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EFFECT OF VALUE-ADDED TAX (VAT) ON PRICE FIRMNESS IN NIGERIA: A TIME SERIES ANALYSIS

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Abstract: **This study contributed to knowledge by examining the effect of Value Added Tax (VAT) means of revenue generation on Price firmness in Nigeria by finding out the role VAT is playing in the Inflation rate in Nigeria. The ex-post facto research design was embraced, and data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin for the period 1994 to 2018. The study employed simple linear regression model (ordinary least square (OLS)) via E-Views 10 statistical package in analyzing data. The results of the inquiry indicate that there is a significant connection between VAT and price stability (Inflation Rate) in Nigeria. The result of the investigation revealed that divergent to the view by commercial business owners that VAT elevated the prices of their products, which engenders inflationary outcome. Value Added Tax (VAT) has no inflationary significance in Nigeria. Increased tax returns from VAT does not give rise to inflation in Nigeria and recommends that, although transparency is inevitable in today's global economy, sequencing of faces of liberalization is necessary to check possible inflationary consequences in Nigeria, therefore advocates for relative increase in the overall share of VAT within the context of fiscal policy whenever expansionary financial measures are adopted for achieving the goal of economic growth.**

Keywords: **Value Added Tax, Price Stability, Inflation Rate, Nigeria.**

1. INTRODUCTION

Taxation is the utmost part of contemporary economic progress. Its significance ascends not only from the fact that it is by far the most important of all revenue sources but also because of the gravity of the problems created by the present-day heavy tax burden (Greene, 2011). The primary goal of taxation is to generate revenue. A high level of assessment is necessary for a welfare state to fulfill its obligations. According to Musgrave (2000), taxation is used as an instrument of attaining specific social intents, i.e., as a means of wealth redistribution and thereby sinking disparities. In a contemporary Government, tax is needed not just to generate the fund required to meet its ever-growing costs on infrastructure and social amenities but also to shrink the inequities of income and wealth. Taxation is also used to discourage the consumption of certain products and control inflation (Olaoye, 2014).

The pre-occupation of most republics of the globe is to strive to achieve rapid overall development via optimal tax mobilization and expanded revenue base. An efficient and effective tax system is essential for any country, the benefit of which can never be overemphasized. However, due to the changing tendencies in the global market environment, income tax bases are continually thinning as the government's ability to tax capital flows deteriorate. Therefore, commanding that tax strategies and policies are designed appropriately and monitored continuously in other for revenue authorities to optimize revenue collection and ultimately support their plans (Gcabo, 2012).

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Today, many nation-states of the universe, especially developing countries like Nigeria, selectively introduced new forms of taxes to boost their revenue capacity to improve the socio-economic conditions of their citizens and achieve rapid economic development of the countries (Iorun, 2012). Value-Added Tax (VAT) is an indirect tax with the impressive performance in price stability and economic growth in all countries where it has been introduced, according to Ajakaiye (2000) influenced the decision to introduce VAT in Nigeria in first September 1993 which began actual operation early of January 1994.

The VAT is a replacement of the existing sales tax, which has been in operation under Federal Government Legislated Pronouncement N0. 7 of 1986 but is operated on the basis of residence. Several factors and considerations, notably inform the rationale behind replacing sales Tax with the Value Added Tax. VAT base is broader than sales tax since it does not only cut across consumable products but other professional services as well. The tax is collected only by the Federal Inland Revenue Service (FIRS) at the rate of 5% of the value of the goods and services supplied. The VAT rate in Nigeria of 5% is classified to be among the lowest in the globe and has remained unaltered from the commencement of the Act to date. But the current proposed rate to be fully implemented in February 2020 in Nigeria is 7.5%. From inception to date, the tax has recognized to be a reliable source of revenue for the Nigerian Federation. Consequently, few attempts had been made to push up the rate to about 10% but were discarded by the public resentment against the proposed increase. The main reason that led to the introduction of VAT includes: Need for improved nation income due to increased public expenditure; Reduction in the over-dependence on sales of crude oil with its attendant uncertainties in the international market; Reducing the rich's materialistic tendency for unnecessary luxury goods, and Making the tax equitable for all masses by curbing the rice, thereby reducing the gap between the rich and the very poor.

Value Added Tax (VAT) has become an essential source of revenue to the Nigerian Government (both Federal and state levels). The Nigeria-Federation increased the percentage of VAT imposed on goods and services, not only because of its relevance to income base and economic growth but also because it has been a major tool used by the government to discourage the consumption of certain commodities considered to be harmful to the health of the general public. The instruments that introduce VAT spell out the goods and services that attract the tax. It shows, for instance, and those food items do not attract VAT; besides, sellers of products on which VAT is paid must first be registered with the Federal Inland Revenue Services. The aim is to ensure that the 5% VAT is paid on such goods. But this is different from the case now. Market women are now charging VAT on food items based on the apparent fact that this tax increases their profit margin. Landlords and hotels are not left out of this. All these are contrary to the regulation governing the system (Iorun, 2012). The fear now is that very soon, Nigerians will be paying VAT on virtually everything (Olaoye, 2014). The resultant effect of all these is that it has changed the citizens' perceptions of the system, causing them to doubt the goodwill of the government with regards to their wellbeing. This resolve is not far from the truth since the problems, as mentioned earlier, impact directly on the living standard of the ordinary residents in terms of too much encumbrance on the final clients, inflation, and a rise in fuel pump price, to mention but a few. This opinion by the citizenry had become a great cause for concern since the success of any public policy is judged in terms of its effect on the public (Iorun, 2012). It is against these premises that this study seeks empirically investigate the relationship between VAT and Price Stability in Nigeria.

The broad spectrum of the study is to ascertain the relationship between VAT and price stability. The study-specific goals were to examine the relationship between VAT and inflation; VAT and money supply; and VAT and trade openness

Research Hypotheses

A hypothesis is an uncertain reaction to a research inquiry often stated in the form of a relationship between a dependent and an independent variable. The following research hypothesis will be stated in its null way.

1. H_0: Value-Added Tax has no significant effect on inflation rate in Nigeria.

2. REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 The Concept of Value Added Tax (VAT)

A VAT is a utility tax levied at each stage of the consumption chain and borne by the final consumer of the product or services. Each element at the distribution chain is required to charge and collect VAT at a flat rate of 5% on all invoiced sums on all goods and services not exempted from paying VAT, Under Value Added Tax Act 1993, as amended, and where the VAT collected on behalf of the representatives (output VAT) in a particular month is more than the VAT paid to other persons (input VAT) in the same month, the difference is required to be remitted to the government on a monthly basis, by the taxable person (Federal Inland Revenue Services. Information Circular No. 9304). Where the reversed is the case, the taxpayer is entitled to a refund of the excess VAT paid. All exports are zero-rated for VAT, and no VAT is payable on exports. Every person, whether resident in Nigeria, who sells goods or render services in the nation under the VAT Act as amended, is obligated to register for VAT within six months of its commencement of business in Nigeria, which is to be registered with the FIRS.

The Value-Added Tax Act offers that an external non-resident taxable individual that carries on economic activities in Nigeria is also obligated to register for VAT, using the address of the person with who it has a subsisting economic activity for correspondence with FBIR and agreement with the VAT law. The foreign non-resident taxpayer is required upon registration for VAT to include in its invoice VAT 5% with the instruction to the receiver of the goods or services to remit the VAT in the currency of the transaction to the Nigerian government on behalf of the non-resident foreign individual. A taxable-person, whether Nigeria resident outside Nigeria, who fails or refuses to register for VAT administration within six months of engaging in any economic activity in the territory of Nigeria is liable to pay a penalty of N5,000 for the first month that failure arises and a further penalty of N5,000 for each subsequent month in which the failure continues. In addition to the fines of non-registration, Section 32 of the VAT Act, as amended, authorized the FIBR to seal up the premises from where the economic activity in question is being carried on within the territory of Nigeria.

Sam (2013) in discussing the arguments for and against VAT states that VAT, like sale tax, is an indirect, consumption tax which has the administration than sale tax, for instance in the manufacturing of taxable, instead of collecting 5% sales tax at the point of sale of the cloth, VAT is collected at the burden of record keep and processing of VAT information by the various production levels and the kind of record-keeping needed may be very expensive for an illiterate society and may also give rise to fraud on the side of the producer and or tax collectors or evasion from the bottom of the producer or seller since credits are given for VAT paid at earlier production stages, it gives rise to complications, repayment claims and counterclaims if the records are not adequately helped. On the other hand, VAT discriminates less between different types of goods and services because the tax is levied as long as there is evidence that value is added. VAT reduces distortion in consumer's choice, and so reduced the misallocation of resources that arises under the sales tax. Therefore, VAT can be described as neutral between all goods and services if it is levied at a single rate and is also indifferent between vertically integrated companies like the one producing only cloth or thread or cotton alone because it is claimable on payment made at the lower production stage.

Administration of Value Added Tax in Nigeria

Loveday and Nwanyanwu (2015) opined that the accomplishment or disappointment of any tax depends mostly on the magnitude of how it is suitably managed, and the scope of tax is interpreted and implemented as well as the publicity brought into it, which determines how a particular tax can meet its objective. (Richard, 1993) opined that "the effective and efficient execution of fiscal policies depends on the quality of public administration and the formation of systems that are really adapted to the available resources. A VAT may be problematic to administer but it is not as complicated as personal income tax or corporate income tax. FIRS (1999) stated that there are five district bodies on which the rest in Nigeria. They are interrelated and the function of each is complementary to others: The Board (Federal Board of Internal Revenue), The Service (Federal Inland Revenue Service), The Technical Committee, The Nigeria Customs Service, and The VAT Directorate. Other sub-internal bodies include The State Internal Revenue Service; The Zonal Officer, and The Local VAT Officer.

The establishment of an additional 25 VAT offices and five zonal tribunals have been approved over the years. The management will work closely with the Nigeria Custom services and the State Internal Revenue Services. Custom Services explicitly takes care of the VAT on imports. To qualify for VAT, an Organization of the firm must register for the VAT Directorate. All domestic participants within the distribution chain in Nigeria are expected to register for VAT.

The following are suggested methods of achieving tax compliance: Institutionalizing Tax Culture in Nigeria (This would involve the introduction of taxation as a fundamental component of policy and the management of the state, and to generate a sustainable tax culture among Nigerians, there are certain areas which require attention as follows: Overview and Philosophy of Tax Culture; Enforcement of Tax Laws (Evasion and Avoidance); Reward for Compliance; Sanctions for Non-Compliance; Operation and Funding for Tax Refunds, and Concept of the Unique Taxpayer Identification Number); Institutions to Drive Tax Policy and Tax Administration (There are individual institutions, which have a unique role to play in driving tax administration and policy in Nigeria, within the context of creating a tax culture. These institutions include Ministries of Finance and Revenue Authorities) Autonomy; Funding; Structure and Processes (the independence and funding of tax authorities. The internal structures of tax authorities would be developed in a manner in which it can support effective and efficient tax administration at all levels of Government); Staffing and Capacity Building; Consultants; Academia/Educational Institutions; National and State Assemblies play a critical role in the development of the tax system, as the Nigerian constitution confers on them a significant part of oversight of tax and revenue authorities); Elimination of Bottlenecks and Leakages in the Tax System; Accountability for Tax and Other Revenue Collected; Efficient Utilization of Tax Revenues Collected and Manner of communication to the Taxpayer; Tax Public Relation; Tax Education; Tax Counseling; Tax Guidance and Examination, and Tax Recognition and Prizes (Menendez, 2001; Ola, 2001 & Sarker, 2003).

2.1.2 Economic Stability in Nigeria

The significant roles of any government in an economy are that of efficiency in resource allocation, equity in income distribution, and stabilized economic activities. The first two roles come under microeconomic problems that involved individual market and person. Efficient allocation of scares resources to the sectors that need them most and that will efficiently, and productivity made use such funds and also will help in the development of other sectors i.e., the scarce resources of the country should be efficiently allocated to industries in need of these resources to increase economic activity and national income of the country under equity in distribution, the government is charged with the responsibility of maintaining an even distribution of goods services and income to the individual sectors in the economy i.e. equity in distribution involves ensuring that all the goods and services are well distribution of income the country that is the gap between the very rich and the poor is not too wide, and this does not mean equality in income distributed but rather, the difference in income should relate to the differences in effort or contribution to total output. Therefore, the government ensures that all we paid according to their contributions to the economy.

The role of government in stabilization will be our primary focus since it is the topic in question; the government uses taxation to achieve this role, but our main concern is how the government will use VAT. In stabilizing the economy, the Government's role in economic stability is a macroeconomic problem because it involves the aggregates in an economy, i.e., national, unemployment rate, balance of payment, position, a balanced budget, exchange rate and interest rate. When we talk about stabilization, we refer to stability in this economic variable. About our topic of discussion, we will restrict our analysis to those variables that will be influenced by VAT like the GDP, balanced budget, national income, and inflation rate. Since the main objective of VAT is to increase GDP. And national income, reduce the produce the problem of budget deficits and curb inflation. Since we know that the most significant challenge that brings about economic stability in deficits through borrowing from the banking sector which leads to increased money supply without an increase in the national output.

2.2 Theoretical Framework

Over the centuries, writers of public finance have developed two essential approaches to taxation; these are the benefit theory and the ability theory.

The Benefit Theory: This philosophy of taxation is that tax authorities should levy taxes on individuals and corporations according to the benefit expected. The greater the good corporate governance, the higher optimal tax compliance by residents ad nonresidents of a particular Nation. This model has been exposed to undecorated criticism on the following grounds:

Firstly, If a nation maintains a specific association between the benefits to be enjoyed and the benefits earned. It will be against the basic standard of the tax. A tax is a compulsory payment made to a republic or government to meet the recurrent and capital expenditure without the expectation of any direct benefit by the taxpayer. It is difficult to estimate the benefits enjoyed by an individual taxpayer in a tax year. Finally, the theory may ignite the introduction or application of a regressive tax system where the tax rate reduces as the taxable or chargeable income of the taxpayer increases.

The Ability-to-Pay Theory: This is a progressive taxation principle that maintains that taxes should be levied according to a taxpayer's ability to pay. This progressive taxation approach places an increased tax burden on individuals, partnerships, companies, corporations, trusts, and individual estates with higher incomes. The ability to pay principle is conceived in terms of sacrifice on the part of the taxpayers. It is the most progressive tax system leading to the complete egalitarian distribution of offer tax income. It is also the least aggregate sacrifice or minimum principle since the total sacrifice will be the least.

2.3 Empirical Review

Ogbonna and Appah (2012) investigated the impact of tax reforms on the economic growth of Nigeria for the period 2007–2017. The study adopted petroleum profit tax, company income tax, value-added tax, education tax, personal income tax and customs and excise duties (independent variables), and Gross Domestic Product (GDP) as the dependent variable. The Augmented Dickey-Fuller was used to examine the unit root test, and the Johansen's Co-integration test and Error correction technique were also adopted to run the regression analysis. It was discovered that there is a positive relationship between tax revenue and the economic growth of Nigeria. They argued that a 54% variation in the dependent variable (GDP) is a result of the change in tax revenue and that there exists a long-run equilibrium relationship between GDP and the independent variables. The Augmented Dickey-Fuller test conducted on the variables showed that all the series were stationary at 1(1) and that the series was significant between 1 and 5 percent except for companies' income tax and customs and excise duties that were significant at 5 percent. In the study of Ogbonna and

Ebimobowi (2012) researched the impact of tax revenue on the economic growth of Nigeria using relevant descriptive statistics and econometric analysis. It concluded in the various results that tax revenue is positive and significant related to economic growth. Also, tax revenue improves the revenue-generating machinery of the government to undertake social desire that will translate to economic growth in real output. However, his view so far represented the most comprehensive assessment of the impact of tax revenue on Nigeria's economic growth. VAT does not penalize efficiency since the same rate of VAT is payable4 at lower as well as higher value-added. It is also more accessible, for example, capital formation under VAT than sale tax. The VAT is complicated to evade if the collectors are honest and competent, to reduce the cost of collection of VAT in some countries, self-assessment by companies and sellers in being introduced, which enables them to pay their every month or every quarter, using their sales and purchase figures. Using their sales and purchase figures finally VAT can harmonize consumer taxes in a customs union of many countries like the Ecowas or EEC.

Adman and Woods (2014), while writing on VAT and sales tax, claim that VAT avoids the double tax element that could occur under other forms of sales tax. They are both destination-based taxes that take domestic expenditures not produced goods as their base sale tax applies to the consumer price of taxable commodities while VAT applies to the value-added at each stage of the production distribution sequence. The VAT has many administrative advantages over sales tax. Under sale tax, the seller must determine whether or not the buyer is entitled to an exemption while under VAT, the seller collects tax on every transaction. The VAT mechanism also provides buyers and sellers with an investment to comply with the tax that is under the absent sales tax. The compulsory issue of invoices under VAT enables the tax authorities to perform gross checks more quickly than it can perform under the sales tax. The countries administering VAT gave some reasons for their choice, which is that. A VAT is more comprehensive in its coverage than sales tax. It is better equipped to include services in the tax base and also to adjust the tax on exports and import correctly and also it's potential for raising revenue is more significant than that sale tax. On the administrative and compliance cost of the two taxes, the sales tax would appear to be simpler to administer and comply with than VAT.

Adedeji (2015) observed that VAT had numerous advantages that out-weigh the cost associated with its administration. The VAT has a more significant potential for raising revenue, which facilitates greater dependence on internally generated revenue or more stable sources of income as against inflationary finance or taxes from primary commodities and crude oil whose price changes continue to be violated in the world market. A VAT is often seen as the best way to promote neutrality and uniformity of the tax burden and to provide for increased productivity and industrialization. A VAT is a buoyant revenue source closely linked to an increase in consumption and has become a crucial part of overall revenue for most countries using it. But there are still controversial points about it, for instance, and it is expensive to administer. It is regressive. On the expensiveness of VAT, it would require the expansion of internal revenue services, but the high revenue yields from it would cause administration cost to be measured as a percentage of revenue yield.

Okafor (2013) also maintains that since rates payable for both luxuries and essentials are similar, the brunt of VAT could fail profoundly on the poor. This disadvantage to him could be dangerous if not eliminated by the process of exemptions, and zero-rating Aliko, however, stated that it is advantageous to keep the application of VAT as uniform as possible and to help the weak utilizing adjusting elsewhere in the economic system, and this shows that although VAT is regressive, it regressively can be caused and although it is expensive, its expensiveness can be reduced. And although it contains a self -checking mechanism. It can still be evaded, which can account for 2-4% of revenue forgone.

Shall and Shivazi (2014) On broadening the tax base and lowering tax rate of VAT, maintained that it should be the foremost goal of any reform initiative in developing countries. For them, developing countries typically levy high tax rates on a narrow base, encouraging tax evasion and compromising the rareness of the tax system. Broadening the tax base can generate higher revenue while also providing similar tax treatment to various activities and individuals in similar circumstances. A broad-based VAT would have limited exclusion, while a narrow-based VAT would have numerous exclusions. The comprehensive the tax base, the lesser the tax rate necessary to raise a given amount of revenue, also the more extensive the VAT base, the more efficient the tax system. The two primary justifications for excluding specific items from taxations are: VAT challenging to collect on some goods and services because sellers could easily avoid reporting their sales, and some products are excluded on equity grounds since these goods claims are a proportionately large percentage of the income of lower-income families. The study also claimed that VAT could further assist in improving the collection of other taxes by creating verifiable records of transactions through production and channels. They maintained that VAT adoption has been successful in raising additional revenue and reducing the efficiency costs of taxation in countries like Indonesia, Turkey, Korea, Columbia, etc. but has the disadvantage of the inability to encompass a large number of economic activities that are carried out in the informal sector in a typical developing like Nigeria.

Ajakaiye (2000) empirically examined the macroeconomic impact in the Nigerian Federation: a computable general equilibrium investigation. The paper revealed an indication that VAT income is already a significant source of returns in the Nigerian Federation. That is, the study indicated that in 1994 (the year of inception), real VAT income was in billion. In 1995 actual VAT income was used three circumstances to approximate the presumed Nigerian situation. First, the study assumed that the government pursued an active fiscal policy involving the reinjection of combination with supposed non-cascading handling of VAT and that the result of the analysis was that the tumbling treatment of VAT with a dynamic economic system not only had the most destructive impacts on the one that most closely approximated to the Nigerian situation.

Umeorah (2013) positively investigated the effects of Value Added Tax (VAT) on economic growth (GDP) and total tax revenue in Nigeria. The VAT was introduced in the nation in 1994, and one desires to evaluate the contributions to Gross Domestic Product and Total Income. Two hypotheses were projected namely First: HO1, that VAT does not have a momentous consequence on GDP. Secondly, HO2: that VAT does not have a substantial influence on Total Tax Returns. Simple Linear Regression technique was used to analyze time-series data relating to VAT, GDP and Total Revenue for the period 1994–2010 and computation done with the assistance of SPSS. The results of the regression analysis showed that VAT has a significant effect on GDP and also on Total Tax Revenue. That means that both Null Assumptions (Ho) are accepted.

Eyisi, Chioma, and Nwaorgu (2015) scientifically researched the effect of taxation on microeconomic performance in Nigeria from 2002 to 2011. Data were collected from secondary sources. Three hypotheses were tested using the ordinary least squares regression method. The implication of the findings displayed that government earnings from taxation would affect consumer spending and boost output production levels and advocate that to ensure rapid economic development in Nigeria, and there is a need for the government to encourage local manufacturers of output through provisions of incentives from taxation. And through the increase of import duties to discourage importation of foreign goods which competes with

Oraka, Okegbe, and Ezejiofor (201) examined the effect of Value Added Tax on the local products thereby cumulative income generation from taxation, which enhances economic evolution. The government should continue to show fairness in fixing the income tax of consumers to encourage consumers' spending tax scheme using a time series data of twenty tax years, and the data for the analysis were gathered from the central bank statistical bulletin.

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Yakubu and Jibrin (2013) pragmatically concentrated on analyzing the impact of value-added tax (VAT) on the economic growth of Nigeria. Data analysis used the Johansen Cointegration test. The result shows that the value-added tax has a positive impact on the economic development of Nigeria. The researcher concludes that the policymakers in Nigeria should continue this fiscal policy with other macroeconomic indicators. Pursuing this policy will enhance the Nigerian economy positively, more specifically, in times of economic crisis in the world.

A review of past studies revealed that investigation into the macroeconomic effect of VAT was carried out by Ajakaiye (2000) using a computable general equilibrium model. As much as the research is aware of no other detailed study has so far been carried out on this particular investigation since then. This study intends to reinvestigate the macroeconomic effect of VAT in Nigeria on price stability, using a different econometric model. This reinvestigation is necessary, given the fact that the economic environment in Nigeria has since changed from what it was.

3. METHODOLOGY

3.1 Design and Methods

The study employs an ex-post facto research design. It explains how the independent variable (VAT) affects a dependent variable (price stability) and is used because the data collected are already in existence. It is a logical, pragmatic study in which the researcher does not have direct control over independent variables because they have already occurred or they cannot be manipulated. The data utilized for the analysis are secondary which include: Value Added Tax and Inflation Rate collected from Central Bank of Nigeria (CBN) statistical bulletin. The study adopted the Simple Linear Regression model to evaluate the link between the VAT and price stability in Nigeria via E-views 10 econometric software. The data cover the period 1994 to 2018.

Categories of analyses include descriptive statistics and the test for the hypotheses formulated by using regression analysis and for the test of significance at 5% level of significance. In addition to the above model, the article applied the following tests to analyzing and finding the relationship between VAT and Price Stability in Nigeria: Coefficient of determination is used to measure the proportion of the variation in the explanatory variable explained by the regression equation. The adjusted coefficient of determination was adopted to measure the proportion of variation of VAT variables not captured by the coefficient of determination. Autocorrelation was deployed to identify the repeating patterns and periodic signals that have been buried under noise.

3.2 Model Specification

In examining the effect of VAT on the price level, the study will apply the Ordinary Least Square Method. The model is as stated below:

INFt = f(VATt,)

The econometric equation is specified in dynamic logarithmic form as:

$INFt_t = \beta_0 + \beta_1 \log VAT_t + \mu_t$

Where:

Log = The Natural logarithm

$\beta0$ = intercept or constant

$\beta1$ = Coefficient of the explanatory variable, VAT

VAT = Value Added Tax

INF = Inflation Rate

t = The time under study (1994-2018)

μ = The error term

Apriori expectation: $\beta_1 > 0$; that is, β_1 is positive.

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4. PRESENTATION AND ANALYSIS OF DATA AND RESULTS

4.1 Presentation of Data

Table 1 is a representation of Nigeria's VAT, Inflation Rate, Money Supply, and Trade Openness from 1994-2018.

Table 1: Data on Value-Added Tax and Inflation Rate.

YEAR	VAT	INF
1994	5.03	57
1995	6.26	72.8
1996	11.29	29.3
1997	13.91	10.7
1998	16.21	7.9
1999	23.75	6.6
2000	30.64	6.9
2001	44.91	18.9
2002	52.63	12.9
2003	65.89	14
2004	96.20	15
2005	87.45	7.8
2006	110.57	8.2
2007	144.37	5.4
2008	198.07	11.6
2009	229.32	12.6
2010	275.57	13.7
2011	318.00	10.8
2012	347.69	12.2
2013	389.53	8.5
2014	388.85	8.1
2015	381.27	9
2016	397.06	15.7
2017	473.77	16.5
2018	533.74	12.07

Source: CBN Annual Statistical Bulletin and National Bureau of Statistic (1994-2018)

4.2 Presentation and Analysis of Results

Descriptive Statistics Result

Table 4.2: Descriptive Analysis Result

	VAT	INF
Mean	185.6783	16.16680
Median	110.5668	12.07000
Maximum	533.7396	72.80000
Minimum	5.026000	5.400000
Std. Dev.	171.3186	15.64302
Skewness	0.535669	2.726680
Kurtosis	1.844621	9.533588
Jarque-Bera	2.586112	75.44470
Probability	0.274431	0.000000
Sum	4641.957	404.1700
Sum Sq. Dev.	704401.4	5872.899
Observations	25	25

Source: Author's Computation with E-views 10

Table 2 shows the mean, maximum, minimum, and Jargue-Bera (J.B) for each of the variables, among others. The results provided useful insight into the time series data over the period from 1994 – 2018. First, the significant and astronomical difference between the maximum and minimum values in VAT and INF indicated a high degree of change in the variables, which implies that the interaction of the variables with the economy, has a tremendous impact over the years. The mean of the variable indicated a very high figure over the period, which also implies that the average performances of variables are relatively significant to the economy. The Jargue Bera test, however, did not establish normality in the two variables, and this means that other factors may be needed to ascertain their normalcy.

Regression Analysis Result

Table 3 addresses the regression model specified in section three, as well as the hypothesis stated in section one of the study.

Table 3: Regression Analysis Result

Dependent Variable: Inflation (Price Stability)

Independent Variable: Value-Added Tax (VAT)

	Coefficient	Probability	Other statistics
C	-2.113631	0.0000	R^2 = 0.991194
LOG(VAT)	-0.202095	0.0013	Adj R^2 = 0989936
F-stat = 787.9267			

Coefficient of Linear Determination: The computed R^2 value 99% of which is the coefficient of multiple determinations indicates that our model satisfies the requirement for the goodness of fit. The value shows that 99% of the variation in the Price Stability (Inflation Rate) is explained by the variation of the explanatory variables (Value-Added Tax), while the remaining 1% is explained by a variable not included in the model.

F-Test: A mere observation of the individual's parameters will reveal that all the variables statistically significant at a 5% level of significance. Furthermore, the joint influence of the explanatory variables on the dependent variable is statistically significant and also confirmed by F-probability, which is less than 5%.

4.3 Test of Hypotheses

1. H_0: There is no significant relationship between VAT and inflation rate in Nigeria. The result in the above table shows a Prob value of 0.0013, and this means that the Null hypothesis is rejected as the result shows a Prob value of 0.0013, which is below 5% at a 5% level of significance.

4.4 Discussion of Findings

The study investigated the relationship between VAT and Price Stability in Nigeria. From the empirical analysis of the data collected, the coefficient of determination (R^2) indicates that about 99% variation in (INF) is explained by LOG(VAT), this shows that the model has extreme explanatory power. Also, it implies that the model is statistically significant. The study found that there is a positive and meaningful relationship between VAT and Price Stability. It is also confirmed by the correlation analysis, which tests the relationship between the dependent and independent variables. It showed that the variables are positively correlated and have a significant relationship.

5. CONCLUSION AND RECOMMENDATIONS

From the analysis and results of the study, it is clear that there is a significant effect of VAT on price stability (Inflation Rate) in Nigeria. The result of an extensive investigation carried out under the study revealed that contrary to the view by commercial business owners that VAT raised the prices of their products, which engenders inflationary outcome. Value Added Tax (VAT) has no inflationary consequence in Nigeria as speculated. Specifically, Inflation in Nigeria is stirred to a very great extent by openness. Increased tax returns from VAT do not give rise to inflation in Nigeria.

The study makes recommends that, although openness is inevitable in today's globalized economy, sequencing of faces of liberalization is necessary to check possible inflationary consequences in Nigeria, and advocates for relative increase in the overall share of VAT within the framework of fiscal policy whenever expansionary financial measures are adopted for achieving the goal of economic growth.

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APPENDICES

Appendix I: Comprehensive Result of Regression Analysis

Dependent Variable: LOG(VAT)
Method: Least Squares
Date: 10/18/19 Time: 10:10
Sample: 1994 2018
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.113631	0.255794	-8.263033	0.0000
INF	-0.202095	0.054399	-3.715031	0.0013

R-squared	0.991194	Mean dependent var	4.512135
Adjusted R-squared	0.989936	S.D. dependent var	1.456492
S.E. of regression	0.146113	Akaike info criterion	-0.863223
Sum squared resid	0.448331	Schwarz criterion	-0.668203
Log-likelihood	14.79029	Hannan-Quinn criteria	-0.809133
F-statistic	787.9267		
Prob(F-statistic)	0.000000		

Source: Author's computation using E-views 10

Appendix II: Correlation Analysis Result and Graph

Covariance Analysis: Ordinary
Date: 10/25/19 Time: 10:43
Sample: 1994 2018
Included observations: 25

Correlation t-Statistic Probability	VAT	INF
INF	1.000000 ----- -----	
VAT	-0.311612 -1.572747 0.1294	1.000000 ----- -----

Source: Author's computation using E-views 10