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Review of Value Added Tax (VAT) on economic growth in Nigeria

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Abstract

VAT yield in Nigeria is poised to providing an irrepressible revenue base resulting in more proceeds than other consumption tax, to enable the government provide its obligations of security, social and economic improvements for her citizens, but these has not been felt in spite of its increase in tax revenue. This obliged the research to appraise value added tax influence on economic growth from 1995 to 2021 in Nigeria. Value added tax (VAT), inflation (INF) and government expenditure (GOV) were the independent variables while gross domestic product (GDP) was the contingent variable. The Vector Error Correction Mechanism (VECM) was employed on time series data, resulting in a long run relationship among the variables. The conclusion derived from the results is a positive interconnection between VAT and economic progression in Nigeria; with same direction for GOV but negative for INF. The Nigerian government is hereby recommended to use its policy framework to enlarge the scope of VAT coverage and ensure effective utilization of VAT proceeds for a progressive economy.

Keywords: Value Added Tax, Economic Growth, Vector Error Correction Mechanism, Government Expenditure, Nigeria.

1. Introduction

Value Added Tax (VAT) Act 1993 as amended requires a charge of a set rate of 7.5% on invoices for goods and services, from every citizen of Nigeria (handled by the Federal Inland revenue service - FIRS), provided they are not relieved of VAT. VAT is consumption tax endured by product or service consumers, as one of the widely held taxes around the world for its easy administration, significant yields and hard to circumvent. VAT, whose value increases with respect to product or service value, is retrieved at every stage of the production and distribution of manufactured and imported goods and services from manufacturers, distributors and importers via their VAT registration number in Nigeria (Orisadare & Fasoye, 2022, Okoyeuzu, 2013). VAT yield in Nigeria has been on the increase but this has not brought economic gains and prosperity to her citizens in terms of growth, hence the research is determined to consider VAT influence on economic expansion in Nigeria throughout the research cycle. The thrust of this paper is to assess VAT's impact on Nigeria's economic prosperity.

Empirical evidences on VAT and economic growth from Nigeria existed (Orisadare & Fasoye (2022), Ayeni & Omodero (2022), Bingilar & Preye (2020), Kareem et al. (2020), Caleb et al. (2018), Adegbie et al. (2016), Madugba & Joseph (2016), Oyedokun (2016), Onodugbo (2013), Okoyeuzu (2013), Ogbonna & Ebimobowei (2012), Ebiringa & Emeh (2012), Adereti & Sanni (2011), Michael & Ben (2007), Ajakaiye (2000), among others). They found variant effect of VAT on economic growth, some revealing positive effects, some were negative and others had mixed effect in Nigeria and

consequently this research aim to permeate the divergence in literature of VAT on economic growth during 1995 – 2021. The Nigerian economy has in recent times existed undergoing momentous alarms and declines in VAT revenue due to weakening in economic activities resulting from economic depression. Our main results showed a progressive effect of VAT on Nigeria's economic prosperity.

2. Literature Review

An obligatory charge enforced by government representatives on revenue, resources and consumption of her citizens, their properties and transactions for public intents is known as taxation (Ariwodola, (2001), Arnold & Mclntyre, (2002)). The stance of tax administration in Nigeria is queued from the British prototype since 1960, running till self-assessment arrangement which is in tandem with the American pattern came to light in 1990. The British prototype presumes inept tax payers and procedures, hence the authentication of information furnished by tax payers as regards validity and correctness. The American pattern of deliberate observance and efficient data processing system could not be replicated in Nigeria due to the Nigerian perspective (Umeora, 2013).

An implicit tax, obligatory upon every sale commencing at the onset of manufacturing and delivery sequence, which climaxes in consumer sales is VAT. Ola (2001), affirmed that a tax disbursed at every single phase of additional value is VAT. Its incidence stands borne by either the manufacturer or purchaser or apportioned by both, as a charge on value gained on goods prior to its sales. As a multi-stage tax on supplied goods by the producer, the computation is output tax less input tax and it accrues to the government.

Empirical Review

Orisade and Fasoye (2022) using threshold vector autoregressive (TVAR) studied the outcome of VAT and growth in Nigeria and found that the economy is jeopardized when VAT is beyond 10 percent threshold value, but unhurt when it is lower than the 7.59 percent; rather, it progresses the citizen's well-being. Ayeni and Omodero (2022) reviewed tax revenue on Nigeria's economic growth making use of VECM and observed a positively substantial link between the variables, recommending government encouragement to tax paying companies as part of the realization of its social responsibilities for economic advancement. ARDL method was employed by Mukolu and Ogodor (2021) in investigating VAT on Nigerian growth economically, which shows a significant impact with the impetus of improving total revenue of Nigeria and reducing tax evasion by taxpayers.

Asaolu et al. (2018) employing ARDL regression on the correlation amid Nigeria's tax revenue and growth, revealed a negatively significant relationship with VAT on economic growth. Inimino et al. (2018) utilizing the analytical technique of Co-integration and ECM observed the reality of long-run relationship. The short run dynamics adjusted to long run equilibrium as stated in the ECM coefficient (negative and statistically significant). Akintoye and Tashie (2013) on Tax compliance and economic growth in Nigeria resolved that compliance (via the readiness of the people to pay tax) is crucial and incapable of being disregarded. An inverse relationship between VAT and GDP was observed by Ebiringa and Emeh (2012).

Adereti and Sanni (2011) utilizing simple regression assessment studied the role of VAT to GDP in Nigeria and found that VAT receipt to Total tax receipt averaged, was minimal, when measured up with

neighboring nations of Ivory Coast, Kenya and Mexico. The study also showed a positively significant relationship with no causality between VAT revenue and GDP. The government was advised to block all escape routes for VAT revenue to substantially influence growth. However, Izedonmi and Okunbor (2010) using same estimation technique found a positive but insignificant correlation amongst the variables.

3. Methodology

The theory underlining this research is the benefit received theory which authenticate a switch connection amid government and tax payers where the former provides public goods and services (other benefits inclusive) to the latter in the populace who sequentially disburse for all goods and services (plus other benefits) received in the appropriate proportion (Ayeni et al., 2017). The benefits among other things are not limited to infrastructure, normalized labour, capital markets (Amadi & Alolote, 2019).

The study adopts and modifies the model used by Ayeni and Omodero (2022). The functional form is:

$$GDP = f(\text{VAT}, \text{INF}, \text{GOV}) \quad (1)$$

The econometric form of the model becomes:

$$GDP_t = \alpha_0 + \alpha_1 VAT_t + \alpha_2 INF_t + \alpha_3 GOV_t + e_t \quad (2)$$

Taking the logarithm of the variables, then we have:

$$\text{Log GDP} = \alpha_0 + \alpha_1 \log \text{VAT} + \alpha_2 \log \text{INF} + \alpha_3 \log \text{GOV} + e \quad (3)$$

Where,
GDP = Gross Domestic Product;
VAT = Value Added Tax;
INF = Inflation Rate;
GOV = Government Expenditure;
α_0 = Constant parameter;
α_1–α_3 = parameters to be appraised;
e = Stochastic error or disturbance term and
t = each variable at a given time period.

Records were retrieved from Central Bank of Nigeria (CBN) Statistical bulletin using E-views 10 econometric tool for the period 1994 to 2021. Apriori expectation is (α 1, α 2 & α 3 > 0).

4. Results and Discussion

a. Unit Root Test

Table 1: Unit Root Test Result

	AUGMENTED DICKEY FULLER (ADF)		PHILLIP PERRON (PP)		
Variables	**Test Statistics**	**Critical Values @ 5%**	**Test Statistics**	**Critical Values @ 5%**	**Order of Integration**
LNGDP	-4.3359	-3.6032	-4.4644	-3.6032	I(1)
LNVAT	-5.1058	-3.6032	-5.1058	-3.6032	I(1)
LNCPI	-5.9309	-3.6033	-4.3478	-3.6032	I(1)
LNGOV	4.5186	-3.6032	-4.5134	-3.6032	I(1)

Source: Author's computation

ADF and PP test results was presented in table 1 revealing compliance to the condition for VECM which affirms stationarity of all variables at first difference I(1).

b. Co-integration Test

Table 2: Unrestricted Co-integration Rank Test (Trace)

Hypothesized No of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Probability**
None *	0.805536	70.03281	47.85613	0.0001
At most 1 *	0.49986	30.73264	29.79707	0.0389
At most 2	0.330095	14.10384	15.49471	0.0801
At most 3 *	0.17059	4.488968	3.841466	0.0341

Source: Author's computation

Johansen co-integration test from table 2 above, reveals two co-integrating equivalences as trace statistic is greater (5% significance) than the corresponding Mackinson critical value. In view of this, from the trace test statistic, the absolute values of the variables are (70.03 > 47.86), (30.73 > 29.80), (14.10 < 15.49), (4.49 > 3.84) implying a long-run equilibrium connection.

c. Vector Error Correction Mechanism

Table 3: Speed of Adjustment

Variables	Coefficient	Std. Error	t-Statistic	Probability
LNGDP - ECT	-0.25802	0.163633	0.281997	0.7269
R^2		0.690531 = 69%		

Source: Author's Computation

The ECT co-efficient from table 3 above is 0.258 which implies that it will adjust back to equilibrium at 25.80% after disequilibrium within one year.

Table 4: Vector Error Correction Mechanism

Variables	Coefficient	Std. Error	t-Statistic	Probability
LNVAT	0.040595	0.143955	0.281997	0.7821
LNINF	-0.35139	0.402317	0.87343	0.3972
LNGOV	0.067194	0.117821	0.570309	0.5775

Source: Author's Computation

Table 4 above shows a positive coefficient of 0.040595 and a non-significant probability of 0.7821. The implication is that VAT has an affirmative effect on economic growth in Nigeria during the period of study but it is not significant. INF has a negatively insignificant connexion alongside economic growth whereas GOV is positive, though insignificant too.

The R^2 test from the VECM shows that the three explanatory variables in the equation explain 69% of the regular variations in the determined variable.

Discussion of Findings

The variables examined had varying results. Value added tax and government expenditure exhibited a positive correlation on gross domestic product, whereas a divergent nexus was found for inflation. Consistency in conjunction with the benefit received conjecture which endorse a connection linking the two key variables where the payment of tax on all goods,

services and other benefits would improve government's provision of public goods, services and other gains in the economy thereby leading to her growth. This is in tandem with the findings of Ayeni and Omodero (2022), Mukolu and Ogodor (2021), Adereti and Sanni (2011) but contrary to that of Asaolu et. al. (2018), Akintoye and Tashie (2013). Moreso, when the level of value added tax declines, it mitigates against the growth of emerging economy like Nigeria.

5. Conclusion and Recommendations

Reviewing the outcome of the independent on the dependent variable from 1995 to 2021, a positively insignificant long run relationship resulted between value added tax and economic growth in Nigeria. The objective of VAT and economic growth nexus (sharing a long run relation) was achieved through Johansen co-integration test after conducting unit root test (ADF and PP) which were both integrated in order one I(1). The VECM results indicated a 25.8% adjustment to equilibrium within a year. The following are recommended:

i. The scope of VAT coverage should be broadened in Nigeria.
ii. The effective utilization of VAT revenue generated should be clearly noticeable by tax payers for swift compliance and reduction in tax avoidance or evasion.
iii. Nation-wide sensitization should be embarked upon by the government through well-planned seminars, workshop and other visual and audio means.
iv. Training and re-training of government staff charged with VAT administration should be encouraged.

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