Effect of Value Added Tax and Capital Gains Tax on Economic Growth in Nigeria: Traditional Versus Buoyancy Approach

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Abstract

This paper evaluates the effect of Value Added Tax (VAT) and Capital Gains Tax (CGT) on economic growth in Nigeria using both the traditional method of raw data analysis and a more robust buoyancy method of measuring performance of tax systems. Secondary data used relating to main variables (VAT, CGT) and control variables Company Income Tax (CIT) and Petroleum Profit Tax (PPT) covering 1994-2014 were obtained from reports of Federal Inland Revenue Service (FIRS) and Central Bank of Nigeria (CBN) and these data were analysed using Ordinary Least Square regression analysis with robust standard error. The result of the study at 5% significant level using traditional method reveals positive significant effect of PPT and CIT on Nigeria's Economic growth (p-values = 0.0000, 0.0000), while VAT is also significant at 5% (p=0.0002). However, CGT was insignificant (p=0.220). Contrarily, the buoyancy approach reveals mixed and oscillating performance of VAT and CGT on an annual basis but such performance were satisfactory in 13 years out of the 20 years covered (tax buoyancy ≥1). The study concludes that the use of buoyancy approach in evaluating the performance of tax systems is preferred to the traditional method for policy direction and is recommended to be used in conjunction with the traditional approach. More so, VAT and CGT should be adequately exploited as alternative revenue sources to support the dwindling oil revenue to sustain economic growth vision of Nigeria government.

Keywords: Taxation, Buoyancy, Capital Gains Tax, Value Added Tax, Economic growth
JEL Classification:H2, H25, H24

1. INTRODUCTION

The desire to uplift the social and economic wellbeing of the populace remains the primary objective of the government in any given country. However, the magnitude of economic growth in terms of political, economic, social and infrastructure development experienced in any country depends partly on the amount of revenue generated and/or available in that country. That is why revenue generation drive is always handled strategically with a view to garner adequate revenue from different sources to finance government activities.

However, one means by which government generates revenue to meet her primary obligations in Nigeria is through a well-structured tax system (Ogbonna & Appah, 2012). Tax is a major player in every society of the world and a tax system offers itself as one of the most effective means of mobilizing a nation's internal resources. It lends itself to creating an environment conducive to the promotion of economic growth. Myriads of such benefits offered by taxation on a country's economy are well spelt out in Adeyemi (2012) and Abiola and Asiwe (2012) to mention a few. These authors among others agreed that apart from providing foreign direct investment and a fiscal policy tool for positioning the economic growth of a country, the most important role of a tax system is its revenue-raising function. This explains why government imposes taxes to finance its expenditures.

Under the current tax laws in Nigeria (2011 till date), the three tiers of the government have specific areas of emphases on the different type of taxes including: capital gains tax (CGT), value added tax (VAT), education tax (ET), petroleum profits tax (PPT), Nigerian social investment trust fund (NSITF), stamp duties, withholding tax, double taxation agreements/treaties, personal income tax (PIT), and companies income tax (CIT).

Among these forms of taxes, PPT and CIT generated the highest income for the country until recently when the amount of revenue coming in from those sources continue to fall significantly due to reasons not farfetched. One, fall in international oil prices which reduces petroleum income and two, collapse/closure of operation by a number of companies due to global economic crisis and unfavourable infrastructural facilities in the country. This had drastically and negatively affected Nigeria's economy as manifested in inability of almost its 27 states to finance their recurrent expenditures (mainly salary payments) while the federal government also battles with financing problems. It is unfortunate that despite the bailout fund given to the financially troubled states, no corresponding improvement is recorded as many of them are still owing their staff while nearly all the states in the country tend towards unanimity in their inability to pay the ₦18,000 minimum wage.

This scenario is pathetic and calls for exploring other tax sources to augment government revenue needs. Hence, VAT and CGT that constitute a veritable source of revenue in other countries like Nepal, Sweden and Denmark readily comes to mind and are therefore examined in this study with respect to their effect on government financing (recurrent and capital expenditures) and on economic growth.

Since revenue from PPT which is the major tax income for Nigeria is becoming unreliable, other tax revenue sources are a better choice for revenue mobilization compared to deficit financing and money creation. Though these other tax forms have been used in countries like Denmark and Sweden to finance their economies, it does not automatically spell success for Nigeria. Thus, a detailed and empirically established impact/relationship between these taxes and economic growth must precede government plans to use them to influence economic direction of Nigeria.

VAT which was introduced in Nigeria as a replacement for the inefficient sales tax in 1993 is a multistage levy collected on sales of goods and services. The burden of the tax is shifted forward in successive stages so that at the end, it is the final consumer that pays for the tax. The current policy is to gradually reduce the rate of income tax while focus is shifted to indirect tax, within the non-oil sector, such as VAT in order to stimulate economic growth in the sectors as well as to meet government revenue requirements (Adedeji & Oboh, 2012).

With the level of asset acquisition in Nigeria and asset declaration policy of the government, capital gains tax is also a revenue head to watch out for in the revenue drive of the country. CGT was introduced on 19 September, 1985 to capture gains on exchange of assets which seems not to have been adequately captured. Hence, the extent to which these forms of taxes (VAT and CGT) have contributed to economic growth in Nigeria needs a reassessment before placing reliance on them. This is because reliance placed on PPT and CIT is generating unresolved financial difficulties for the country presently.

VAT, according to Bird (2005) is characterised by challenges in its collection, administration as well as in the economy of countries where it is operational. Other opinions have been expressed as regards the negative consequences of VAT as well as positive but insignificant correlation between

VAT revenue and GDP (Afolayan & Okoli, 2015). In a contradictory manner, Ekeocha, Ekeocha, Malaolu and Oduh (2012) posits that since VAT base is incentive (persistent and non-volatile) to cyclical swings in the economy, the revenue therefrom will not drop sharply when the economy slows down.

The management and administration of CGT as presently implemented in Nigeria is also bedeviled by a number of inadequacies (Oserogho, 2004) while the findings of Thomas (2010) on CGT brought proposals dealing with outright elimination of CGT, reduction of tax rates for certain classes of taxpayers or elimination of preferential tax treatment.

Moreover, both VAT and CGT have not been given much attention like other types of taxes such as PIT, PPT, CIT while their administration and collection had been poor and inefficient. CGT is worse for it because not all asset acquisition/disposal are registered in the country such that revenue leakage is rampant and as such, the tax system seems inefficient compared to findings of a number of studies in the literature.

A number of inconsistencies as regards VAT and economic growth can be seen in Afolayan and Okoli (2015), Izedonmi and Okunbor (2014), Adegbie and Fakile (2011), Adereti, Sanni and Adesina (2011) and Olaoye (2009) who all came out with findings that VAT contributes significantly to economic growth or development of Nigeria. However, their findings contrast with Ajakaiye (2000), Ngerebo and Musa (2012) that support the negative or insignificant impact of VAT on economic growth in Nigeria. Studies of CGT and its impact on economic growth are very rare in the literature except Thomas (2010) and in other cases when the concept of CGT is lumped together with VAT and other tax types.

Thus, impacts of these two sources of revenue to countries specifically Nigeria remained unresolved and by implication therefore, the outcome of the much cherished policy shift to indirect taxation for revenue stability cannot be established until the relationship between them and economic growth is empirically established. This forms the policy thrust of this study with a view to address the pertinent questions relating to the influence and contributions of VAT and CGT on economic growth in Nigeria and address the following objectives:

The main objective of this study is to examine the relationship between Value Added Tax (VAT) and Capital Gains Tax (CGT) on Nigeria's economic growth using the traditional and buoyancy approaches. The specific objectives are to:

i. Evaluate the influence of VAT on economic growth in Nigeria.

ii. Assess the contribution of CGT to economic growth in Nigeria.

Research Hypotheses

Ho_1: Value Added Tax (VAT) has no significant influence on economic growth in Nigeria.

Ho_2: Capital Gains Tax does not significantly contribute to economic growth in Nigeria.

Interesting to note is that all the studies in Nigeria regarding these tax concepts were addressed using the traditional approach/method which made use of nominal figures/raw data that eventually mislead policy directions. This is a serious academic omission since the current trend in tax system performance assessment focuses on the use of buoyancy approach (a method thatmade use of real figure/data) instead of the raw data as it obtained under the traditional approach.

The rate at which tax revenue changes as a result of change in income, change in tax rate and tax base, change in efficiency of tax assessment and collection can be explained with the help of tax buoyancy. Hence, tax buoyancy measures the changes in actual tax revenue due to change in income as well as due to discretionary measures such as tax rates and tax bases (Tuan, 2003). It is thus a measure of both the soundness of the tax bases and the effectiveness of tax changes in terms of revenue collection. As much as we know, this type of approach is non-existent in Nigerian literature and as such constitutes the study gap. The findings from this approach are compared with the traditional method of nominal values for agreement or discord in growth evaluations.

Given the introduction of VAT in Nigeria in 1993 coupled with availability of data, the study covers only 1994 to 2014.

2. LITERATURE REVIEW

The concept of taxation, growth and economic growth were clarified as well as the different types of taxes covered in this study. This is followed by theoretical foundation and empirical studies.

Conceptual Clarifications

Taxation wasdefined by Odewale (2004) as a compulsory contribution to the support of government levied on persons, property, income, commodities, transactions etc. at a fixed rate mostly proportionate to the amount on which the contribution is levied. Given this definition and characteristics of tax which was upheld by other studies, Oyebanji (2006) identified direct and indirect taxes as the two major forms of taxes in Nigeria.

Direct Taxes are taxes imposed by the government on the income of individuals and companies and which are actually paid by the person or persons on whom it is legally imposed while Indirect Taxes are taxes by the government on goods and services. CGT falls under the direct tax while VAT is an indirect tax system.

Value Added Tax as pointed out by Soyode and Kajola (2006) is a consumption tax on all VATable goods and services**.** VAT is imposed on the net sales value of non-exempt, qualifying goods and services and is levied on any individual, corporation sole, group, body corporate or organization that consumes, buys, procures or imports such taxable goods or services in Nigeria. Thus, it can be assumed that VAT revenue is not sterilized but injected into the economy through increased government final consumption expenditure.

Capital Gains Tax according to Ola (2011) is a tax applicable to capital gains accruing to any person (company or individual) on the disposal of a chargeable asset. Chargeable assets are all forms of property, including options, debts and any form of property created by the person disposing of it, or otherwise coming to be owned without being acquired. Thus, almost everything we own and use for personal or investment purposes is a capital asset. Examples include a home, personal-use items like household furnishings, and stocks or bonds held as investments. Capital gains are the excess consideration realized from the sale of asset at a price that is higher than the purchase price. When a capital asset is sold, the difference between the cost of sale and the sales price is a capital gain or a capital loss.

Growth according to Olopade and Olapade (2010) is an increase in economic activities while Likita (1999) defined a country's economic growth as a long-term rise in capacity to supplement increasingly diverse economic goods to its population. This growth capacity is based on advancing technology as well as institutional and ideological adjustment that it demands. According to Dwivedi (2004), economic growth is a sustained increase in per capita national output or net national product over a long period of time. It implies that the rate on increase in total output must be greater than the rate of population growth. Another quantification of economic growth is that national output should be composed of such goods and services which satisfy the maximum want of the maximum number of people.

Economic growth can be determined by four important determinants namely, human resources, national resources, capital formation and technological development. A country's tax system is a major determinant of other macroeconomic indexes. Specifically, for both developed and developing economies, there exists a relationship between tax structure and the level of economic growth and development. Indeed, it has been argued that the level of economic development has a strong impact on a country's tax base and tax policy objectives which vary with the stages of development (Kiabel & Nwokha, 2009).

Tax Buoyancy along with tax elasticity can generally be used to evaluate the performance of a tax type or the whole tax system (Shome, 1998). However, tax buoyancy according to Tuan (2003) is the ratio between the real growth rate of tax revenues and the real growth rate of GDP. Tax elasticity is used in predicting future revenue which is not our objective in this study, thus, tax buoyancy concept was upheld and a tax system is considered to be satisfactorily performing if its buoyancy is greater than or equal to one (1).

Theoretical Discussion

According to Bhartia (2009), a taxation theory may be derived on the assumption that there need not be any relationship between tax paid and benefits received from state activities. In view of this, the following theories were considered related to this study:

Expediency Theory is a theory which asserts that every tax proposal must pass the test of practicality. It must be the only consideration weighing with the authorities in choosing a tax proposal. Economic and social objectives of the state as well as the effects of a tax system should be treated irrelevant (Bhartia 2009, in Ogbonna & Appah, 2012). In other words, in the choice of various tax proposals, the authority need not consider various economic and social objectives or the effect of a tax system. In practice, every authority or government is pressurized by various economic, social and political factors to orient its taxation policy in certain directions.

Every group of people does its best to resist a change that goes against its interest. The government in many cases has to adopt certain policies simply because they are under pressure to yield to that effect. Furthermore, depending upon the changing political strength of different economic groups, the government is likely to reshape the tax structure which might lead to a mistake if it does not see the administrative feasibility, cost of collection, etc. However, to build up the entire tax system only on the consideration of expediency may be full of pitfalls. Such a tax policy may be able to yield certain good results like contributing to the equality of income distribution or reducing disparities, yet, such results would be purely accidental and not the outcome of any thoughtful scheme.

Benefit Received Theory is premised on the assumption that there is basically an exchange relationship between tax-payers and the state. The state provides certain goods and services to the members of the society and they contribute to the cost of these supplies in proportion to the benefits received (Bhartia 2009, in Ogbonna & Appah, 2012). The approach is considered fair being that the beneficiaries of government expenditure pay proportionately for these benefits. It also determines simultaneously the tax level and public services of different government.

In other words, how extensive the individual benefits from the government should determine along with taxation, who should pay for these services. This is the most important principle of taxation as it treats revenue and expenditure imposed on the basis of tax payer's ability to pay. Here, there is no quid-pro-quo arrangement while the ability to pay principle is conceived in terms of sacrifice on the part of the tax payers. It is the most progressive tax system leading to complete egalitarian distribution of offer tax income.

Empirical Evidences

Different scholars have used different explanatory variables to attempt some empirical measurements of tax efforts in various countries. For instance, Adereti *et al* (2011) carried out a research on VAT and economic growth in Nigeria usinggross domestic product (GDP), VAT revenue, total tax revenue and total (Federal Government) revenue from 1994 to 2008.The data were analysed using both simple regression analysis and descriptive statistical method and finds that: the ratio of VAT revenue to GDP averaged 1.3%compared to 4.5% in Indonesia, though VAT revenue accounted for as much as 95% significant variations in GDP in Nigeria and there was a positive and significant correlation between VAT revenue and GDP.

More recently, Okoli (2015) worked on correlation between VAT and national revenue in Nigeria. He examined the extent to which VAT has been contributing to Nigeria's total federally collected revenue and subsequently its position among the other three components. The study employed an Error Correction Model (ECM) for the analysis using data spanning from 1994 -2012. Findings showed that both Value Added Tax (VAT) and Petroleum Profit Tax (PPT) contribute positively to federally collected revenue.

Ogbonna *et al* (2012) examined the impact of tax reforms on the economic growth of Nigeria from 1994 to 2009. The data collected were analysed using relevant descriptive statistics and econometric models. The results from the various tests showed that tax reforms is positively and significantly related to economic growth and the study concluded that tax reforms improves the revenue generating machinery of government to undertake socially desirable expenditure that will translate to economic growth in real output and per capita basis.

Adeyemi and Babington-Ashaye (2012) studied the reintroduction of CGT in the Nigerian capital market. The paper provided a summary of the nature of CGT in Nigeria as stipulated in the CGT Act and to capture the arguments against the reintroduction of CGT in the Nigerian capital market. Issues such as double taxation, capital formation hindrance, the lock-in effect and taxation of illusory income are also raised. The discussion of the various pros and cons argument was also presented but the arguments of the proponents of the reintroduction of CGT seem to be weightier than those against that view.

Obaje (2012) carried out a theoretical framework on capital gains in Nigeria and examined the nature and the justification for capital gains tax as a lucrative ground for raising revenue for development especially in the developing countries. The study finds that in Nigeria, CGT is yet to yield the desired result in terms of raising revenue for the government due to lack of awareness, inadequate data and the high rate of inflation which has led to high incidence of avoidance of CGT. Ngerebo and Musa (2012) appraised the tax system in Nigeria; a case study of VAT between 1994 and 2004. He conducted tax effectiveness and tax efficiency rates/test using revenue generating tool and fiscal planning tool respectively. The study found that VAT has been effective but not efficient in Nigeria.

In evaluating VAT remittance using observations from developing country (Nigeria), Chinwe (2013) finds a continuous decrease in VAT revenue returns implying a decreasing impact on economic growth. Contrarily, Abata (2014) examined the impact of tax revenue on Nigerian economy, a case of Federal Board of Inland Revenue (FBIR) and finds that tax revenue, tax administrative system and tax evasion significantly affected government revenue in Nigeria but the dimension of the relationship was given as positive and significant by Okafor (2012).

Umeora (2013) examined the effect of VAT on economic growth of Nigeria using data series that spans 1994 to 2010 and analysis was carried out using linear regression method and finds that VAT contribute significantly to GDP and to total revenue in Nigeria. This conclusion is not different from those of Izedonmi and Okunbor (2014) who although used Cobb-Douglas regression model, examined the roles of VAT in the economic growth of Nigeria and finds it making a unique significant contribution to the economic development of Nigeria and composition of GDP.

Unegbu and Irefin (2011) evaluated the impact of VAT on economic development of emerging nations with specific reference to Adamawa State of Nigeria using both primary and secondary data that were analysed using regression, discriminant analysis and ANOVA. The study finds VAT contributing significantly to economic and human development of the state. However, results of primary data analysis reveals that VAT has minimum impact.

On the contrary, Afolayan and Okoli (2015) investigated the impact of VAT on Nigerian economic growth between 1994 and 2012 using ECM and finds a positive but insignificant correlation between VAT revenue and real GDP. Although, they claimed some problems inhibits VAT potency but unfortunately, the potency was not measured and this gap was considered a serious academic omission. It is this potency that this study measures through the use of buoyancy approach. In the same direction an appraisal of the tax system in Nigeria by Ngerebo and Masa (2012) affirms that VAT system was effective in generating more than expected revenue but not efficient in directing or influencing the consumption expenditure of the Nigerian citizens.

More interestingly, Umoru and Anyiwe (2013) adopted a disaggregated empirical evidence method to evaluate the relationship between tax structures and economic growth in Nigeria. They found that the new tax policy shift from direct to indirect taxation has no empirical base; since only PPT and CIT were able to maintain both short and long run revenue generation and growth enhancing potential. More so, indirect taxation (VAT and CGT inclusive) has negative effect on economic growth in Nigeria.

With respect to CGT, Hungerford (2010) evaluated the economic effect of CGT and finds that CGT revenues have been a fairly small, but not a trivial source of government revenue. He pointed out most of the argument in the literature including the fact that capital gains reduction will

increase savings and investment, provide a short term economic stimulus and boost long term economic growth. However, a tax reduction on capital gains would mostly benefit very high income tax payers who are likely to save most of the tax reduction while a temporary capital tax reduction could have a negative impact on short-term economic growth.

While Ebril, Keen, Bodin and Summers (2001) argue that from collection efficiency perspective, trade taxes may be superior to other types of consumption taxes including VAT, Tuan (2003) having looked at evidence from Ghana, New Zealand and Trinidad and Tobago concludes that VAT promotes production efficiency and it may become a money machine if it is simple in rate structuring and broad based. He posits that VAT, its mechanism and policy issues may help jumpstart the construction of an efficient tax administration and that was why an increasing number of countries around the world have switched from various types of consumption tax to VAT.

It is clear that none of the studies reviewed so far covered years 1994-2014, which therefore constitute the gap for this study. Besides, a critical look at the empirical literature shows that none of the studies was able to cover the two tax concepts i.e. Cpital Gains Tax (CGT) and Value Added Tax (VAT) at a time while the use of nominal values for tax and economic growth variables is considered inappropriate. Hence, the use of buoyancy approach (real values/figures) for these variables through the use of GDP deflator is preferred and adopted to investigate the effect of VAT and CGT on economic growth in Nigeria.

3. METHODOLOGY

Model Specification

Guided by the perceived functional relationship between the matrix of economic growth (GDP) with VAT and CGT revenue, an appreciable link is established between the 3(three) variables using both buoyancy approach and the traditional approach

Tax buoyancy approach:

The universal model according to Shome (1988) is given as:

$$B_{TY}^{a} = \frac{\Delta T^{a}}{\Delta Y \cdot 1} X \frac{Y}{T^{a}} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{i}$$

Where

B_{TY}^{a} = Buoyancy of tax revenue to income

T^{a} = Total tax revenue

ΔT^{a} = % change in total tax revenue

Y = Income

ΔY = % Change in income

When broken down into individual tax system, buoyancy may be expressed as:

$T^a = T_1^a + T_2^a + T_3^a$ ----------ii

$\Delta T^a = \Delta T_1^a + \Delta T_2^a + \Delta T_3^a$

Transforming equation (ii) leads to:

$$B_{TY}^a = \frac{\Delta T_1^a + \Delta T_2^a + \Delta T_3^a}{\Delta Y} X \frac{Y}{T^a}$$

$$= \left(\frac{\Delta T_1^a}{\Delta Y} X \frac{Y}{T_O^a}\right) + \left(\frac{\Delta T_2^a}{\Delta Y} X \frac{Y}{T^a}\right) + \left(\frac{\Delta T_3^a}{\Delta Y} X \frac{Y}{T^a}\right)$$

$$= \frac{T_1^a}{T^a} x \left(\frac{\Delta T_1^a}{\Delta Y} X \frac{Y}{T_1^a}\right) + \frac{T_2^a}{T^a} x \left(\frac{\Delta T_2^a}{\Delta Y} X \frac{Y}{T_2^a}\right) + \frac{T_3^a}{T^a} x \left(\frac{\Delta T_3^a}{\Delta Y} X \frac{Y}{T_a^3}\right) \ldots\ldots\ldots\ldots \text{iii}$$

Thus, $B_{TY}^a = \frac{T_1^a}{T^R} x B_{T_1Y}^a + \frac{T_2^b}{T^R} x B_{T_2Y}^a + \frac{T_3^b}{T^R} x B_{T_3Y}^a$----------iv

Where

T_1^a, T_2^b, T_3^b are revenue from tax 1, 2 and 3 types

T^R = Aggregate income from all types of taxes combined

$B_{T_1Y}^a, B_{T_2Y}^a, B_{T_3Y}^a$ = Tax buoyancy of tax revenues for tax types 1, 2 and 3 respectively from equation iv.

This model is adopted except that ΔY (Change in income) is replaced with change in GDP to suit the purpose of this study as follows:

Thus, $B_{T\Delta}^a GDP = \frac{T_1^a}{T} x B_{T_1\Delta}^a GDP + \frac{T_2^b}{T} x B_{T_2\Delta}^a GDP + \frac{T_3^b}{T} x B_{T_3\Delta}^a GDP$----------v

Where:

ΔGDP = Change in GDP

Hence, tax buoyancy is computed for each of the tax systems (CGT, VAT) and the result is compared with the traditional method/approach to see whether the general claim of most studies (using traditional method) can be upheld or a shift to new approach of buoyancy method is preferred.

The apriori expectation is that the performance of a tax system is considered satisfactory (i.e keeping up with the growth of the economy) if the buoyancy is greater than or equal to 1 (one); otherwise, it will be considered unsatisfactory.

Traditional Approach

Under this method, the relationship among the study variables is such that economic growth (GDP) depends on VAT and CGT revenue and is modeled following the works of Owolabi and Okwu (2011) and Adereti, Sanni and Adesina (2011).

$$GDP_t = f(VAT_t,)$$

Contrastingly however with these studies is that we controlled for company income tax and petroleum profit tax as other component of GDP growth with a view to fish out the extent to which VAT and CGT influences GDP (economic growth) asides other variables as follows:

$$GDP_t = f(VAT_t, CGT_t, CIT_t, PPT_t)$$

From this relationship, the stochastic model is specified as:

$$GDP = \alpha_0 + \alpha_1 VAT + \alpha_2 CIT + \alpha_3 CGT + \alpha_4 PPT + \mu_{it}$$

These variables were stated in log form to cater for outliers or difference in magnitudes as follows:

$$LogGDP = \alpha_0 + Log\alpha_1 VAT + Log\alpha_2 CIT + Log\alpha_3 CGT + Log\alpha_4 PPT + \mu_{it}$$

Where:

GDP = Growth in Gross Domestic Products representing Economic Growth as used in the traditional approach
VAT = Value Added Tax
CIT = Company Income Tax
CGT = Capital Gain Tax
PPT = Petroleum Profit Tax
μ_{it} = Error Term

The apriori expectations is such that VAT, CIT, CGT, PPT >0, meaning that they all exert positive influence on GDP (economic growth).

Research Design, Data and Estimation Technique

A time series research design is adopted in this study due to the nature of the variables under study and because the variables assume different values at different times extracted from relevant sources. These data are secondary in nature and were obtained from various reports of the Federal Inland Revenue Services (FIRS) and the Central Bank of Nigeria (CBN) Statistical Bulletin 2014,

Office of the Accountant General of the Federation and Federal Ministry of Finance and Budget. The said data are values for Value Added Tax (VAT), Capital Gains Tax (CGT), Company Income Tax, Petroleum Profit Tax and Economic Growth (EG) proxy by GDP between 1994 and 2014 in Nigeria. The specified model was estimated using Ordinary Least Square regression analysis with robust standard error to address the problem of heteroskedasticity.

4. RESULTS AND DISCUSSION OF FINDINGS

Result of Traditional Approach

The result of the traditional approach to evaluating the effect of VAT and CGT on Nigeria's economic growth is shown in table 1.

Table 1: Effect of VAT and CGT on Economic Growth in Nigeria.

Dependent Variable	Independent Variables	Coeff.	Std. Error	t-Stat.	Prob.	Adj. R^2
GDP	VAT	-3.253906	6.575327	-4.94866	0.0002	R^2=0.996483 Adj. R^2= 0.995545
	CGT	17.96446	14.32519	1.254046	0.2290	
	CIT	64.28015	27.54338	23.33779	0.0000	
	PPT	62.82683	7.651382	8.211174	0.0000	

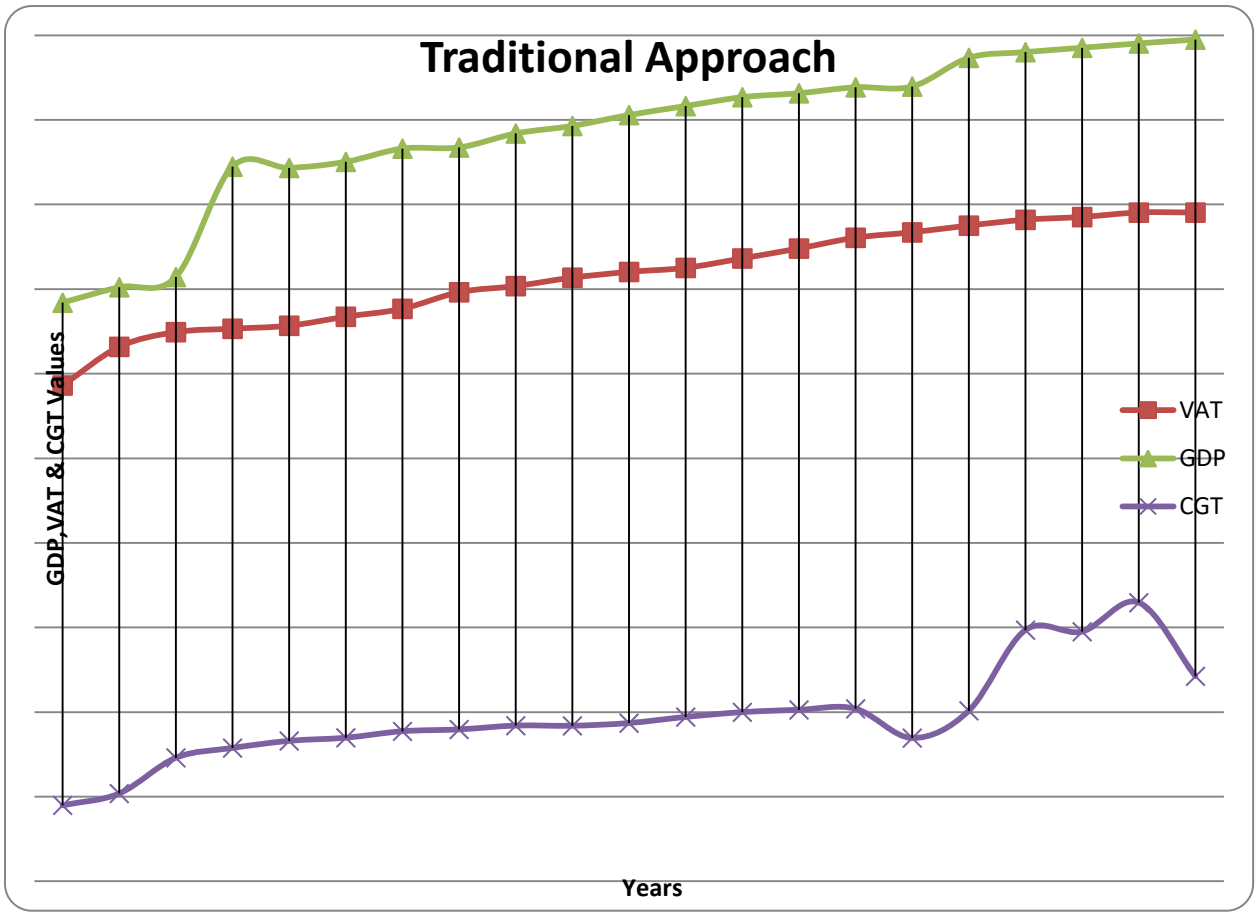
Source: Authors Computation, (2016)

Table 1 reveals that the three variables: CIT, PPT and VAT are statistically significant with respective p-values of (0.0000, 0.0000 and 0.0002). Besides, the coefficients are all positive (64.28015, 62.82683 and 3.253906). This implies that CIT, PPT and VAT have positive significant effect on economic growth in Nigeria since they all bring in revenue into the economy although in different magnitudes. This does not mean that VAT reduces economic growth but that the revenue from VAT does not keep pace with economic growth in the country). In addition, the R^2 of 99% attests to the predictability of economic growth by the tax systems examined (i.e 99% of changes in GDP is caused by VAT, CGT, CIT and PPT while the remaining 10% can be attributed to other variables not considered in this study.

The significance of PPT and CIT found in this study agrees with Umoru and Anyiwe, (2013) while the significance of VAT is in line with Tuan, (2013) who posits that VAT promotes production efficiency and it may become a money machine if handled well. This negative sign of coefficient of VAT translates to mean that administration of VAT has not been handled efficiently in Nigeria.

However, on the contrary, capital gains tax (CGT) is insignificant with p-value = 0.2290 but a positive coefficient = 17.96446. By inference therefore, the effect of CGT on economic growth is insignificant. This insignificance of CGT can be likened to the mixed results found by Ngerebo and Musa (2012). Thus, this type of tax (CGT) needs to be adequately and effectively exploited in the country with a view to increase the revenue drive of the government at this time when the country is going through a period of revenue insufficiency and increased expenditure. The pictorial representation of these performance or effect is shown in figures 1 & 2

Figure 1: Structural Appearance of VAT and CGT using raw figures (Traditional Approach)



Source: Authors' Drawing, (2016).

As figure 1 reveals, the traditional approach using raw data for the variables shows that GDP is growing at different and higher rates than either VAT or CGT. Comparatively, from figure 1 it can be seen that VAT has more effect on economic growth than CGT. However, the behavior of the graphs indicates that going by the traditional method, revenue generated from VAT and CGT have insignificant effect on Nigeria's economic growth.

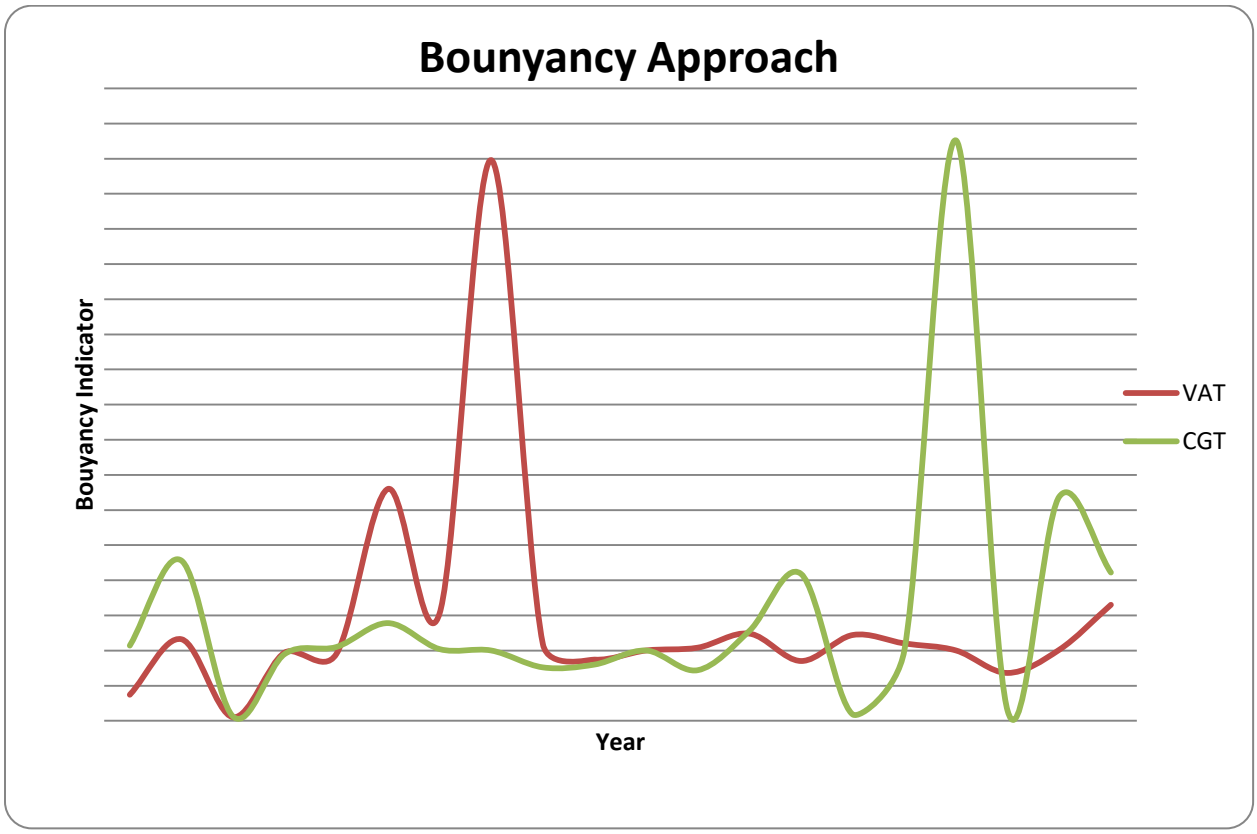
This general believe and the deficiency of using raw data for policy directives prompted and calls for a more pragmatic method referred to as the buoyancy approach. This approach has been applied to assessment of tax systems in other countries (USA, UK, Ghana, New Zealand and Trinidad and Tobago) but yet to be used in Nigeria.

Tax Buoyancy Approach

Tax buoyancy approach disregards the use of raw data for analyzing tax effect on economic growth and therefore calls for the use of real data through the use of GDP deflator (which incorporates changes in values form year to year). This is reflected in figure 2

This approach involves evaluating the performance of a tax system on a scale of 1 in which case, a tax system is adjudged satisfactory if its tax buoyancy equals to or exceeds 1. Contrarily, a buoyancy of less than 1 indicates an unsatisfactory performance by a tax system.

Figure 2: Diagrammatical Representation of VAT and CGT using Buoyancy Approach



Source: Authors' Drawing, (2016).

The pictorial representation of real data after taking into consideration the effect of GDP deflator is shown in figure 2. The figure reveals oscillating performance by the two tax systems compared to the traditional method (figure 1) which shows constant insignificant contributions of the tax systems to economic growth in Nigeria. This means that real figures reflects the true performance of the tax systems instead of relying on the raw figures. These data were shown in appendix 1 which obviously reveals that CGT revenue (column 2) is lower than that of VAT (column 1).

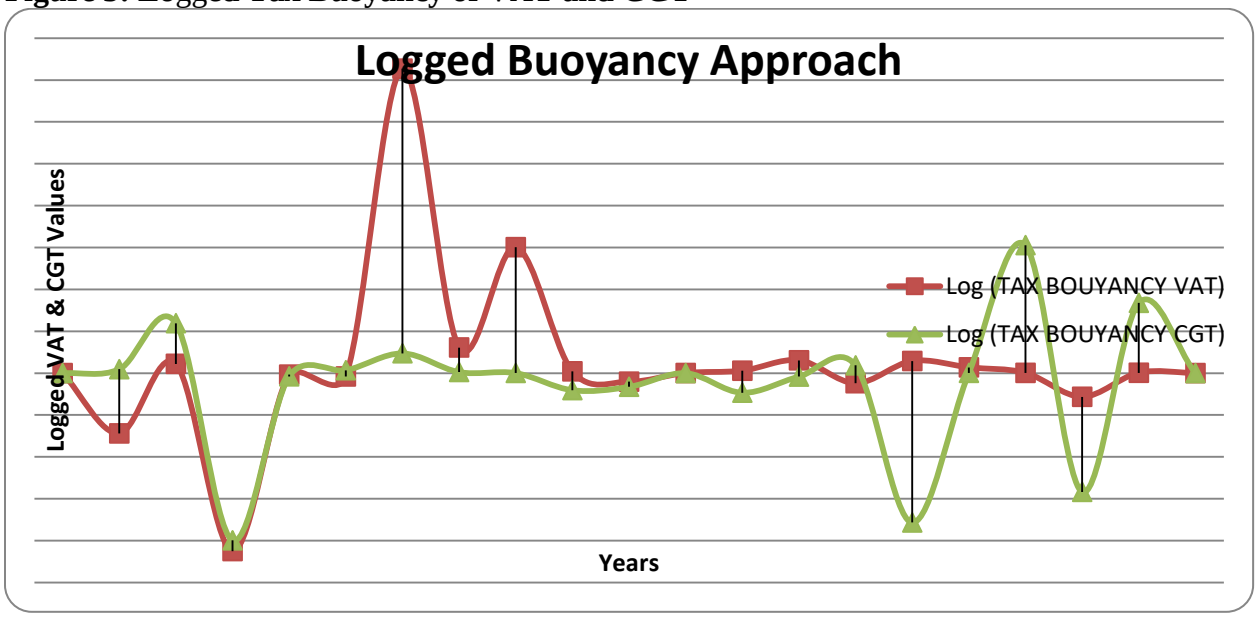
The buoyancy results in figure 1 and appendix 1 show that the performance of the tax systems examined to be a mixed one. For instance, the highest performance was recorded by VAT in 2002 with a buoyancy of 7.98 and the lowest of 0.05 in 1997. Similar performance was exhibited

by CGT as it has the highest performance/buoyancy of 8.26 in 2011 and the lowest also in 1997 (0.06).

Specifically, VAT performance/buoyancy as shown in figure 1 and appendix 1 was unsatisfactory (less than 1) in the years 1995, 1997, 1998, 1999, 2004, 2008 and 2012; but performs well (buoyancy >1) in 1996, 2000-2003, 2005-2007, 2009-2011 and in 2013 and 2014. With respect to CGT, its performance was unsatisfactory in 1997, 1998, 2003-2004, 2006, 2009 and 2012 but does well in 1995, 1996, 1999-2002, 2005, 2007-2008 and in 2010, 2011, 2013 and 2014. In terms of number of years, the two tax systems perform well in 13 out of the twenty years considered (65% pass rate).

The effect of outliers in research was taken care of by logging the tax buoyancies and the trend illustrated in figure 3 in comparison with the standard of 1. The performance of the two types of taxes oscillates between satisfactory performance (buoyancy ≥ 0) and performance below expectation (buoyancy ≤ 0). The figure reveals clearly that VAT performs slightly better in terms of contribution to economic growth in Nigeria than CGT. These findings have no precedent in Nigerian literature as it is the pioneer study on the concept.

Figure 3: Logged Tax Buoyancy of VAT and CGT



Source: Authors' Drawing, (2016).

Tax buoyancy approach provides a year by year performance scoring of taxes and is thus preferable and assume supremacy of understanding/interpretation for policy direction compared with the traditional method which gives a blanket/sweeping generalization of statistical insignificant effects for VAT and CGT.

While the traditional approach is based on benefit received theory since he who buys the affected (VATable products) or involved in the exchange of assets (CGT) pays accordingly, tax buoyancy approach is hinged on the expediency theory.

5. CONCLUSION AND RECOMMENDATIONS

Having established the theoretical base of expediency and benefit received theory for buoyancy and traditional approaches, the conclusions reached was that Nigeria revenue generation drive through VAT while CGT has not been adequately harnessed. This is because revenue from these types of taxes was low compared to other tax types (PPT and CIT) (see appendix 1). Going by this, the traditional approach reveals that PPT and CIT exerts significant positive effect on Nigeria's economic growth (they contribute more revenue) while VAT and CGT have insignificant effects on Nigeria's economic growth.

Buoyancy approach reveals year by year performance for VAT and CGT such that both types perform satisfactorily (tax buoyancy ≥ 1) in more years (13 out of 20) than years when performances were unsatisfactory (7 out of 20 years). Buoyancy approach to evaluating tax systems is better than the traditional approach in terms of offering policy direction and planning strategies. This means that both VAT and CGT also contribute to economic growth but in a mixed manner such that the performance were good in one year and were unsatisfactory in the following year and vice versa from year to year

Based on the conclusions reached, it is hereby recommended as follows:

(i) Nigeria government should double its efforts on improving CGT source of revenue due to its promising revenue growth potentials on the economy. The same goes for VAT.

(ii) The buoyancy approach to evaluating tax systems should be more emphasized but used to complement the traditional approach to aid government tax planning especially on year by year basis.

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Table 2: Tax Buoyancy Results

YEAR	VAT	CGT	GDP	GDP DEFLATOR %	REAL VAT	REAL CGT	REAL GDP	TAX BOUYANCY VAT	TAX BOUYANCY CGT	Log (TAX BOUYANCY VAT)	Log (TAX BOUYANCY CGT)
1994	7,261	0.079	69,147	31	234	0.00255	2230	-	-	-	-
1995	20,781	0.109	105,223	113.1	183	0.00096	930	0.37	1.07	(0.1440)	0.0094
1996	31,000	0.288	139,085	32.7	948	0.0115	4253	1.16	2.28	0.0221	0.1192
1997	34,000	0.376	2,801,973	1	34000	0.376	2801973	0.05	0.06	(0.425)	(0.3993)
1998	36,900	0.456	2,708,973	-5.7	-6473	-0.08	-475258	0.97	0.95	(0.0037)	(0.0077)
1999	47,136	0.497	3,194,015	17.1	2750	0.0291	186785	0.95	1.05	(0.0080)	0.0069
2000	58.5	0.593	4,582,127	35.2	1662	0.017	130174	3.30	1.39	0.727	0.0474
2001	91.8	0.623	4,725,086	-0.3	-306000	-2.077	-15750281	1.53	1.02	0.0612	0.0027
2002	108,600	0.691	6,912,381	39.9	2722	0.0173	173243	7.98	1.00	0.3007	0.0004
2003	136,400	0.688	8,487,032	11.1	12288	0.062	764597	1.09	0.76	0.0042	(0.0406)
2004	159,500	0.741	11,411,067	-0.2	-797500	-3.705	-57055335	0.87	0.80	(0.0205)	(0.0326)
2005	178,100	0.874	14,572,239	22	8095	0.0397	662375	1.00	1.00	0.0002	0.0001
2006	230,400	0.996	18,564,595	17.3	13318	0.0576	1073098	1.04	0.72	0.0057	(0.0467)
2007	301,700	1.062	20,657,318	4.8	62854	0.2213	4303608	1.24	1.28	0.0306	(0.0083)

2008	404,500	1.094	24,296,329	10.8	37454	0.1013	2249660	0.85	2.09	(0.0241)	0.0185
2009	468,400	0.4935	24.794,239	-4.3	-108930	-0.15	-5766102	1.22	0.09	0.0289	(0.3567)
2010	562.9	1.0367	54,204,800	103.8	5423	0.01	522204	1.10	1.00	0.0137	0.0006
2011	659.154	9.3045	63,258,580	9.5	69385	0.98	6658798	1.00	8.26	0.0005	0.3057
2012	710.555	8.9166	71,186,530	9.3	76404	0.96	7654466	0.68	0.14	(0.0566)	(0.2836)
2013	802.684	19.656	80,222,130	5.9	136048	3.33	13596971	1.01	3.19	0.0008	0.1678
2014	802.965	2.6498	89,043,620	4.7	170844	5.64	18945451	1.65	2.11		

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