Impact of Government Expenditure and Value Added Tax on Nigerian Economy

Oladapo O. Babalola

Abstract

This work examines the impact of Government expenditure and Value Added Tax (VAT) on economic growth. The standard Ordinary Least Square (OLS) was used to test the explanatory variable on the dependent variable, using data sourced from the Central Bank of Nigeria (CBN) Annual Bulletin and National Bureau Statistics (NBS), with scope covering 1994-2011. Results showed a positive relationship between VAT and GDP (Economic Growth), but negative for government expenditure, due to government engaging in consumption expenditure rather than capital expenditure. Though VAT adoption is a major landmark for our ailing economy, the side effects needs to be well managed to increase aggregate welfare effect on citizens and the economy. However, the penalty for evading the payment must not be relaxed while government ensures the location of VAT offices close to the rural centres so that *VAT*able people can be accessed.

Keywords—- Economic Growth, Government Expenditure, Nigeria, Value Added Tax (VAT).

Introduction

The economic history of both developed and developing countries reveals that taxation is an important weapon in the hands of government; not only for revenue generation, but also to achieve fiscal goals like influencing the direction of investment and timing in consumption of certain goods and services. The imposition of a tax is based on certain principles, as advocated by Adams Smith one of which is how effective as well as how equitable the tax concerned can be. This is due to the fact that a tax can be effective without being equitable and vice versa.

Value added tax was first introduced by France in 1954. It has since been embraced by well over seventy countries all over the world. These include the entire Organization for Economic Co-operation and Development Countries, Japan, Canada, the state of Michigan in the USA, while VAT has become a major source of revenue in many developing countries. In sub-Saharan Africa for example, VAT has been introduced in Benin Republic, Cote d'Ivore, Guinea, Kenya,

Madagascar, Mauritius, Niger Republic, Senegal, Togo and Nigeria. Evidence suggests that in these countries, VAT has become an important contributor to total government tax revenues (Ajakaiye, 1999, in Aruwa, 2008). Shalizi and Squire (1988) found out that VAT accounted for about 30% of total tax revenues in Cote d'Ivoire, Kenya and Senegal in 1982. Some oil producing countries are not excluded from the list of countries that had some economic relief from VAT. Tait (1989) showed that VAT has been in effect in Ecuador and Mexico since at least 1973 and by 1983 accounted for 12.35% and 19.71% of total government revenues in these counties respectively. Indonesia introduced VAT in 1983 and by 1988; the ratio of VAT revenue to GDP had risen to 4.5% (Bogetic and Hassan, 1993).

This impressive performance of VAT in virtually all countries where it has been introduced, according to Ajakaiye (1999, in Aruwa, 2008), clearly influenced the decision to introduce VAT in Nigeria in January 1994. According to the Federal Inland Revenue Service, (1993), VAT is a consumption tax that is relatively easy to administer and difficult to evade and it has been embraced by many countries world-wide. The adoption of Value Added Tax (VAT) as a form of tax in Nigeria through the VAT Act No 102 of 1993 marks an important landmark in tax reform in Nigeria. The VAT Decree led to the phasing out of the Sales Tax Decree of 1986. The decree came to being due to the outcome of the Dr. Sylvester Ugoh headed study group in November 1991. The group recommended that VAT should be introduced after two years of preparatory work. The decree spelt out the goods on which VAT can be collected (*VAT*able). Food items which were seen as non VATable are meant to be registered with the Federal Inland Revenue Service (FIRS), thus ensuring the payment of VAT on goods and services. The decree later took effect on 1st December 1993, but by administrative agreement, invoicing for the purpose did not start until 1st January, 1994. VAT was defined as a self assessment tax that is paid when returns are being rendered, since it is an input-output mechanism that is self policing. VAT was also seen as a tax levied on the purchase of goods and services with a return remitted to the FIRS at the end of the month. VAT is a tax on supply of goods and services which is eventually borne by final consumer but collected at each stage of production and distribution channel (Bhatia, 2008). The Gross Domestic Product (GDP) is a measure of National Income (NI) and output for a given country, in a given period of time usually a calendar year. GDP will not measure exchange but production, however for the course of this paper the proxy for economic growth will be GDP.

The introduction of VAT in the Nigeria economy was a fight against one major problem of public finance; acquisition and allocation of funds by governmental units. The revenue generated from the oil sector and development of government revenue in the international market which were in arithmetic progression, are also reasons for the adoption of VAT. The Sales Tax in the country was narrowed down to some products such as cigarettes, mineral drinks, canned food, which necessitated the adoption of VAT. VAT is a multistage tax system imposed on value added to goods and services as they proceed through the various stages of production and distribution, and to services as they are rendered (Bhatia, 2008).

In 1995, VAT fetched a total of N20, 761.580,661. This is about 27.66% of Federal Government total tax revenue for the year. By all standards, it was a very commendable

performance; the collection in 2003 was a great improvement to relative performance in 1994 of VAT which was only 12.4% of the total government revenue for the year. This improved performance may be due to the productivity bank of 5% excess solution over targets promised all revenue agencies in the 1995 Budget speech. However the government may be happy about the high and growing VAT revenue flow because, according to the proponents of the tax, it encourages savings and investment, which are principal elements of a healthy economy (Glenday, 2006). The trend, at which VAT in Nigeria is growing the revenue base of the government, is quite on the positive note, because it shows a continuous growth in revenue. This is evident in the fact that, the 6% target of GNP during the first year of its inception was not only met, but exceeded by N135m on monthly basis in the period.

VAT, like other type of taxes has its drawbacks, which might have some effects on the economic growth of the country. This is because in a buoyant economy, a tax on consumption means reduced rate of inflation, through the mop up of excess purchasing power of the people. It can also be inflationary in the case of a depressed economy. The Nigeria case is an example of an economy in the former scenario. VAT could then be a fair measurement of economic growth since money in circulation increase with economic growth. If VAT is a revenue source for accruing more state or public funds available to government to spend, to provide basic amenities and an enabling environment for investment, then there exist a relationship between VAT, government expenditure and economic growth.

Another argument often put forward is that import duties only tax imports, whereas a consumption VAT taxes both imports and the domestically supplied portion of total consumption. Therefore, the higher the share of consumption supplied domestically, the larger the VAT base is relative to imports. Final consumption in most economies usually exceeds imports of goods by a wide margin. This means that either more revenues can be raised at the same rate, or the same revenues can be raised at a lower rate than with import duties (Glenday 2006:30). Therefore, an unexpected floor in the revenue can be absorbed only by some combination of inflationary financing thereby 'crowding out' private investment, resorting to foreign debt obligations, reducing expenditure by delaying development expenditures or reducing operation and maintenance. The classical economist (such as David Ricardo, John Stuart) believed that when governments are directed to right measures of taxation, it then becomes a useful economic principle. This same reason leads to revenue being placed before expenditure and public debt by same group of economist. However, with more understanding and distillation of the classical economist as well as work done by John Maynard Keynes, Karl Max, J.M Buchman, Carl Shoup, Musgrave, just to mention a few, have lead to the fine tuning of the functions and dynamics of taxation in countries. Historically, taxation is seen as the oldest form of financing the public sector, others may include seignorage, loans, borrowing, among others, in times of war or peace while citizens expect the government to reciprocate by either spending public revenue in such a way that it will enhance their welfare for the sacrifice of their private resources which they make through payment of taxes. Adam Smith argues that growth was self reinforcing as it exhibited increasing return to scale. He opines that profit declined not because of decreasing marginal productivity, but rather because the competition of the capitalist for workers will bid wages up.

Research Problem

For a nation to grow economically and be self reliant, there is urgent need for its government to engage in some activities that will boost the morale of its citizens and enhance their standard of living, while the citizens on their own part pay taxes; a civil obligation, as a backup for the government. This will encourage the government to put in place infrastructural amenities like roads, power for industrial and domestic consumption, education, health, security (external aggression or internal disruption) etc. This paper therefore brings to bear the effect (positive, negative or neutral) which Government Expenditure and VAT; a special type of sales tax, imposed on the Nigerian consumers of products and services has on the economic growth and survival of the country.

Research Questions

An exclusive appraisal of tax can only be valid on two grounds; that the government is well informed of macroeconomic variables and; that the degree of under or over estimation is not too disproportionate to VAT base or its capacity in the economy. Since tax is quite important in the economy of a state, either developed or developing [i.e. in developing countries, Company Income Tax (CIT), Capital Gain Tax (CGT), Personal Income Tax (PIT), and for those that deal in petroleum related activities Petroleum Profit Tax (PPT)]. However during the course of this paper, the following questions will be asked:

i.   Is the role of government essential to economic growth?
ii.   Is GDP (a proxy for economic growth) depending on government spending?
iii.   Is VAT a better form of tax?
iv.   What are the impacts of VAT on the Nigerian economy since its adoption?

Research Purpose

With the main objective of analyzing the relationship between GDP, government expenditure and VAT in Nigeria; the purpose of this paper will therefore be to evaluate the impact of VAT and government expenditure on the Economic growth of Nigeria. Hence, the purpose of stating the hypothesis is to test that:

Hypothesis One
H_0: that government expenditure has no impact on the growth of the Nigerian economy
H_1: that government expenditure has an impact on the growth of the Nigerian economy

Hypothesis Two
H_0: that VAT has no impact on the Nigerian economic growth
H_1: that VAT has an impact on the Nigerian economic growth

Research Methodology

Secondary data sourced from CBN Statistical Bulletin and Nigerian Bureau of Statistics was used. To test for the hypothesis stated above, a multiple regression analysis was used to evaluate the data. A simple Keynesian model of economic growth is adopted, where the major

determinants of economic growth(Y; GDP) at the macroeconomic levels are Value Added Tax (VAT; X_1) and the Government Expenditure (Ge; X_2). Apart from these variables other factors may also affect economic growth which therefore are seen as the white noise/ stochastic disturbance term (U_t).

The economic model theoretically is:

GDP = f(Ge, VAT)

The GDP is therefore a function of the Government Expenditure and Value Added Tax rate in the polity.

The structural form of the above equation is:

$Y_t = b_0 + b_1 X_{t1} + b_2 X_{t2} + U_t$

Y_t = Economic Growth at time t

X_{t1} = Government Expenditure at time t

X_{t2} = Value added tax at time t

U_t = white noise or disturbance term for time t

b_0 = the expected rate of economic development when both VAT and government expenditure is zero

b_1 = the impact of government expenditure on economic growth

b_2 = the impact of VAT on economic development /growth

A'prori Expectation

With the model specified, there are varied impacts government expenditure can have on the economy. This is due to the fact that it is a function of what the expenditure is designed to control or curb (increase /decrease money supply), hence the relationship will almost than none boost economic welfare (positive relationship). In the case of the Value Added Tax the relationship with economic growth is quite ambiguous.

However, b_0 the intercept, can either be negative or positive; b_1, relationship between government expenditure and economic growth is always positive; b_2 an ambiguous relationship exists between VAT and GDP.

Presentation of Data and Result Analysis

Year	Gross Domestic Product	Government Expenditure	Value Added Tax
1994	904004.7	160893.2	7260.8
1995	1934831	248768.1	20761
1996	2702809	337217.6	31000
1997	2801973	428215.2	34000
1998	272178.4	487113.4	36900
1999	3313563	947690	47100
2000	4727523	701.1	58500
2001	5374335	1018	91800
2002	6232244	1018.2	108600
2003	6061700	1226	136400
2004	11411067	1426.2	159500
2005	14610882	1822.1	178100
2006	185654595	1938	221600
2007	24456892	2450.9	289600
2008	24296329.29	688142.9	404500
2009	24794238.66	735861.6	468390
2010	33984754.13	793551.2	562860
2011	37,409,860.61	847444.3	649500

Source: Central Bank of Nigeria Statistical Bulletin (CBN 2012, Vol. 18)

Interpretation of Results

From the result; without transforming the data:

Adjusted R-squared	0.066357	S.D. dependent	var	42589441
C	14812576	14519206	1.020206	0.3238
Date: 05/10/13 Time: 00:20				
Dependent Variable: GDP				
Durbin-Watson stat 2.294422		Prob(F-statistic)		0.233709
GOVT	-40.85994	33.16054 -1.232186		0.2368
Included observations: 18				
Log likelihood	-339.4902	F-statistic		1.604118
Method: Least Squares				
R-squared	0.176197	Mean dependent var		21719099
S.E. of regression	41152143	Akaike info criterion		38.05446
Sample: 1994 2011				
Sum squared resid	2.54E+16	Schwarz criterion		38.20286
Variable	Coefficient	Std. Error	t-Statistic	Prob.
VAT	101.7198	58.20987	1.747466	0.1010

$$GDP = 14812576 - 40.8599494 Ge + 101.7198 VAT$$
$$(1.020206)\ (-1.232186)\qquad (1.747466)$$

The coefficients above indicate that the *a'prori* expectation is not satisfied. GDP increases by 14812576 units holding VAT constant, while a unit change in the *Ge* will reduce GDP by 40.8599494 units. Also holding the *Ge* constant, a unit change in VAT will increase GDP by 101.7198units, hence, a positive relationship exists between VAT and GDP. The coefficient of determination shows that 18% total variation; as shown in the R^2 value of 0.176197, is accounted for systematically by the independent variable. The variable VAT was found to be significant at 5% and 10% levels of significance, whilst the other variable *Ge* did not pass the test. The DW-Statistic shows the presence of autocorrelation, which was later corrected by transforming the data set. This will enable an improved result, coefficient and, of course, the OLS technique all together.

However when the data was transformed, a better result was obtained as shown below:

Dependent Variable: LNGDP
Method: Least Squares
Date: 05/10/13   Time: 00:27
Sample: 1994; 2011
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.931883	2.130892	2.314469	0.0352
LNGOV	-0.074286	0.069031	-1.076123	0.2989
LNVAT	1.010139	0.167959	6.014188	0.0000

R-squared	0.719265	Mean dependent var	15.83957
Adjusted R-squared	0.681834	S.D. dependent var	1.541250
S.E. of regression	0.869361	Akaike info criterion	2.708894
Sum squared resid	11.33682	Schwarz criterion	2.857290
Log likelihood	-21.38005	F-statistic	19.21563
Durbin-Watson stat	1.973749	Prob(F-statistic)	0.000073

$$GDP = 4.931883 - 2.13089266Ge + 1.010139VAT$$
$$(2.314469) \quad (-1.076123) \quad (6.014188)$$

Here, the explanatory variables successfully explained 72% of the total variation in GDP, as seen in the R^2 of 0.719265. This is a better value from the first estimate of 18%, because it can be relied upon for policy recommendation and forecasting. *GDP* variation of 4.931883 was observed, holding *VAT* constant, a change in Ge reduces the *GDP* by 2.13892 (negative relationship). In the same vein, holding *Ge*, a unit change in *VAT,* increases the *GDP* by 1.010139, thus a positive relationship with *GDP*. Again the *VAT* is significant at 5% and 10% level of significance while *Ge* did not pass. Most importantly, the autocorrelation effect was taken care of which now stands at 1.973749; hence the result can be used for policy recommendations.

Summary

From the findings, it was found that a positive relationship exists between VAT and GDP (Economic Growth), but negative for government expenditure. This simply means that VAT increases the revenue base of the nation. However, the government spending, as the revenue base increases due to VAT, has a surprising negative trend on economic growth. This is due to the fact that government spending can only translate or spur growth in the economy if more of capital expenditure are done (like construction of good accessible roads, educational facilities, power generation and of course Security, just to mention a few).

In other words, more revenue spending should be devoted to investment in structures that will create maximum social welfare for the entire citizenry, and not to consumption purposes. Thus, the canons of public expenditure of economy, surplus, sanction and benefit must be well

harnessed and taken into consideration even as the revenue base is increased due to VAT. However, VAT continues to generate funds for the government who is saddled with the role of providing basic amenities and an enabling environment for both private and public goods, which have an inferred effect on government expenditure.

Conclusion

It was a good step that the Nigeria government adopted VAT as modern fiscal policy. Although it may be a bitter dose for curing an ailing economy, but it will in the long run benefit the Nigerian economy and its citizens, if the side effects can be properly managed. To sustain the positive relationship between VAT and GDP, more focus should be given VAT administration by locating offices at the grassroots, thus reducing tax evasion. Government should also see that the growth sustainability of a nation depends on the size of government spending, hence the positive relationship of VAT to GDP can then be transformed into the aggregate demand for goods and services (i.e. output), only when such expenditure is directed towards capital and infrastructural development leading to Maximum social welfare of the residences or citizens of the country.

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