusted R squared (AR^2), the standard error test; the F-statistic and the Durbin-Watson (d.w.) statistics.

4.3The Adjusted R-Square- The value of the adjusted R-squared (AR^2) for LG was 97.7% and 97.8% for SG. . It implies that IGR and VAT explained about 98% systematic variations in TR and TCR over the observed years in the LG and SG economy and governance respectively while the remaining 2.2% or 2% variation are explained by other determining variables outside the models.

4.4The t-Statistics- The value of the **t**-Statistics is calculated by expressing the respective variable's coefficient relative to the standard error**.** If the value of $\mathbf{t \geq 2}$, the variable is said to be significant For the model, when compared half of each coefficient with its standard error, it was found that the standard errors are less than half of the values of the coefficients of all the variables except IGR at the state level.. Hence the variables are statistically significant. The F statistic of 254 and 274 for LG and SG are significant at 1% level and this shows that the explanatory variables, especially VAT, are important determinants of revenue generation for the LG and SG

4.5The Durbin-Watson (d,w.) statistics.- This statistics shows the presence of serial correlation in a model if the value is too high or too low from the value 2. Serial correlation is an OLS breach and would lead to a spurious result especially if $AR^2 >$ d,w. statistics. When

there is the presence of serial correlation in a model (equation), ordinary least square may not be appropriate without modification. Gujarati (2004) hinted that the residual variance may underestimate the true variance; this may overestimate the R^2 (and consequently) the adjusted R^2. The t and F-tests are no longer valid and if not corrected, may likely give spurious and misleading conclusions about the statistical significance of the estimated regression coefficients. The test results in this study suggest that we need to modify our original specification to take account of serial correlation.

The value of Durbin Watson (d.w.) are 2.06 and 2.13 for the models. The LM Test gave a high probability of no serial correlation for the models. The actual zero serial correlation value of d,w. statistics is 2.0. A waiver of $1.85 \leq d.w. \leq 2.15$ may be condoned. The Durbin-Watson statistic can be difficult to interpret. To perform a more general Breusch-Godfrey test for serial correlation in the residuals, the **LM Test for Serial Correlation** was used. The statistic labeled "Obs*R-squared" that appeared in the LM table (if E-View 7 is used), is the LM test statistic for the null hypothesis of no serial correlation. If the probability of no serial correlation is zero, there is a strong indication of the presence of serial correlation in the residuals from the equation. Then we specify an order of serial to test against. Entering "1" yields a test against first-order serial correlation.

4.6 The F Value or **F ratio-** is the test statistic used to decide whether the model as a whole has statistically significant predictive capability, that is, whether the regression Sum of Square is big enough, considering the number of variables needed to achieve it. **F** is the ratio of the Model Mean Square to the Error Mean Square. In the two models above, F-Ratio > 2 and p(F-Ratio=0000). These showed that regressions are significantly well fitted to the data in the models for LG and SG.

In summary, since all the econometric test applied in this study show a statistically significant relationship between the dependent and independent variables from the model, we accept the alternative hypothesis which states that: There is a significant relationship between VAT and revenue generation in the local and state governments..

Conclusion

The introduction of VAT has been a laudable landmark in the history of the Nigerian tax system. The collective findings from this study have vindicated the claim that VAT has been a source of tax revenue that have attracted national attention, At least it has been a financial burden lifter in the local and state governments. The allocation of 35 percent of the Federal VAT pool to the local government was about 300 percent of its IGR. The state governments gulped 50 percent of VAT pool from the Federal Government and has been a significant factor in the economic growth as VAT signaled up to 14 percent of the states total revenue in some years. It can safely be concluded that VAT has been a dynamic force in revenue stability for the Local and State Governments in Nigeria. A caveat here rests on the avoidance of the temptation to increase VAT rate as proposed by Okonje-Iweala (2015) because of an untenable excuse of falling oil prices.

Recommendations

Policy makers especially FIRS must not yield to the temptation of increasing VAT rate but rather increase VAT base. There is still scope for improving the revenue collection from VAT: by increasing the number of VAT taxpayers, reforming the VAT administration, creating intensive awareness among the people and comprehensive handling of controversial issues, and increasing the efficiency of the monitoring system. Vast opportunities in VAT

have not been tapped and thousands of taxable persons are still operating outside the VAT net.

Evasion of VAT and VAT frauds has since been the duo but horrible giants inhibiting the realization of the expected productivity of the tax. FIRS must hold VAT evasion and frauds in the horns to reduce the cankerworms if not totally eradicated. Efforts may be extended to revisiting and updating the VAT Act to reduce opportunities for avoidance, frauds and evasion.

The Local and State Governments should not be complacence with VAT boom but intensify strategies, with little or no burden or incidence on the poor, to improve the internally generated revenue.

Suggested Future Research Focus.

Based on the revenue generation landmark for local and state governments in Nigeria, all efforts should be collectively geared towards fighting the socio-economic enemies of value added tax. One aspect of these is VAT frauds and evasion. Research should be conducted into VAT frauds and evasion in Nigeria.

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Appendix

Table A-1* Variables for Local Governments

Dependent Variable	Independent Variables	Coefficients	Std Error Coefficient	t-Stat	Sig
TCRLG	IGRLG	11.957	3.2558	3.6724	0.0023
	VATLG	5.8231	0.39833	14.618	0.000
	Constant	-31.538	35.004	-0.9859	0.3818
Adjusted AR^2 =0.077	F-ratio = 254.17	Prob (F-ratio) = 000	S.E. of regression = 96.608	d.w. = 2.06	

Table A-2* : Variables for State Governments

Dependent Variable	Independent Variables	Coefficients	Std Error Coefficient	t-Stat	Sig
TRSG	IGRSG	0.9685	0.5456	1.775	0.096
	VATSG	8.255	1.2584	6.500	0.000
	Constant	233.13	247.33	0.9426	0.3608
Adjusted AR^2 = 0.978	F-ratio = 274.07	Prob (F-ratio) = 000	S.E. of regression = 197.87	d.w. = 2.13	

*E-View 7.1 Extract