

DOES VALUE ADDED TAX CAUSE ECONOMIC INSTABILITY? EVIDENCE FROM NIGERIA

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Abstract

The need to examine the effect of fiscal policy instruments on fluctuations in key macro-economic indicators such as the economic output (GDP), monetary policy (interest rate) and the general price level (inflation) motivated this study. VAT is a proven source of revenue generation, but its tendency to cause instability in the macro economy is still uncertain. Employing the VECM econometric estimation technique, the data sample for the period 1994 to 2019 was analysed and interpreted. Although a negative relationship was seen to exist between VAT and fluctuations in economic output, and a strong positive association between VAT and Price Instability, the Vector Error Correction Model (VECM) regression result showed that Value Added Tax does not promote shocks in key macro-economic variables as it exert insignificant influence on economic output instability, monetary policy instability and price instability. This is an indication that VAT could be useful in stabilizing the economy by synchronizing fiscal and monetary policy instruments in achieving desired macro-economic goals. VAT in Nigeria is mainly focused on revenue generation as it has not yet been harness as a useful tool for economic regulation and stabilization. Although the study finds support in the Keynesian theory, it recommends further examination to substantiate the findings of the study.

Keywords: Economic Instability; VAT; Keynesian Theory; Price Instability; Excess liquidity

JEL Classification: H20; H30; E62; E63

1. INTRODUCTION

Value Added Tax (VAT) has gained the attention of governments over time, ever since it was launched in France in 1954. Value Added Tax (VAT) was announced in Nigeria, by the Value Added Tax decree of 1993, and its administration commenced in January 1994, with a mandate to broaden Nigeria tax base, improve revenue generation and stimulate economic growth and development (Oraka, Okegbe & Ezejiofor, 2017).

Fiscal policy instruments have remained an indispensable medium for achieving various macro-economic objectives all over the world. Being an indirect tax, Value Added Tax (VAT) has become a preferred revenue generation tool by revenue authorities because of its relative ease of administration, ability to raise desired revenue for government, high collection efficiency (ratio of actual VAT to targeted VAT if all non-exempted consumptions are taxed) and its economic regulation potentials. In recent times, its economic regulation and stabilization potential is being appreciated by governments, as a result of the need for multi-dimension efforts in savaging turbulent economies, bedevilled by rising inflation, unemployment, dwindling revenue, exchange rate fluctuations, unstable interest rate, budget deficit, rising debt burden and economic recession. This is evident in the increase of VAT by 50% from 5% to 7.5%, a move seen as a response to the inflation causing potential of the legislation on minimum wage increment, as demonstrated in the Finance Act 2020. With series of fiscal policy reforms in recent times, including the income tax regulation 2019 and the finance act 2020, there are growing concerns as to the implication on the stability of the macro economy.

There exist very limited empirical works on the subject as regards Nigerian macro economy. Following Ajakaiye (1999) computable general equilibrium model on the response of key sectorial macroeconomic indices to VAT, several other studies (Ikpe and Nteegah, 2013; Enofe and Igbinovia 2014; Aminu, 2019) have been carried out on the subject matter. From the time of Ajakaiye's study to date, Nigeria economic environment has continued to undergo series of changes, necessitating the need for more recent empirical evidence on the tendency of VAT to cause disturbance in the macro-economy and the economic stabilization potential of VAT in Nigeria. The study seeks to fill this gap by investigating the implications of VAT on economic stability using key macro-economic indicators within framework of the Vector Error Correction Model (VECM).

The study seeks to examine the effect of Value Added Tax (VAT) on economic stability in Nigeria, with specific focus on its effect on economic output fluctuation (instability), price fluctuation (instability) and monetary policy fluctuation (instability) in Nigeria. Economic stability is the absence of extreme fluxes in the macroeconomic space.

The rest of the study is on literature review, methodology, data analysis, discussion of results, as well as the recommendations and conclusion.

2. REVIEW OF LITERATURE

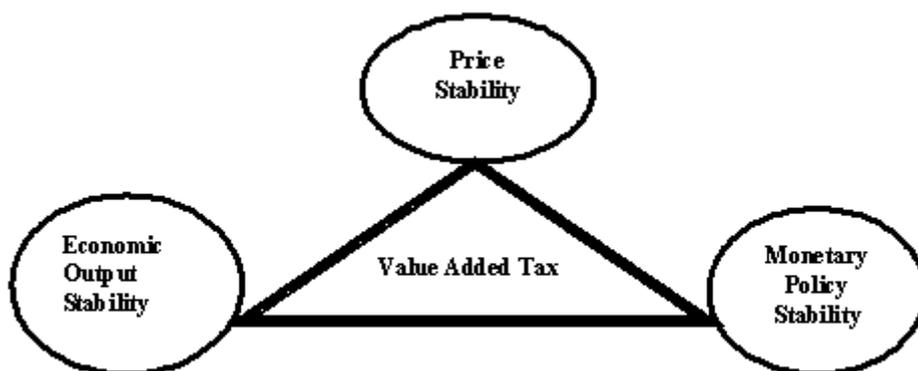
2.1. CONCEPT OF ECONOMIC STABILITY

Economic stability as a concept is inexact as it is subjective in interpretations. Therefore, variability of policies having impact on economic stability can be interpreted differently. It is not easy to explain the concept of economic stability. In its broadest definition, economic stability is the situation

where there are no extreme fluctuations or volatility in macroeconomic variables. With the indicators being chosen here, it seems possible to reach definition in the narrowest sense. However, regarding this subject no consensus has been reached in the literature as well. While economy grows, having a small ratio of inflation is deemed as being stable with respect to the economic aspects. Besides, achieving full employment makes contribution to the stable condition of economy in the narrow sense.

Economic stability refers to an absence of extreme fluxes in key macroeconomic variables. An economy with constant output growth and stable prices could be referred to as stable. A stable price level, will give rise to the efficient use of the economy's scarce resources resulting in better economic fundamentals (Ozpençe, 2017). Macroeconomic policies are basically aimed at ensuring stability in the economy through steady growth of output while ensuring that inflation is in check (Herbert, Nwarogu & Nwabueze, 2018)

A semantic representation of the study's key concepts is shown below.



*Figure 1. Conceptual framework of the study
Source: Researchers' Compilation, 2020*

2.2. SOME PRIOR STUDIES

Bakare (2013) examines value added tax and output growth in Nigeria using the Ordinary least square regression analytical technique (OLS). Result revealed a positive and significant impact exerted by value added tax on output growth in Nigeria.

Onodugo and Anowor (2013) empirically analyses the contributions of VAT to the Nigerian economy using the ordinary least square simple regression analysis. Analyses reveal that VAT has significantly made contributions to Nigeria's economic output as well as her capital formation. They recommended a

high level of efficiency and effectiveness of the VAT system to ensure optimum result.

Ikpe and Nteegah (2013) using partial equilibrium analysis, empirically examine the effect of VAT on the stability of prices in Nigeria. They adopted a combined framework of monetarist, structuralist, and fiscalism approaches to inflation modelling, using multiple regression analysis involving annual data for the period 1994-2010. VAT was seen to exert a strong upward pressure on price levels. The strong effect was attributed to the burden of VAT on intermediate outputs.

Olaoye (2013) carried out a survey on the perception of the Nigerians on VAT and the general price level of commodities in Nigeria. The outcome of the survey revealed that VAT has made insignificant contributions to inflation rate in Nigeria. He recommended an upward review of VAT to match current realities in the country.

Obiakor, Kwarbai and Okwu (2015) examine the influence of value added tax on consumption expenditure pattern and consumer price index in Nigeria. Using multiple regression, data on VAT, consumer price index and house hold consumption expenditure for the period 1994 to 2014 were collected and analysed. Results revealed that VAT exerts insignificant influence on consumer price index and significantly affected consumption expenditure of household on durable goods.

Oraka, Okegbe and Ezejiofor (2017) in a simple regression analysis, investigate VAT and the Nigerian economy. Using data for the period 2003 to 2015, results reveal a non-significant effect of VAT on the economy proxy by the Gross Domestic Product. The study concludes that the Nigerian economy has developed in a slow pace and will likely continue the same way if nothing is done, despite the revenue generation capacity of VAT.

Yahaya and Yusuf (2019) examine the impact of selected taxes on economic growth in Nigeria using the Auto Regressive Distributive Lag (ARDL). The analysis revealed that VAT exerts a positive insignificant influence on economic growth.

2.3. THEORETICAL FRAMEWORK

The study is hinged on the Keynesian theory of economic stability. In 1936, following the great depression, Keynes advocated for a number of measures that governments should carry out to attain economic stability that could not be left to the unregulated process of the market (Enofe & Igbinovia, 2014). For him, taxes are tools for redistributing wealth, thereby increasing the propensity to consume and that taxes could be used to reduce national debt, to stimulate or slow down an economy as desired.

At the centre of the Keynesian argument, is the belief that without regulation, capitalism is an insecure system and cannot guarantee equilibrium without state intervention through fiscal and monetary policies (Baghebo &

Edoumiekhona, 2012). The need for a regulated economy is of great importance especially in developing nations having unorganized private sector, with imperfect capital market and the domestic private capital accumulation is constrained. Hence the need for fiscal policy measures. VAT improved government revenue, increases the cost of ‘VAT-able’ goods and services, reduces the disposable income of citizens, and affects the volume of money in circulation (Enofe & Igbinovia, 2014).

The literature and theory considered stimulate the following hypotheses stated in their null forms:

H01: there exist no significant connection between VAT and economic output fluctuations (instability) in Nigeria.

H02: VAT has no significant effect on monetary policy fluctuations (instability) in Nigeria

H03: VAT does not significantly affect price fluctuations (instability) in Nigeria.

3. RESEARCH METHODOLOGY

This study adopted Ex post facto design. Secondary data on VAT, GDP, interest rate and inflation rate for the period 1994-2019 were obtained from the Federal Inland Revenue Service publications, the National Bureau of Statistics (NBS) and the Statistical Bulletin of the Central Bank of Nigeria (CBN) for the period 1994-2019. The study covered the period 1994-2019 which enables the study to empirically reveal the impact of Value Added Tax on economic stability in Nigeria.

3.1. MODEL SPECIFICATION

Based on the theoretical framework and the objectives of the study, the econometric models are a modification of the systemic equation models of Enofe and Igbinovia (2014) on VAT and economic development in Nigeria, consisting of components of aggregate demand, stated as:

$A = f(\text{VAT}, \text{RGDP}, \text{Consumption}, \text{Investment}, \text{Government Expenditure})$ (1)

The model for the study is therefore specified below.

$A = f(\text{GDPFLUC}, \text{VAT}, \text{INF}, \text{MFLUC})$ (2)

It is stated in econometric form as:

$$\Delta \text{GDPFLUC}_t = \sum_{k-i}^m \theta_{1.1,j,k} \Delta \text{GDPFLUC}_{t-k} + \sum_{k-i}^m \theta_{1.2,j,k} \Delta \text{VAT}_{t-k} + \sum_{k-i}^m \theta_{1.3,j,k} \Delta \text{INF}_{t-k} + \sum_{k-i}^m \theta_{1.4,j,k} \Delta \text{MFLUC}_{t-k} + U_{it} \quad (3)$$

$$\Delta \text{VAT}_t = \sum_{k-i}^m \theta_{2.1,j,k} \Delta \text{GDPFLUC}_{t-k} + \sum_{k-i}^m \theta_{2.2,j,k} \Delta \text{INF}_{t-k} + \sum_{k-i}^m \theta_{2.3,j,k} \Delta \text{VAT}_{t-k} + \sum_{k-i}^m \theta_{2.4,j,k} \Delta \text{MFLUC}_{t-k} + U_{it} \quad (4)$$

$$\Delta \text{INF}_t = \sum_{k-i}^m \theta_{3.1,j,k} \Delta \text{GDPFLUC}_{t-k} + \sum_{k-i}^m \theta_{3.2,j,k} \Delta \text{VAT}_{t-k} + \sum_{k-i}^m \theta_{3.3,j,k} \Delta \text{INF}_{t-k} + \sum_{k-i}^m \theta_{3.4,j,k} \Delta \text{MFLUC}_{t-k} + U_{it} \quad (5)$$

$$\Delta MFLUC_i_t = \sum_{k-i}^m \theta_{4.1,j,k} \Delta GDPFLUC_{i,t} + \sum_{k-i}^m \theta_{4.2,j,k} \Delta VAT_{t-K} + \sum_{k-i}^m \theta_{4.3,j,k} \Delta INF_{t-K} + \sum_{k-i}^m \theta_{4.4,j,k} \Delta MFLUC_{t-K} + U_i \tag{6}$$

Where:

A = Vector of endogenous variables; GDPFLUC = Economic output instability; VAT = Value Added Tax; INF = Price instability; MFLUC = Monetary policy instability; U = Error term

Table 1. Measurement of Variables

Variable	Notation	Proxy	Source
Value Added Tax	VAT	VAT revenue collected by the FIRS	Enofe and Igbिनovia (2014)
Economic output instability	GDPFLUC	Economic growth fluctuations (Percentage annual change in GDP)	Fasoranti (2013)
Price instability	INF	Inflation rate (Consumer Price Index)	Fatukasi (2005)
Monetary Policy instability	MFLUC	Interest rate fluctuations (Percentage annual change in interest rate)	Anyanwu (1997)

Source: Researchers' compilation, 2020

3.2. METHOD OF DATA ANALYSIS

A vector Error Correction Model (VECM) model is a reduced form of a dynamic simultaneous econometric model. VECM is a system equation model and is commonly used for multivariate time series model in macroeconomics and have especially been used to estimate the effect of policy action. There are several reasons for popularity VECM. One is the ability of VECM model to provide predictions that are comparable to those of large scale structural model. In addition VECM allows for a very general interaction and feedback among the relevant variable without having to arbitrarily classify them as endogenous and exogenous variables (Enofe & Igbिनovia, 2014).

4. RESULTS AND FINDINGS

Table 2. Descriptive Statistics

	GDP FLUC.	VAT	MFLUC.	INF.
Mean	21.886	415.653	1.8197	16.366
Max	74.448	1188.570	45.792	72.830
Min	5.729	7.300	-29.412	5.380
Std.	16.407	382.139	18.008	15.272
JB	29.128	2.570	1.224	85.541
Prob.	0.000	0.277	0.542	0.000

Obs.	26	26	26	26
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Source: Researchers' Compilation (2020)

Table 2 shows the descriptive statistics for the variables. As observed, GDP fluctuations show the following statistics; Mean=21.886 which indicates that on the average, the extent of economic instability for the sampled period is 21.89%. STD= 16.407 which suggests that GDP fluctuation exhibits considerable level of clustering around the mean value, Max= 74.448 and Min= 5.729. VAT show the following statistics; Mean=415.653 which indicates that for the sampled period, average value added tax of #415.65 billion. STD= 382.139 which suggests that VAT exhibits considerable level of clustering around the mean value, Max= 1188.570 and Min= 7.300. MFLUC show the following statistics; Mean=1.8197 which indicates that for the sampled period, the average monetary policy instability is 1.82%, STD= 18.008 which suggest that MFLUC exhibits considerable level of dispersion from the mean value, Max= 45.792 and Min= -29.412. INF show the following statistics; Mean=16.366 which indicates that for the sampled period, the average inflation rate is 16.37%, STD= 15.272 which suggest that INF exhibits considerable level of clustering around the mean value, Max= 72.830 and Min= 5.380.

Table 3. Correlation Matrix

	GDP FLUC.	VAT	MFLUC.	INF
GDP FLUC	1			
VAT	-0.542	1		
MFLUC	0.003	0.078	1	
INF	0.839	-0.323	-0.019	1

Source: Researchers' Compilation (2020)

Table 3 above reveals the correlation coefficients of the studied variables (VAT, Fluctuations in Economic output, monetary policy instability and price instability). As observed, GDP FLUC is significant and inversely correlated with VAT ($r=-0.542$), indicating that VAT forestalls fluctuations in economic growth. While VAT has a weak but positive correlation with MFLUC ($r=0.003$). For PRICE FLUC, VAT is seen to have a strong and positive association ($r= 0.839$), indicating that an increase in VAT will increase fluctuation (instability) in prices of goods and services. The positive correlation indicates that VAT, the explanatory variables lead to increase in Fluctuations (instability) of economic variables while a negative association suggests that they forestall fluctuations (instability) in economic variables.

Unit Root Test

Table 4. The ADF unit root test for the Variables

Variable	Intercept		Trend and Intercept	
	ADF Value	Critical Value @ 5%	ADF Value	Critical Value @ 5%

GDP FLUC	-	-	-5.613* (0.0007)	-3.612
VAT	-	-	-3.655* (0.0469)	-3.622
MFLUC	-	-	-7.053* (0.0000)	-3.622
INF	-	-	-5.195* (0.0025)	-3.658

Source: Researchers' Compilation (2020)

Given the nature of the data, this test becomes necessary as econometric analysis carried out using non-stationary data often give rise to spurious regression estimates. Stationarity indicates that the process mean and variance seem stable and any stochastic shock will return to a proper mean level. Table 4 shows the Augmented Dickey Fuller (ADF) units root test results. As observed, all the variables passed stationarity test at first difference, trend and intercept i.e. I (1). This is ascertained by the significant criterion of the probability value of ADF values at 5% level ([GDPFLUC, p= 0.0007<0.05], [VAT, p= 0.0469<0.05], [MFLUC, p= 0.0000], [INF, p= 0.0025]).

Table 5. Lag Selection

Lag	Akaike Information Criteria (AIC)	Schwarz Criteria	Log-likelihood
1	32.42710	33.80150	-361.1252
2	32.41792	34.59017	-328.8061

Source: Authors' Compilation (2020).

From Table 5, a lag length of 2 will produce a desirable result.

Co integration Test

Table 6. Johansen Maximum Unrestricted Co integration Rank Test (Trace)

Hypothesized	Eigenvalue	Trace Statistic	Critical Value	Prob.
Number of CE(s)				
None *	0.693673	56.78224	47.8561	0.0058
At most 1	0.549346	29.57090	29.7970	0.0531
At most 2	0.353207	11.23865	15.4947	0.1972
At most 3	0.051533	1.216897	3.84146	0.2700
Trace test shows 1 co-integration equation (s) at the 5% level				

Source: Authors' Compilation (2020).

The results in table 6 indicate long term relationships among variables, as the probability value of 0.0058 is less than the norm (0.05). Thus, the results for the test reject the null hypothesis that there is no co-integrated vector. Since the variables pass both stationarity and co-integration test, the Vector Error Correction Model (VECM) is favoured over the short run Vector Autoregressive Regressive (VAR) model.

Vector Error Correction Model Results (VECM)

Table 7. VECM Result (GDP FLUC Dependent Variable)

	Coefficient	t-statistics	Prob.
C(1)	-1.154889	-3.711687	0.0005
C(2)	0.164328	0.687459	0.4948
C(3)	0.319601	1.786560	0.0798
C(4)	0.048673	1.340855	0.1858
C(5)	0.030320	0.654426	0.5157
C(6)	-0.073361	-1.371837	0.1760
C(7)	-0.060536	-1.216699	0.2292
C(8)	0.348427	1.576652	0.1209
C(9)	-0.144813	-0.983736	0.3298
C(10)	-2.536010	-1.199484	0.2358
R-Squared	0.859727		
Adj. R-Squared	0.762615		
DW	3.228712		

Source: Authors' Compilation (2020).

Where: C (1)= long run convergence estimate for equation (1), C(2) to C(9)= short run estimates. C(2)= [D(GDP(-1))]; C(3)= [D(GDP(-2))]; C(4)= [D(VAT(-1))]; C(5)= [D(VAT(-2))]; C(6)= [D(MFLUC(-1))]; C(7)= [D(MFLUC(-2))]; C(8)= [D(INF(-1))]; C(9)= [D(INF(-2))].

Table 7 above, shows the regression result for models using GDP as the dependent variables. R² is 0.860 which suggests that GDPFLUC, VAT, MFLUC and INF jointly explain about 86% of systematic variations in GDPLUC with an adjusted value of 76.3%. The D.W statistics of 3.2 indicates that the presence of serial correlation in the residuals is not unlikely, however this does not give serious cause for concern. Commenting on the specific result of the independent variables, it is observed that the long run convergence is represented by the coefficient of -1.155 denoted by C(1) which is statistically significant at 5% level of significance . For the short run impact of GDPFLUC, VAT, MFLUC and INF at both lag one and two respectively on GDPFLUC, we observed that none of the variables exhibit significant impact, however the nature of relationship differs.

Table 8. VECM Result (MFLUC Dependent Variable)

	Coefficient	t-statistics	Prob.
C(21)	-0.544225	-0.378669	0.7065
C(22)	-0.077194	-0.069915	0.9445
C(23)	0.539302	0.652670	0.5168
C(24)	0.109512	0.653133	0.5165
C(25)	0.054146	0.253017	0.8013
C(26)	-0.634222	-2.567631	0.0132
C(27)	-0.572162	-2.489661	0.0160
C(28)	-0.026978	-0.026430	0.9790
C(29)	-0.684505	-1.006701	0.3187
C(30)	-7.279772	-0.745447	0.4594

R-Squared	0.601586		
Adj. R-Squared	0.325761		
DW	2.297175		

Source: Authors' Compilation (2020).

Where: C(21)= long run convergence estimate for equation (3), C(22) to C(29)= short run estimates. C(22)= [D(GDP(-1))]; C(23)= [D(GDP-2)]; C(24)= [D(VAT-1)]; C(25)= [D(VAT-2)]; C(26)= [D(MFLUC-1)]; C(27)= [D(MFLUC-2)]; C(28)= [D(INF-1)]; C(29)= [D(INF-2)].

Table 8 above, shows the regression result for models using MFLUC as the dependent variables. R² is 0.602 which suggests that GDPFLUC, VAT, MFLUC and INF jointly explain about 60.2% of systematic variations in MFLUC with an adjusted value of 32.6%. The D.W statistics of 2.29 indicates that the presence of serial correlation in the residuals is unlikely. Commenting on the specific effect of the independent variables, it is observed that the long run convergence is represented by the coefficient of -0.544 denoted by C (21), however, it is statistically insignificant at 5% level of significance. For the short run impact of GDPFLUC, VAT, MFLUC and INF at both lag one and two respectively on MFLUC, we observed that C (26) and C (27) of the variables exhibit significant impact on VAT at 5% level of significance, however, the nature of relationship differs.

Table 9. VECM Result (INF Dependent Variable)

	Coefficient	t-statistics	Prob.
C(31)	0.391483	1.264844	0.2116
C(32)	0.018544	0.077989	0.9381
C(33)	-0.046572	-0.261715	0.7946
C(34)	-0.015011	-0.415707	0.6793
C(35)	-0.013650	-0.296183	0.7683
C(36)	-0.040952	-0.769864	0.4449
C(37)	0.026745	0.540387	0.5912
C(38)	0.279154	1.269876	0.2098
C(39)	-0.242732	-1.657654	0.1034
C(40)	0.733015	0.348542	0.7288
R-Squared	0.609678		
Adj. R-Squared	0.339455		
DW	2.321024		

Source: Authors' Compilation (2020).

Where: C(31)= long run convergence estimate for equation (4), C(32) to C(39)= short run estimates. C(32)= [D(GDP(-1))]; C(33)= [D(GDP-2)]; C(34)= [D(VAT-1)]; C(35)= [D(VAT-2)]; C(36)= [D(MFLUC-1)]; C(37)= [D(MFLUC-2)]; C(38)= [D(INF-1)]; C(39)= [D(INF-2)].

Table 9 above, shows the regression result for models using INF as the dependent variables. R² is 0.610 which suggests that GDPFLUC, VAT, MFLUC and INF jointly explain about 61.0% of logical changes in INF with an adjusted

value of 33.9%. The D.W statistics of 2.3 indicates that serial correlation in the residuals is highly unlikely. Commenting on the specific performance of the independent variables, it is observed that the long run convergence is represented by the coefficient of 0.391 denoted by C (31), however, it is statistically insignificant at 5% level of significance. For the short run impact of GDPFLUC, VAT, MFLUC and INF at both lag one and two respectively on INF, we observed that none of the variables exhibit significant impact on INF, however, the nature of relationship differs.

Discussion of Findings and Hypotheses Testing

Hypotheses testing and discussion of the findings is based on the short run estimates of the explanatory variables on tables 7, 8, 9. The results are discussed below;

Value Added Tax and Economic Output Instability

The VECM results in table 7 showed that VAT has an impact of 0.320 and 0.049 at lag one and two respectively, however statistically insignificant ([VAT-1, $p=0.080$; VAT-2, $p=0.186$]). Therefore, the hypothesis that H_{01} : *value added tax has no significant impact on economic instability cannot be rejected*. In tandem with Herbert, Nwarogu & Nwabueze, (2018), who report that VAT reforms have positive but insignificant effect on economic stability. A similar study of Bakare (2013) investigates the enormity of the impact of the value added tax on output growth in Nigeria, found that value added tax exhibits positive relationship with output growth and does not cause its instability. Implying that VAT has the potential to broaden government revenue sources, without triggering instability or hindering growth of economic output.

Value Added Tax and Monetary Policy Instability

The VECM results in table 8 showed that VAT has positive impact of 0.110 and 0.054 on Monetary Policy stability as captured by interest rate instability at lag one and two respectively, however statistically insignificant at 5% level of significance ([VAT-1, $p=0.517$; VAT-2, $p=0.801$]). Therefore, the hypothesis that H_{02} : *value added tax has not significant impact on fluctuations in interest rate cannot be rejected*. The finding for this study finds support in the Keynesian theory. The theory advocates that government can use taxes to regulate key economic variables. That is, tax instrument could be relied on to regulate, drive or retard an economy as desired. In this case, VAT can be used to control money supply by reducing or increasing disposable income and excess liquidity.

Value Added Tax and Price Instability (Inflation)

The VECM results in table 9 showed that VAT has inverse impacts of -0.015 and -0.014 on price instability as captured by the inflation rate at lag one and two respectively, however statistically insignificant at 5% level of significance ([VAT-1, $p=0.679$; VAT-2, $p=0.768$]). Therefore, the hypothesis that H_{03} : *value added tax has not significant impact on price instability cannot be rejected*. Our study result is in tandem with Olaoye (2013), Obiakor, Kwarbai and Okwu (2015)

but contradicts the findings of Ikpe and Nteegah (2013) who report that VAT exerts a strong upward pressure on price level in Nigeria, contributing to price instability. In their study, the effect of VAT on the stability of prices was examined for the period 1994 to 2010. Our study finds support in the Keynesian theory.

Summary of Findings

The summary of findings is stated below:

- i. Value added tax has a negative and insignificant effect on Economic growth instability at 5% level of significance at both lag one and two, indicating that although VAT as a fiscal instrument in Nigeria over the years have reduced fluctuations in economic output growth, the influence has not been substantial and compelling. The correlation result reveals a negative and strong relationship ($r=-0.542$), implying that, as VAT increase, the instability in economic growth decreases.
- ii. Value added tax has a positive insignificant effect with monetary policy fluctuation as captured by the stability of interest rate at 5% level of significance at both lag one and two. This implies that VAT has over the years not caused major distortions in the stability and consistency of monetary policies in Nigeria. The correlation result reveals a Positive and weak relationship ($r=0.003$).
- iii. Value Added Tax has a positive and insignificant effect on price instability captured by inflation rate at 5% level of significance at both lag one and two, indicating that as VAT in Nigeria increase, price instability increase too, but not to the extent of having deleterious effects on the overall economy. The correlation result reveals a positive and very strong relationship ($r=0.839$).

5. CONCLUSION

The study investigates Value Added Tax and economic stability in Nigeria. The need to examine the possibility of maximizing fiscal policy instruments in revenue generation, without negatively distorting key macro-economic indicators such as the economic output (GDP), monetary policy (interest rate) and the general price level (inflation) motivated this study. Premised on the research gap, the study hypothesized that Value Added Tax is not a significant driver of economic output instability, monetary policy instability and price instability. Employing the VECM econometric estimation technique, the data sample for the period 1994 to 2019 was analysed and interpreted. Although a negative relationship was seen to exist between VAT and fluctuations in economic growth, and a strong positive relationship between VAT and Price Instability, the vector error correction model result showed that Value Added Tax does not drive fluctuations in key macro-economic variables as it has no significant effect on economic growth instability, monetary policy instability and price instability. An indication that there is more to be done in terms of synchronizing fiscal and monetary policy instruments in achieving desired macro-economic goals. VAT in Nigeria is mainly focused on

revenue generation as it has not yet been harness as a useful tool for economic regulation and stabilization. Although the study finds support in the Keynesian theory, however the researchers recommend further examination to substantiate the findings of the study.

The findings of the study necessitate the following recommendations:

- i. Revenue authorities should harnessed more of the revenue generation potentials of VAT, as this will not significantly distort the macro-economy or cause macroeconomic problems.
- ii. Beyond revenue generation, the economic regulation potentials of VAT could be explored for optimum benefits.
- iii. More to be done in terms of synchronizing fiscal and monetary policy instruments in achieving desired macro-economic goals.
- iv. VAT and other indirect taxes could be used to address excess liquidity problem as it reduces disposable income and excess money in circulation. This justifies the increase in VAT rate by the Nigerian government to curb excess liquidity occasioned by the increase in minimum wage.

The use of recent data in the study is an improvement of prior studies, an addition to the body of knowledge and helps to address the challenge of dearth of literature on the macro economic implications and economic regulation potentials of VAT. The study provides empirical evidence on the volatility effect of VAT on key macro-economic variables in Nigeria, an improvement on Ajakaiye (1999) study on VAT and macroeconomic indices.

The study is not without limitations. The proxy used for representation of variables could pose limitation to generalization on this study, especially the inexact nature of economic stability, as captured in economic literature.

Further studies should consider the effect of VAT on other proxies of economic instability outside those used in this study. A comparative analysis of key macro-economic variables on pre VAT introduction and post VAT introduction era is also necessary. Since VAT rate has been 5 % from inception in 1993 till 2019, researches on the effect of change in VAT rate on macro-economic variables should be conducted soonest, following the change in VAT rate to 7.5 % in 2020. The contributions of other fiscal instruments, population growth, corruption and rising poverty to economic instability should also be examined.

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