VALUE ADDED TAX, BUDGET DEFICIT AND ECONOMIC PERFORMANCE IN NIGERIA

BY

ATA Joshua Ochuko

SSC1608040

DEPARTMENT OF ECONOMICS
FACULTY OF SOCIAL SCIENCES
UNIVERSITY OF BENIN
BENIN CITY

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A PROJECT WRITTEN ÁND SUBMITTED TO THE DEPARTMENT OF ECONOMICS, FACULTY OF SOCIAL SCIENCES, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE DEGREE (B. Sc.) IN ECONOMICS OF THE UNIVERSITY OF BENIN, BENIN CITY.

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DECLARATION

I, ATA JOSHUA OCHUKO, do hereby declare that this project titled: "VALUE ADDED TAX, BUDGET DEFICIT AND ECONOMIC PERFORMANCE IN NIGERIA" is entirely my own work and composition. The work embodied in this project has not been submitted in Candidature for any degree and is not concurrently being submitted for any other degree. All references made to works of other persons have been duly acknowledged.

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Ata Joshua Ochuko **DATE**

(Project Student)

CERTIFICATION

We certify that this work titled, "VALUE ADDED TAX, BUDGET DEFICIT AND ECONOMIC PERFORMANCE IN NIGERIA" was carried out by ATA JOSHUA OCHUKO in the Department of Economics, Faculty of Social Sciences, University of Benin, Benin City, Edo State.

Dr. N.L. Arodoye
(Project Supervisor)

Date: _______________

Prof. E.I. Izilein
(Project Co-ordinator)

Date: _______________

Dr. C.A.U. Ighodaro
(Head of Department)

Date: _______________

DEDICATION

This work is dedicated to God Almighty, the Father of our Lord Jesus Christ and to all who have influenced my life positively. It is also dedicated to my dad, my mum my brothers, sisters and my all of my siblings.

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ABSTRACT

This paper examines the impact of value added tax and budget deficit on economic performance in Nigeria. The main objective of this study is to examine the interrelationship among value added tax, budget deficit and economic performance proxied as gross domestic product (GDP) in Nigeria during the period under study. The study utilized aggregate annual data from 1980 to 2018. The data was analyzed with the co-integration/ VECM method. The major findings are: the test for stationary using Augmented Dickey Fuller (ADF) which showed that all the variables except budget deficit were not stationary in levels but were all stationary in first difference. The Johansen-Juselius co-integration techniques were employed in testing for long run equilibrium relationship among the variables and the results indicated that co-integrating relationship was found among the variables. The coefficient of determination reveals that about 88% of the systematic variation in the dependent variable (GDP) is explained by the five independent variables which are value added tax, budget deficit, exchange rate, consumer price index and real interest rate. Also, the vector error correction model (VECM) shows that about 22% of the discrepancy between the actual and the long run or equilibrium value in the real gross domestic product is corrected or eliminated each year. Furthermore, the result revealed that value added tax, budget deficit, and exchange rate has positive and insignificant effect on GDP in Nigeria, while consumer price index has positive and significant impact on GDP in Nigeria based on the magnitude and the level of significance of the coefficient and p-value. The result also reveals that there is long run relationship between value added tax, budget deficit and gros domestic product as evidenced by the VECM. The paper concluded that Government and policy makers should carefully study the present state of the economy and properly estimate the effects of various alternative policy measures of financing fiscal deficits. And also government should supervise the collection of VAT revenue to ensure orderly, fair and equitable dealings in the collection of VAT revenue and to forestall illegal deals by privilege insiders so as to raise the revenue as effectively and efficiently as possible.

CHAPTERONE

INTRODUCTION

1.1 Preamble to the study

The major aim of government in most developing countries is to stimulate growth and development that will reflect in the lives of its citizens, providing security and enabling environment for business to strive. In the light of this, the subject of taxation and budget deficit as it relates to economic performance cannot be overemphasized. They appear to be part of the major subjects debatable in the field of public finance. The mobilization of resources to provide long term and sustainable growth is an essential policy option available to developing countries such as Nigeria, One of the dominant economic concerns in the current decade is the tenacity and size of the government budget deficits. The reason for this concern varies from the general public feelings that it is irresponsible for government to live beyond its means". Deficit budget is a famous instrument of fiscal policy used to increase the rate of economic performance of a country. Deficit as a means of financing was introduced in Nigeria after the civil wars, oil crisis and current financial and economic issues. Since independent, over 85% of Nigerian budget are on deficit (Akinmulegun)

However, despite the extended expansion of government expenditure in Nigeria over the years, the expected level of economic development is not been achieved as Larger percentage of the Nigeria citizens are still living in chronic poverty, persistent high mortality rate, low life expectancy due to inaccessibility to standard medical facilities; poor road network, shortage of food, and embarrassing high rate of high rate of unemployment (Ogunleye and Simon) [2].

Sequel to these, government resorted to budget deficit to fill the resource gap. Notably, many economic policies of the government, including the well celebrated Structural adjustment programme (SAP) of 1986 were implemented with the help of budget deficit. Not only this, the financing of the so called oil subsidy, the perennial in security problems as well as other engagements of the government such as the 2011 and 2015 general elections were financed courtesy budget deficit (Akinmulegun). Budget Deficit in this context refers to a situation where government expenditure exceeds government spending in the process of ensuring economic performance (Monogbe, *et al)*. In order to measure the extent to which government has borrowed, it requires that all revenue and expenditure be taken into account so as to ascertain its deficit or surplus. In ability of the government in paying up her debt transpires increases debt servicing cost.[3]

Meanwhile, series of empirical studies has been done on this subject matter and quite a number of results emerged. For instance, Ricardian Equivalence Theorem emphasis that increases in the budget financed by fiscal spending will be matched with a future increase in taxes and so they leave interest rates and private investment unchanged Banerjee, *et al*. [4]. That is, In an attempt to repay the borrowed fund, tax which was cut in the previous years will eventually be raised higher than what was supposed to be paid earlier which himplies that the accumulated private savings during increase in government spending will be used in setting off the borrowed fund in the future. The choice is therefore between taxes now or tax later.

However, the Keynesian economics opined that there is a positive nexus between budget deficit and economic performance. They however argue that budget deficit stimulate domestic production, trigger aggregate demand, increase level of savings , promote investment trends at any given level of interest rate and hence crowd in private investment.

A feasible and effective Tax system is the most imperative instruments to appropriately channel resources to the government coffers. An ineffective tax system will result in seeking for domestic and foreign borrowing especially when other sources of government revenue are inadequate to augment revenue from tax. Hence, insufficient to fund public expenditures.

Overtime, this has been the case of Nigeria and other developing countries cause for always running on budget or fiscal deficits, making the economy volatile, debt ridden and at the mercy of other nations if not properly managed.

Decades ago the Nigerian government introduced the National Tax Policy (NTP). This policy was geared towards shifting from direct to indirect taxation in Nigeria. The idea of introducing VAT was recommended by a study group that was set up by the federal government in 1991 to review the then exiting tax system as a replacement of sales tax.

Value Added Tax (VAT) has become a major source of revenue in many 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, 2000).

The Nigerian tax system has not been able to perform the expected role of revenue generation and regulation of income redistribution. This stemmed from the structural and administrative defects of the tax system. The machinery and procedures for implementing tax systems are inadequate resulting into tax evasion and avoidance by most individuals and institutions. On the other hand, the need for more sources of revenue for the government cannot be over emphasized.

This period is chosen given that it is a mix of 15 years of military government and 24 years of civilian or democratic government.

This work is an attempt to examine and analyse the effectiveness of budget deficits and value added tax as a fiscal tool for economic stabilization and growth in Nigeria. Economic stabilization implies actions aimed at preventing or reducing erratic movements in magnitude of major economic development indicators or variables. Stabilization policies seek to control the growth of income, employment, prices, debts, balance of payments, output, etc. Specifically, this work is appraising budget deficits and value added tax in relation to economic growth, unemployment, balance of payments, inflation and per capita income – all of which are economic development indicators and by extension, reflects the performance of the Nigerian economy.

1.2 Statement of the research problem

For more than a decade Nigeria has been struggling to generate adequate revenue to meet her public expenditure which as one of the reasons led to the inception of the value added tax as a replacement of the sales tax to augment total tax revenue in order to improve the country's economic performance. Notwithstanding this development, Nigeria continues to face the problem of huge amount of budget deficit on a yearly basis and hence, the accumulation of domestic and public debt as a result of deficit financing.

Budget deficit and value added tax as a fiscal tool has been an effective tool used in improving economic performance as seen in most countries when optimally utilized. It is yet to bring about any noticeable change in the performance of the Nigerian economy. In 2018, Nigeria had a budget of total expenditure of N9.12 trillion to be funded by a total revenue of N7.17 trillion composed of tax revenue of 5.32 trillion (VAT N1.108 trillion) and a fiscal deficit of N1.95 trillion. (CBN Statistical Bulletin and budget office). It is expected that an increase in tax revenue as a result of increase in VAT will increase economic performance so also an increase in budget deficit if optimally utilized but the results in Nigeria has proven otherwise. The question is why is it so?

It is for this reason that this study based on empirical data, attempt to assess VAT's reliability as an effective revenue generation means for the nation's public use and its impact on Nigeria economy likewise the effect of budget deficit on the development of the nation's economy and also to assess the interrelationship that exist among them.

1.3 Study questions

I. Is the value added tax significant in the performance of the Nigerian economy ?

II. Is the budget deficit significant in the performance of the Nigerian economy ?

III. Is there any interrelationship among value added tax, budget deficit and economic performance?

1.4 Objectives of the Study

The main objectives of the study are as follows

i. To assess the interrelationship among the value added tax, budget deficit and economic performance in Nigeria.

ii. To examine the impact of value added tax on economic performance in Nigeria

iii. To investigate the relationship between budget deficit and economic performance in Nigeria

1.5 Research Hypothesis

The following research hypotheses were formed on the basis of the research questions as a frame work for the study.

i. value added tax does not significantly affect Nigeria's economic performance

ii. Budget deficit does not significantly affect Nigeria's economic performance

iii. There is no interrelationship among value added tax, budget deficit and Nigeria's economic performance

1.6 Significance of the study

This research attempted to assess the impact of value added tax and budget deficits and economic performance proxied as Gross Domestic Product (GDP. This study will aid government and other policy makers with the current trend associated with this study in making informed decision for the benefit of the society and economy at large. It will also add to the existing works of related literature.

1.7 Scope of the Study

The researcher considered value added tax revenue, gross domestic production as proxy for economic performance and budget deficit of the Nigerian economy from the periods of 1980 to 2018 due to the availability of sufficient data. The research aim to analyze the impact of value added tax revenue and budget deficit on economic performance and also to ascertain the relationship that exist among them.

The past 40 years central bank of Nigeria (CBN) and Federal Inland Revenue Service (FIRS) reports from 1980 to 2018 of the country was used to collect data for this research work.

1.8 Limitations of the study

The study was essentially based on secondary data; it is well known that secondary data has its own limitations. Official statistics may reflect the biases of those in power therefore limiting the information that can be found. The data may lack authenticity given the data collation and storage system of the country which will make checking for accuracy of the data almost impossible.

The researcher also faced the problem of contradictory data from different data sources and some important data where not found as the required data for the study where historical in nature.

However, the inaccuracy of the data was minimized and these limitations in no way negate the findings of the study and offer scope for further research in future.

1.9 Organization of the Study

This work is organized into six sections. Following this chapter one is chapter two which comprises of the overview of the Nigerian tax system, budget deficit and models of economic growth. Chapter three will take care of the theoretical and empirical literature reviews. Section four is made up of the theoretical framework, the methodology adopted, the empirical specifications of the model, estimation techniques and the sources of data. Chapter five will be the presentation of results obtained and the analysis while chapter six will be for summary of findings, recommendations, limitations of study and conclusion

CHAPTER TWO

BACKGROUND TO THE STUDY

2.1 Structure of the Nigerian Tax System

The Nigerian Tax System has undergone significant changes in recent times. However, the tax system is basically structured in such a way as to contribute to economic growth through income generation. On the basis of incidence, taxes can be structured into direct and indirect. There are different components of direct taxation. These include the personal income tax [PIT], petroleum profit tax [PPT], companies' income tax [CIT], educational tax [ET]. The PIT is currently regulated under the Personal Income Tax Act of 2004. The PPT is regulated by the Petroleum Profit Tax Act [PPTA] of 1990. PPT is charged on the profit of a petroleum company in the upstream sector of the industry. Companies in Nigeria are taxed under the Companies Income Tax Act introduced in 1961 with modifications in 2007. The administration of the CIT is vested on the Federal Inland Revenue Services. Education tax in Nigeria is under the regulation of the Education Tax Act No. 7 that was promulgated in 1993. The tax is payable by all companies at the rate of 2 percent of the assessable profit defined in the Company Income Tax Act. Therefore, assessment of education tax and companies' income tax are done concurrently.

The different prominent components of indirect taxation in Nigeria include, Value Added Tax [VAT] and Custom and Excise Duty [CED]. VAT is regulated by the Value Added Tax Act [VATA] of 2007. The Nigerian VAT system is destination based, which means the tax is levied on goods and services consumed within the tax jurisdiction. The implication of this is that VAT imposition is designed to stimulate export growth [Desai and Hines (2002)]. In Nigeria, the current tax rate chargeable is 7.5 percent on goods and services purchased but the tax payer can claim credit for input tax when such goods are sold. The CED is regulated by the Custom and Excise Management Act of 1990. The duty is chargeable on all goods and services imported into Nigeria. The tax is administered by the Nigeria Custom Services and is also referred to as import duties. Currently, the duties ranged between 2.5 percent to 100 percent depending on the product.

The Nigeria tax system, like any tax system, is a tripartite structure which comprises of: Tax Policy, Tax Legislation and Tax Administration. Tax policy forms the basis for tax laws while tax administration is the implementation of the tax laws. This shows that in a bid to establish an effective and efficient tax system that will make taxation the pivot for national development, appropriate tax policies and legislations should be put in place and adequately implemented.

The objective of a tax system is to:

- promote fiscal responsibility and accountability
- To facilitate economic growth and development
- To provide the government with stable resources for the provision of publicgoods and services
- To address inequalities in income distribution
- To provide economic stabilization
- To correct market failures or imperfections

The National Tax Policy: is a document which sets broad parameters for taxation and ancillary matters connected with taxation. It is a clear statement on the principles governing tax administration and revenue collection. It therefore, provides a set of guidelines, rules and modus operandi that would regulate taxation in Nigeria.

The objectives of the National Tax Policy are to address the myriad of problems bedeviling the Nigerian tax system. It is aimed at creating a tax system that will contribute to the well-being of all Nigerians and taxes which are collected by Government, should directly Impact on the lives of the citizens. This can be accomplished through proper and judicious utilization of the revenues collected by government. The tax system, as envisaged by the National Tax Policy, is expected to meet the following objectives:

- To promote fiscal responsibility and accountability
- To facilitate economic growth and development
- To provide the government with stable resources for the provision of public• goods and services To address inequalities in income distribution.
- To provide economic stabilization.
- To pursue fairness and equity.
- To correct market failures.
- The Policy document was launched and given credence to in April 2012.
- However, in a bid to give legal backing to tax policy, there is need to fully crystallize its tenets into more tax laws enacted by the national assembly.

Tax Legislation Laws refer to a whole body of enacted acts of legislation. In the context of taxation, it is a codified system of order that describes the legal implications of taxation, i.e.

government levies on economic transactions. Tax laws provide a well-defined legal backing to the administration of each

- tax type States in clear terms the applicable rate,
- Tax laws stipulate what constitutes offence and the appropriate sanctions to each offence.
- They enshrine best practices in terms of ethical and professional conduct

Tax Administration in Nigeria: The administration of taxation in Nigeria is vested in the various tax authorities depending on the type of tax under consideration. Broadly, there are three categories of tax authorities, namely: Federal Inland Revenue Service, State Internal Revenue Service, and The Local Government Revenue Committee. The enabling law in respect of each type of tax will normally contain a provision as to the body charged with the administration of the tax. Each of the above mentioned tax authorities have their distinct composition, powers and functions.

2.1 Value Added Tax and Economic Growth

For the first two decades after Nigeria independence, the economy was relatively buoyant as a result of favourable balance of payments and the oil boom. The government somehow neglected revenue from taxation especially from the real sectors namely agriculture and manufacturing sectors as a result of large revenue from sales of crude oil. The global oil glut adversely affected the revenue position of Nigeria, There was over 60% drop in oil price (it was below $40per barrel). This was unanticipated by the government and resulted in over 80% fall in the yield (spread) per barrel of oil produced in Nigeria, steep decline in the country's revenue even down to recent times, 2016 budget deficit of over ₦2trillion, continuing devaluation of the

Naira, slowing Gross Domestic Product (GDP) growth, reduced inflow of foreign direct investment, rising inflation and growing unemployment (Gupta, 2016).

Consequently, the government economic team became reactive in behaviour. A number of economic reforms including tax regime reforms have been pursued by the government. As part of the efforts put in place by the Government to improve the mode of finance, a study group on indirect taxation was set up by the Federal Ministry of Budget and Planning in April 1991.

Among other things, the aim was to study how to improve the administration of indirect taxes in Nigeria. It was this study group that carried out the feasibility study of Value Added Tax and came up with a firm recommendation in November, 1991 that Value Added Tax should be introduced in Nigeria. After two years of preparatory work, a Modified Value Added Tax (MVAT) committee was set up in 1992 to undertake preliminary work for the introduction of the new tax. The committee was later to work in close collaboration with the Federal Inland Revenue Service in 1993. The latter was to take over the administration of the new tax which was scheduled to come on stream as Value Added Tax (VAT) by first September, 1993 but eventually came on stream on first December, 1993 by Decree No. 102 of 1993. By the introduction of Value Added tax (VAT), it was intended that government revenue priorities would move away from crude oil sales, oil royalties and petroleum profit tax, all of which are vulnerable to international petroleum price fluctuations, to a more stable internally generated revenue services but the way and manner these policies and plans were implemented by the government as proved that they are less of a priority.

The essence of tax reforms in both developing and developed countries of the world is the reduction or eradication of budget deficits through appropriate restructuring of the tax system to attract higher revenue or to improve the revenue elasticity or buoyancy of the tax structure. Tax reform is therefore a deliberate design to increase revenue, improve efficiency, and promote equity (World Bank, 1991).

Value added tax (VAT) is simply called the goods and services tax (GST), it is levied on the value added that results from each exchange. It is an indirect tax collected from someone other than the person who actually bears the cost of the tax. It was invented by a French economist, Maurice Leave in 1954 and was first introduced in France in April, 10, 1954.Value Added Tax (VAT) is one of the most popular taxes around the world. In sub-Saharan Africa for example, VAT has been introduced in Benin republic, Cote d" Ivoire, Guinea, Kenya, Madagascar, Mauritius, Niger republic, Senegal, Togo. Evidence has shown in these countries that VAT has been an important contributor to total government revenue.

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 those countries respectively. Indonesia introduced VAT in 1983 and by 1988, the ratio of revenue GDP has raised to 4.5% (Bogetic and Hassan 1993).

The impressive performance of VAT in virtually all countries where it has been introduced strongly influenced the decision to introduce it in Nigeria in 1993.

The main reason for the popularity of VAT is that it provides a buoyant revenue base that usually yields significantly more revenue than other tax on consumption. It is relatively easy to administer and difficult to avoid. The yield from VAT is a fairly accurate measurement of the growth of an economy since purchasing power increases with economic growth.

Over the years, revenue derived from taxes has been growing very lowly and it seems that no significant physical development actually took place. The impact of tax revenue on the poor is not being felt. Inadequate tax personnel, fraudulent activities of tax collectors and lack of understanding of the importance of tax by tax payers are some of the problems linked to the Nigerian tax system.

Value Added Tax (VAT) is based on the general consumption behaviour of the people. It is expected to boost government revenue with minimal resistance from the tax payers. It was also believed that VAT was introduced among other reasons to serve as means of avoiding taking loans from international agencies for funding the countrys budget and other developmental projects.

Contrary to the peoples beliefs, a rundown of government annual expenditure from 1970 (at the end of the Nigeria–Biafra war) to 2014 shows that the government ran annual budget deficits for 39 years (even after VAT introduction in 1994) which has not translated into a viable economic performance in terms of price stability, infrastructural development and growth that guarantees employment creation.

Two questions begging for answers are: How has the VAT helped in minimizing Nigerian government borrowing (budget deficit)? Can it be concluded that at 5% Vatable rate in Nigeria that VAT revenue is productive as it regards to the tax potential of the country?

Notwithstanding the uncertainty of the answers to the above questions, The federal government of Nigeria is keen on making more money and has decided the people have to pay for it by way of an increase in value added tax. VAT increase is coming against the background of political and economic uncertainty occasioned by long-standing corruption, poor economic management and exacerbating budgetary financing.

The recent increase in the Value Added Tax as agreed by the federal executive council on the 11th of September 2019 from 5 per cent to 7.5 per cent would enable the Federal Inland Revenue generate over N1.95tn in VAT revenue, investigations have revealed. The N1.95tn, according to findings, it is expected to be generated from this current year, taking effect from February 1st. 2020.

There is obviously a gargantuan hole in the country's 'purse'. The World Bank recently noted that fiscal deficits in Nigeria will likely widen further due to increased pre-election spending and sustained revenue shortfalls. Because the economy remains dependent on the 'minute' oil sector, which is less than 10 per cent of the GDP for the bulk of its fiscal revenues and foreign exchange earnings, this makes the country's balance of payments and government budgets vulnerable to volatilities in oil prices. For a government that has increasingly financed its fiscal deficit from borrowings, there is no doubt that it needs more innovative approaches to scaling up its revenue capacities to meet its growing funding commitment and for better economic performance.

2.2 Budget Deficit and Economic Growth

Budget deficit is an economic situation where current expenditure exceeds current expected income. Budget deficits is said to be effective if it realizes its goals. This means that it is a means to an end and not an end in itself. The end in this situation is ensuring the stabilization of prices, economic development and hence an improvement in the standard of living. Given that it is not an end in itself; its usefulness depends on its ability to achieve the goals which the policy architects set out. In Nigeria, government has always relied more on fiscal policy as a key to solving her economic issues. These policies are anchored on Keynesian economic assumptions of increasing or reducing government spending and reducing or increasing taxes and subsidies. In the 1980s, federal government expenditure had grown significantly resulting in fiscal predicaments, inflation and other economic crisis. The low level of private sector driven development, however, led to public sector control of the economy, facilitated by growth in Nigeria's oil sector. Consequently, through the austerity measures implemented in 1982 and Structural Adjustment Programme (SAP) introduced in 1986, the country drastically reduced public expenditure by government as a component of its stabilization and adjustment Programme. These cut backs in public expenditure resulted in unmatched economic and social costs as human resource development was abandoned and with adverse long-term development costs (Oyinlola and Adam, 2003).

For over thirty seven years, between 1980 and 2016, the nature of public expenditure operations of the Nigerian government had resulted in deficits in 35 years and surpluses in two years (1995 and 1996). In spite of these and the eventual implementation of SAP, several problems and constraints in the Nigerian economy are still with us. Worse among them are the continued heavy reliance on the oil sector as the main source of foreign cash inflow and government revenue, the twin evils of inflation and unemployment, the burden of both external and internal debts, the disturbing issue of low productivity in agriculture, manufacturing and the economy in general. This has been attributed to some factors which include social and religious crisis, mismanagement of available resources, corruption, fall in the price of oil in the world market creation of states and local governments that are not economically viable and unprecedented increase in economic activities. This has made the incidence of fiscal deficits inevitable (Egwaikhide et al, 1994 and CBN, 2006). It is worthy of note that since the beginning of civilian rule in 1999 and post economic crisis of 2008, output growth in Nigeria has improved significantly. The last fourteen years spanning from 2000 to 2014 witnessed average growth rate of about 6 percent (CBN, 2015). However, economic growth has not yielded any appreciable decline in unemployment and poverty prevalence despite the huge fiscal deficits by the federal government. From the fore going, it becomes necessary to appraise Nigeria's fiscal deficits since1980 to 2019 with a view to finding out its contributions in the development efforts of the nation.

2.3 Fiscal Policy and Growth

The ambiguities delineated above can be found in the literature that has explored the effects of fiscal policy on growth. Models of the NGTs have stressed the role of government policy as a key determinant of long run growth. Using an extended AK model, Barro (1990) found that there is a fraction of government expenditure and a tax rate on output that maximises growth and welfare. The main hypothesis in Barro's model is that government expenditure is of the kind that increases productivity in the private sector of the economy (government consumption expenditure or more exactly unproductive government spending is missing from the analysis). However, since government expenditure must be financed, it requires distortionary taxation. If the size of government is small the positive effect of expenditure on private productivity dominates the negative effect of taxation.

Subsequently, many models have explored the link between taxation and growth. Rebelo (1991), Milesi-Ferretti and Roubini (1998a, b), Devereux and Love (1994), Pecorino (1994), Turnovsky (2000), Devarajan*et al*. (1996), Kocherlakota and Yi (1997), Bleaney*et al.* (2001), Peretto (2003) are only some examples of an expanding literature. In an endogenous growth framework these studies show that the equilibrium growth rate depends on the structure of taxes, which generally are growth-reducing. All models imply that taxation has distortionary effects on growth and as is familiar from intertemporal Ramsey-type models (Chamley 1981, 1986), these distortions are higher if it is physical capital income that is to be taxed. This is because a tax on capital income, in a growth setting, induces distorsions by reducing the incentives to save and invest with direct effects on the long run growth rate.

However, the standard outcome in public finance that taxation should be levied less on physical capital and to a greater extent on labour is no longer valid. In some classes of models in which both factors − physical and human capital − can be accumulated taxes levied on both factors can have a negative impact on growth (Milesi-Ferretti and Roubini 1998a). So the only taxes that are not growth-reducing are lump sums as well as taxes on consumption (when in the model labour supply is exogenous).

A limit of the majority of these models is that they investigate the effects of taxes without taking into account its counterpart that is government expenditures. If expenditure is productive, such as expenditure on education, R&D, defence, and infrastructures, taxes are not necessarily growth reducing (Jones, Manuelli and Rossi 1993, Turnovsky 1996, Capolupo 1996, 2000, Denaux 2007).

With endogenous labour supply, Turnovsky (2000, p.199), has shown that, since an increase in the tax-financed fraction of government consumption induces workers to devote a large fraction of their time to work, it can increase the long run growth rate. In a recent paper

Peretto (2003) shows that taxation on labour income and on consumption has no impact on the steady state. Both kinds of taxes have only a *level effect* and the impact on growth rates comes mainly through taxes on assets and corporate income.

This brief summary of the literature makes it clear that a firm conclusion on the impact of policy is not yet well settled. Changing some assumptions of the model as well as modes of government financing can lead to different effects on the performance of the economy. Most of the empirical evidence on public policy is based on the use of Real Business Cycle techniques. The approach involves specifying explicit theoretical models which are then calibrated and parameterised so as to derive quantitative implications (see McGrattan and Schmitz [1999] for a review of evidence based on this approach). In general, however, what emerges from these studies is that the adverse effects of different taxes on the equilibrium growth rates rank in terms of distortionary impact according to the following sequence: tax on physical capital > tax on wages > tax on consumption > lump sum taxes (Turnovsky 2000).

On the econometric side the findings are not more reliable than quantitative analyses with results that are extremely mutable. The econometric finding of Barro's seminal work is in contrast with his theoretical result: government expenditure is negatively correlated with growth. While some studies show negative effects of government expenditure and taxation (Fölster and Henrekson 1999), others open the possibility that the effects may be positive (Easterly and Rebelo 1993, Fisher 1993). Yet, while some works reach agnostic conclusions (Agell*et al*. 1997), others confirm *exactly* the prediction of Barro's (1990) model with public policy. We refer to the paper by Kneller *et al.* (1999). The authors show that if the budget constraint is specified correctly, which means that both expenditure and taxation must be considered properly, then

Barro's predictions are accurate. Specifically, they find for a panel of 22 OECD countries (1970-1995) that: (i) distortionary taxation reduces growth while non-distortionary taxation does not; (ii) productive government spending enhances growth, whilst non-productive expenditure does not. Quite apart from robustness and significance of the results of this specific study, one point must be emphasised. When we want to evaluate the impact of taxation on growth, the regression must include expenditure variables otherwise the estimates will be biased by the omission of the variables, which might have positive effects on growth.

Bleaney, Gemmel and Kneller (2001) have replicated the results of the Barro model in a subsequent paper. They illustrate, without ambiguity, the positive long run effects of government policy on growth. However, more than other econometric tests, the estimate of the impact of government spending on growth is very problematic. First, different data quality may induce measurement errors in the estimating equation. Second, there are problems of endogeneity bias and omitted variables that can be correlated with the public sector. Some researchers have shown that when initial income is included in the regression the coefficient of government expenditure on GDP becomes positive. Third, there is a substantial identification problem, which derives from a two-way causation link between the size of the public sector and growth depending on supply and demand side relations. The first is crucial to identify the impact of public spending on growth but finding a set of instrumental variables that isolate the demand side effect seems quite impossible (Slemrod 1995, Agell*et al*. 1997). This lack of robustness in the empirical findings adds to the negligible effects of taxation found in the quantitative method with calibration of theoretical models (Stokey and Rebelo 1995).

Some robustness characteristics have emerged from time series studies. Kocherlakota and Yi (1996, 1997) provide evidence that tax measures significantly affect growth only if public capital expenditure is included in the regression. Their studies are worthy of further comments. The aim of the authors is at testing exogenous versus endogenous growth models using time series data. In the first study (1996), they regress GNP growth rates in the US, for the period 1917-1988, against lags of GNP growth rates, and seven policy variables, and test the hypothesis that the coefficients of the lags of these variables are zero. This may occur in the case of an exogenous growth model. The policy variables used are some measures of taxes, public physical investment and one measure of monetary policy (growth rate of M2). The sum of the slope coefficients for each policy variable was found to be non-zero, which implies that permanent changes in government policy have a permanent effect on growth rates. In the subsequent paper (1997) the two authors extended the analysis also to the UK using time series data up to 160 years and concluded that the results support endogenous growth models that emphasise constant return to reproducible factors at the aggregate level. The results therefore indicate, as theoretically expected, that policy variables exert a long and persistent effect on growth.

A final observation on cross-country regressions is that the majority of earlier studies reported non-robust correlation, either positive or negative, between tax − spending variables and growth and this does not allow any persuasive conclusion about the effects of government on growth.

However, successive empirical works have addressed the question of the impact of productive government spending (i.e., infrastructure, health, etc.) on growth. Whatever the endogeneity problems are, the findings seem to be robust and crucial especially for developing countries (Batina 1999, Canning 1999), Esfahani and Ramirez 2003).

The observation that historically many development miracles have been spurred by good government policy suggests that the methodology of growth empirics should be improved so as to settle satisfactorily this controversial subject.

2.4 Theories of Economic Growth and Growth Model

Economic growth is one of the most important notions in the global economy. Despite the criticism that the level and rate of growth does not always reflect the real level of a population's living standards, it remains the primary measure of prosperity. However, as a measure describing the dynamics of economic processes in the country it has some drawbacks. First, it does not record the volume of production obtained from the informal market, known as the "*black market*", which means that not all economic transactions are included in the total volume of generated output. In addition, economic growth does not take into account changes in the amount of time spent on work, which obviously affects the welfare of society. Also the measure of economic growth does not include the negative processes associated with economic activities, such as environmental pollution, its progressive degradation, or noise pollution.

However, despite all these drawbacks economic growth remains the primary measure of the socio-economic conditions of the citizens of a country.

2.5 Theories of Economic Growth

Analysis of the theory of economic growth begins with the name Joseph Schumpeter. Contrary to the classics, Schumpeter did not consider the accumulation of capital as the main driving force of economic growth. He assigned great importance to the concept of the entrepreneur-innovator, callinghim a "*hero of development*". In his opinion, the innovation and creativity of entrepreneurs determined economic development. Schumpeter was convinced of the unbalanced nature of economic growth and he attributed that process to the nature of the 'jump'. (Schumpeter 1934, p. 65).

Following the introduction of an innovation an entrepreneur receives great profits, but over time the competition copies the invention and the profits begin to decline.

The theory of economic growth proposed by Schumpeter is based on the assumptions of private property, a competitive market and the efficiency of financial markets that could support the production of new inventions. However, in countries lacking a democratic system, these conditions frequently are not fulfilled. Thus, Schumpeter's theory is addressed to the democratic and economically developed countries.

Another theory of economic growth was developed by Arthur Lewis. In his work he dealt with the problem of poor countries, but with a rich labor force (Lewis 1954, p. 3). Lewis shared the overall vision of classical economists, but did not always agree with their diagnoses and methods. The model proposed by Lewis assumes maintaining a low level of life in the short run. The savings thus obtained will increase the stock of capital, which in the long run will lead to the appearance of income growth. Thus, Lewis's model implies enlargement of the differences between countries in the short run as a condition for equalization of income levels in the long run (Lewis 1956, pp. 7-22).

Simon Kuznets developed a theoretical support for the Lewis's theory called "*Kuznets's curve*" (Kuznets 1955, pp. 1-28). Empirical studies confirmed the existence of economic disparities in the early stages of growth. Initially, when labour begins to abandon agriculture for industry, the differences were the greatest. However, as the concentration of factors of production took place in industrial centers, the differences tended to disappear. In addition, Kuznets noticed a positive association between the dynamics of economic growth and the increasing share of urban population in the total population (Kuznets 1976, p. 32).

Nonetheless Lewis's theory contains assumptions which are difficult to accept. The problem of poverty cannot be postponed until an unspecified future. After all, the increased accumulation of capital would be achieved by reducing consumption, and this would most affect the poorest people. A few years later, Walt Rostow created another theory of economic growth.

Rostow, like Lewis, made economic development dependent on the accumulation of capital, and distinguished five stages of development (Rostow1960, pp. 4-16). According to Rostow, the biggest problem for poor countries is to achieve the third stage, called "*take off*". Poor countries have a problem with the interruption of the "*vicious circle*" established through the years. Rostow proposed to break it by accumulating capital. However he realized that in cases where there was an absence of opportunities to increase internal accumulation, external support would be necessary. Also, according to Rostow, reconstruction of the economy from agricultural to industrial would allow for the diffusion of economic growth over the entire country. In 1971 Rostow added a sixth stage of economic development, called "*quality*" - characterized by the continuous improvement in the quality of goods and services (Rostow 1971).

2.6 Models of Economic Growth

Since the process of economic growth is based on great variety of factors that change over time, models of economic growth necessarily apply some simplifications. These simplifications consist in classification and aggregation of the causes of economic growth.

Mostly, in models of economic growth a depreciation rate for capital and growth of population are exogenous. In the case of the savings rate, the models can be divided into two groups. In the first group, the savings rate is exogenous, for example in the Harrod and Domar model, models that use the production function AK, and the neoclassical models of Solow and Uzawa.

The second group includes models with an endogenous savings rate, like the neoclassical model of Ramsey and the models of Kaldor and Pasonetti, which are based on the scientific achievements of Keynes. Models can be also divided according to the capital ratio. The Models of Harrod–Domar and the AKmodels assume its constant value. In turn, the ratio of capital/production in neoclassical models can change over time. Models of economic growth also can be divided according to the criterion of time. Long-term models are primarily used to determine the path of sustainable growth. They characterize a pattern according to which the economy should grow (Woźniak 2008, pp. 145-146).

Short-term models refer to the scientific achievements of Keynes. Their main purpose is to identify the possibility of having the level of actual production approach the level of potential output (Woźniak 2008, pp. 145-146).

2.6.1 Harrod–Domarmodel

Roy Harrod and EvseyDomar developed a model that sought the possibility for sustainable growth. They extended the short-term Keynesian model that assumes the instability of the capitalist economy (Harrod 1939; Domar 1946). In the model of Harrod-Domar growth is sustainable if three growth rates are equal: the actual growth rate, guaranteed growth rate, and natural growth rate. Harrod called such a situation the "*golden age*", whereby the achieved macroeconomic balance ensures the full use of capital and labor.

However, equilibrium requires equalization of savings, which are dependent on households and investments that are in the hands of the capitalists. Hence, that is difficult to fulfill. The savings rate is exogenous, i.e. established outside the model, and the same applies to growth of population, dependent on its natural dynamics. In addition, the model assumes a constant ratio of capital to labor, implying no possibility of substitution of factors of production. Thus, there is no mechanism to balance the three growth rates. Hence, the model of Harrod - Domar reveals two problems. Firstly, the growth of a capitalist economy at the guaranteed rate of growth with full employment is not possible. The process of economic growth is always accompanied by involuntary unemployment. Second, in a capitalist economy there is no convergence towards equilibrium. Thus, Harrod and Domar, by perversely seeking a dynamic equilibrium path, proved the unsustainable character of economic growth.

The economists grouped around Cambridge school of Economics tried to remedy the pessimistic vision flowing from model of Harrod - Domar.

2.6.2 Kaldor-passinetti Model

N. Kaldor and L. Passnetti introduced the functional distribution of income between profits and wages into their models, and they proved the possibility of economic growth with full employment of labor. They maintained the assumption of a constant ratio of capital, but at the same time they abandoned the assumption of a constant savings rate. In addition, Kaldor and Passinetti introduced different levels of the saving rate, which characterized every social group. The savings of the capitalists was greater than the savings realized by employees. The endogenous nature of the savings rate allowed for finding the path of sustainable development, which they found did not run on a "*knifeedge*”. In Kaldor’s model, if the savings rate of the employees is zero, the national economic growth depends on the profit rate of the capitalists (Kaldor 1963).

In 1962, Italian economist Luigi Pasinetti further developed Kaldor’s model. According to Pasinetti, if savings appear in the economy, their possession is associated with the rate of profit. This means that savings of employees generate interest, which is their income. In Pasinetti’s model, as in the case of Kaldor’s model, the economic growth depends on the profit reached by the capitalists. However, while Kaldor obtained this by introducing an assumption of zero savings of workers, Pasinetti did not have to make that assumption (Pasinetti 1962).

A good summary of the reflections on the models of Kaldor and Pasinetti can be found in Kaldor’s statement that ‘capitalists earn what they spend, and employees spend what they earn’ (Kaldor1955-1956). In turn, in Kalecki’s model the major role in the growth process is played by investments, not the level of realized savings. This is why Kalecki's model is called "*investment*", because according to him investments decide on economic growth in the long run (Kalecki1956).

2.6.3 Solow – Swan Model

Analysis of the neoclassical models of economic growth begins with the model of Solow - Swan. Robert Solow proposed a long term economic growth model in response to the unsatisfactory results derived from the model of the Harrod - Domar (Solow 1956). In the same year, American economist Trevor Swan presented a similar model (Swan 1956), which is why the discussed model is called the Solow – Swan model. Its main aim was to show that in the long run, an economy achieved sustainable growth. Then, the growth rate of income *per capita* was equal to rate of population growth. The two problems identified by the Harrod – Domar model instability of the economy and the impossibility of full use of the labor – were solved in the Solow – Swan model by introducing the assumption of substitution of factors of production, which in turn removed the assumption of a constant ratio of capital/production.

2.6.4 Uzawa Two-Sector Growth Model

In the early 1960s Japanese economist Hirofumi Uzawa presented a model of economy composed of two sectors (Uzawa1963). The first sector produces consumer goods, and the other capital goods. The model is stable when the ratio of capital/labor in the branch producing consumer goods is higher than in the branches producing capital goods.

2.6.5 Ramsey - Cass – Koopmans Model

Another neo-classical growth model is based on the work of Frank Ramsey, which concerned the problem of the optimal level of savings (Ramsey 1928). This was later developed by Cass and Koopmans and therefore is often called the Ramsey - Cass – Koopmans model (Cass 1965; Koopmans 1965). In the Ramsey model, the savings rate is endogenous and depends on the decisions of consumers. In addition, Ramsey does not refer to the economy of "*Robinson Crusoe*", where households are both producers and consumers of production. In the Ramsey - Cass – Koopmans model the results on steady growth rate are the same as these in the Solow-Swan model. In another neoclassical model, Diamond introduced analysis of the finite horizons. The life of households is divided into two periods. In the first period households receive wages. They spend them on current consumption and savings. In the second period, households do not earn. Current consumption is financed by accumulated savings from the first period. In the long run an economy reaches a stable state like in the Solow – Swan model (Diamond 1965).

Neoclassical models assume that the economy achieves equilibrium in the long run. In addition, they confirm the existence of convergence, which means faster development of poor countries in comparison with rich ones. The convergence hypothesis says that countries differ from each other only in theory of capital/labor ratio, and they have the same steady state. Hence, the economy with a lower level of income *per capita* will obtain a higher rate of growth. There are a lot of studies and publications on the convergence process between countries. Some of them confirmed the existence of absolute convergence between the selected group of countries, while others confirmed the conditional convergence between countries characterized by similar parameters.

2.6.6 Exogeneous and Endogeneous Growth Model

The opposite of exogenous growth models are models of endogenous growth. They set themselves the objective of explaining phenomena observed in the global economy. First, models of endogenous growth try to answer the question: why do the economies of individual countries produce much larger quantities of goods than they did it a hundred years ago? For example, according to P. Romer, this situation is the result of the increasing return on labor (Romer 1990). Secondly, models of endogenous growth try to explain the role of human capital in economic growth. Thirdly, they try to indicate the reasons for the deepening divergence between countries.

In endogenous models, the main determinants of economic growth are formed inside the model. The technical level of the economy is the result of investment decisions. Returns to factors of production are at least constant. Endogenous models use the AK production function, which is a linear function of technology (Rebelo 1991). In the simple AK model *per capita* variables grow at a fixed rate, regardless of the level of capital. Therefore there is no steady state and the phenomenon of convergence between the economies doesn't exist. The first models of endogenous growth were developed by Marvin Frankel and Kenneth Arrow. Frankel, in his model, tried to reconcile the neoclassical production function with the AK production function. According to Frankel, the neoclassical production function applies to individual companies.

However, the macro economy develops according to the AK function. This assumption is based on the introduction - to the production function - of the factor of externalities that reflect the level of economic development of the country (Frankel 1962).

On the other hand, Kenneth Arrow questioned the results derived from neoclassical models. According to him, conditioning the economic growth on exogenous variables is not very satisfying. Arrow assumes that the obtained knowledge is the result of a process defined as "*learning by doing*". Although, as Sala-i-Martin noted, Arrow's process would have better been called *"learning by investments*" (Sala-i-Martin 2000). However, despite the use of the production function with increasing returns to scale, Arrow's model does not make long-term growth dependent on the level of savings (Arrow 1962). Similar to the Solow – Swan model, economic growth in a steady state is determined by exogenous variables.

Arrow's views on the importance of human capital in the process of economic growth were shared by T.W. Schultz. In his article, Schultz criticized those economists that reject the problem of investment in human capital as a topic of economic analysis. Moreover, according to Schultz the costs for education, health and professional development are investments in human capital (Schultz 1961). Another model of endogenous growth was presented by Paul Romer. He introduced capital externalities into the neoclassical production function. Thanks to this operation the production function is characterized by increasing returns to scale of all factors of production and constant returns to scale of capital, and this assumption lays the foundation for the existence of endogenous growth.

However, in Romer's model the growth of the economy according to the AK production function requires the fulfillment of certain conditions. First, the size of externalities must be significant, otherwise the economy grows according to the Cobb – Douglas function. Moreover, Romer's model foresees the existence of the "*scale effect*", which is not confirmed by the data flowing from the individual economies (Romer1986). On the other hand, Lucas defined the value of the "*scale effect*" as capital *per capita*. Therefore, in contrast to Romer, Lucas did not have to make assumptions about the zero increase of labor (Lucas 1988).Robert Lucas proposed a model of endogenous growth according to which there are two sectors. According to Lucas, there are two types of capital too - physical capital used in the production process and human capital that affects the growth in productivity of both labor and physical capital. Thus a certain person with human capital equal h produces two times more goods than a person with human capital $h/2$ and two times less than a person with human capital $2h$. Lucas also takes into account the existence of increasing returns to scale, and like Romer refers to Arrow's concept of "*learning by doing*". However, in the case of Romer's model, the source of externalities was the accumulation of physical capital, while in Lucas's model the existence of externalities was based on the accumulation of human capital (Barro, Sala-i Martin2004). Lucas's model explains the differences in economic development between countries. Countries characterized by a low level of human capital grow more slowly than countries with considerable resources in this respect. In a further group of endogenous growth models, economic growth is achieved by the endogenization of technical progress, which is the result of a functioning R&D sector.

Endogenous technological progress can manifest itself in two ways. Firstly, it can be expressed by increasing the number of goods used in the production process. Second, endogenous technical progress is reflected by improving the quality of existing goods.

Paul Romer presented the model according to which technical progress, the main determinant of economic growth, is reflected in the increasing supply of intermediate goods. In Romer's model, economic growth is dependent on the level of human capital. Countries rich in human capital can develop very quickly, while the shortage of human capital can lead to economic stagnation. Thus, the model does not confirm the phenomenon of convergence between economies (Romer 1990). In the model of Aghion – How it technical progress is reflected in improvements in the quality of existing goods on the market. In contrast to Romer's model, the appearance of improved goods automatically replaces the "*old*" goods. Another innovation comes with a certain probability. Also, a countrywith more resources of educated people will grow faster than a country with
a lower level of human capital (Aghion, Howitt 1992).

The further work of Becker, Murphy and Tamura tried to determine the correlations between investments in human capital and population growth. They argued that countries which are poor in human capital are characterized by the presence of large families (Becker, Murphy, Tamura, 1990). Mark Rosenzweig presented similar conclusions in his work. According to him, countries with high income *per capita* are characterized by a low birth rate and a high level of human capital (Rosenzweig 1990).

CHAPTER THREE

REVIEW OF RELATED LITERATURE

3.0 Theoretical and Empirical Framework

3.1 Value added tax (VAT)

Taxation is the life wire of every nation and the level of development of any nation most times depends on the amount of revenue generated through taxation. Taxation is therefore, one among other means of revenue generation of any government to meet the need of the both the government and citizens. According to Ifurueze & Ekezie (2014), tax is “a compulsory levy imposed on a subject or upon his property by the government to generate the needed revenue for the provision of basic amenities and create enabling condition or the economic wellbeing of the society”. To them, the enabling environment created by government encourages the establishment of new business, survival of existing business and infrastructures provided is a key determinant of political, economic and social well structured tax system which provides government the needed fund for capital (infrastructure) and current (administrative) expenditure.

A good tax system comprises of the tax law, tax policy and tax administration. The Nigerian tax system is a good portfolio comprising of direct and indirect tax, status which regulate the various types of tax and their administration by both the Federal and Local Governments. Azubuike (2009) believes that the Nigerian system is still far from efficiency as it’s lopsided, dominated by oil revenue and pose a formidable challenges to its usage as a macroeconomic regulating tool. Tax reform became imperative in Nigeria because of the nature of its tax structure, which according to Anyanwu (1997) was complex, inelastic, inefficient, inequitable and unfair. Moreover, the country depended on import and export duties, while there were no opportunities to generate revenue through consumption-based tax such as VAT. The dependency of the country on taxes relating to foreign trade activities had made the revenue base of the country to be very unstable. In addition, the Nigeria's tax base was very narrow while the tax rate was very high.

Tax reform is the process of changing the way taxes are collected or managed by the government (en.wikipedia.org/wiki/taxreform). Tax reforms have different goals: some seek to reduce the level of taxation of all people by the government, some seek to make the tax system more progressive or less progressive. Others seek to simplify the tax system and make the system more understandable or more accountable (Wikipedia).

Bhatia (2009) enumerated the following as the theories of taxation: social political theory, the expediency theory, benefit received theory, cost of service theory and ability-to-pay theory. The theoretical foundation of tax reform is gotten from the Supply-siders. These are sets of economists who had their hay days between 1970 and early 1980s. The Supply-siders believed in the use of economic incentives to encourage production. They positioned that higher marginal tax rate will not only create disincentive to work, investment and saving but encourages tax avoidance and evasion, that reduces public generated revenue (Oriakhi & Ahuru, 2014). The leader of the group Arthur Laffer, using what is today as the Laffer curve showed that there is an optimum tax rate that both encourages savings, investment and labour supply, and at the same time motivate tax payment obligation. Thus, tax rate in excess of the optimum rate will be harmful to economic activities.

Another dimension to theory of tax reforms is the optimal tax reform theory. Under this theory, it is required that the best way to raise revenue is through taxing goods or factors with inelastic demand or supply, and that taxation relating to distribution and externalists or market failures should concentrate on identifying the source or origin of the problem. Thus, for distribution, we should look for the sources of inequality (for example, land endowments or earned incomes) and taxation should be concentrated there (Oriakhi & Ahuru, 2014). Regarding externalities, an attempt should be made to tax or subsidize directly the good or activity that produces the externality (Stern, 1988). Employing the optimal tax reform theory, Newbery and Stern (1987) applied a normative framework to analyze the impact of tax reform and evaluate both its administrative costs and its effects on social welfare.

According to Eftekhari, (2009) taxation has always been an issue for the government and taxpayers alike from the early years of civilization. The issue of taxation has generated a lot of controversy and severe political conflicts over time (Adebisi and Gbegi, 2013). According to its importance, several economic theories have been proposed to run an effective system. Taxes are generally classified under three different theories as given: ability to pay principle, benefit approach and equal distribution principle. However, in this paper is guided by the "ability to pay Principle".

3.3 Theories of Value Added Tax

I. Ability-to-pay Principle

As the name suggests, it says that the taxation should be levied according to an individual's ability to pay. It says that public expenditure should come from "him that hath" instead of "him that hath not". The principle originated from the sixteenth century, the ability-to-pay principle was scientifically extended by the Swiss philosopher Jean Jacques Rousseau (1712-1778), the French political economist Jean- Baptiste Say (1767-1832) and the English economist

John Stuart Mill (1806-1873). This is indeed the basis of „progressive tax," as the tax rate increases by the increase of the taxable amount. This principle is indeed the most equitable tax system, and has been widely used in industrialized economics (Adebisi and Gbegi, 2013). The usual and most supported justification of ability to pay is on grounds of sacrifice.

According to Adebisi and Gbegi, (2013) the payment of taxes is viewed as a deprivation to the taxpayer because he surrendered money to the government which he would have used for his own personal use. However, there is no solid approach for the measurement of the equity of sacrifice in this theory, as it can be measured in absolute, proportional or marginal terms. Thus, equal sacrifice can be measured as:

i. Each taxpayer surrenders the sane absolute degree of utility that s/he obtains from her/his income;
ii. Each sacrifice the same proportion of utility she/he obtains from her/his income;
iii. Each gives up the same utility for the last unit of income; respectively.

The economists are not unanimous as to what should be the exact measure of a person's ability to pay. The main viewpoints advanced in this connection are as follows:

II. Ownership of property

Some economists are of opinion that ownership of the property is a very good basis of measuring one's ability to pay. This idea is out rightly rejected on the ground that if a person earns a large income but does not spend on buying any property, he will then escape taxation. On the other hand, if another person earning some income but buys property, he will be subjected to taxation.

III. Tax on the basis of expenditure

It is also asserted by some economists that ability to pay should be judged by the expenditure which a person incurs. The greater the expenditure the higher the should be the tax and vice versa. The viewpoint is unsound and unfair in every respect. A person having a large family to support has to spend more than a person having a small family. If we make expenditure as the test of one's ability to pay, the former person who is already burdened with many dependents will have to pay more than the latter who has a small family. This is unjustifiable.

IV. Income as the Basis

Most of the economists are of opinion that income should be the basis of measuring a man's ability to pay. It appears very just and fair that if income of a person is greater than that of another, the former should be asked to pay more towards the support of the government than the latter. That is why in the modern tax system of the countries of the world, income has been accepted as the best test of for measuring the ability of a person to pay.

V. Benefits Theory

The theory states that the governments should levy taxes on individuals according to the benefit conferred on them. The more the benefits a person derives from the activities of the governments, the more he should pay to the governments. This principle has been subjected to severe criticism on the following ground:

Firstly, if the government maintains a certain connection between the benefits conferred and the benefits derived. It will be against the basic principles of tax. A tax, as we know, is compulsory contribution made to the public authorities to meet the expenses of the government and the provision of general benefit. There is no direct quid pro quo in the case of a tax. Secondly, most of the expenditure incurred by the government is for the general benefit of its citizens, it not possible to estimate the benefit enjoyed by a particular individual every year. Thirdly, if this principle is apply in practice, then, the poor will have to pay the heaviest taxes, because they benefit more from the services of the government. If more are collected from the poor by the way of taxes, it is against the principle of justice.

VI. The Cost of Service Theory

Some economists were of the opinion that if the state charges actual cost of the service rendered from the people, it will satisfy the idea of equity or justice in taxation. The cost of service principle can no doubt be applied to some extent in those cases where the services are rendered out of prices and are a bit easy to determine, e.g., supply of electricity, postal, etc. But most of the of the expenditure incurred by the government cannot be fixed for each individual because it cannot be exactly determined.

VII. Optimal Theory

The tenet upon which the theory of optimal taxation rests is that tax system in every society should be based on maximum social welfare function. In this direction, optimal theorists assume that social planners are utilitarian since they render public services that are expected to give the entire people in the society greatest happiness. According to Jerry Bentham, the postulator of utilitarian theorist, every activity of the government should provide the greatest happiness for citizens in the state. However, one of the criticisms raised against Optimal theory is that it limits the social welfare function to solely average utility. In other words it assumes that everyone in the society has similar preferences in consumption and public goods. This homogeneity assumption is erroneous (Ramsey, 1927; Stiglitz, 1987; Mirrlees, 1971; Passell, 1990; Tuomala, 1990; Salanie, 2003; and Kaplow, 2008). VAT in some form or other is in operation in more than 120 countries, because the Value Added Tax can take many forms, a country has to make a number of choices.

According to Shoup, “there are as many as 576 nominally possible combinations (Shoup (ed), 1990), all claiming to be VAT”. The basic decisions that need to be kept in view while designing VAT are:

i. Types of VAT: Consumption, Income and Gross Product.
ii. Principles of VAT: the Origin Principle and the Destination Principle.
iii. Methods of calculation: Subtraction, Tax credit or Invoice and Addition Method.
iv. Exemption and zero rating.
v. A single rate VAT or a VAT with two or more rates.

Moreover, the countries that have introduced the comprehensive VAT have shown a remarkable degree of unity in selecting among the possible combinations. Virtually all have adopted for the Consumption type of VAT based on destination principle with tax credit method and with multiple rate and tax exclusive method.

3.2.1 Consumption, Income and Gross Product VAT

The first and important decision is whether to introduce a tax on consumer goods only and not on capital goods. This is called as Consumption VAT. Another type strikes increases in the stock of capital goods. Its tax base is total of all income, Hence it is called as Income VAT. A still broader VAT includes outlays to replace old capital goods, This is Gross Product VAT.

I. **Consumption VAT**

If VAT is confined to consumer goods, it is known as Consumption type of VAT. In this case, the Value added by the firm to the goods and services purchased from others is subject to tax. The value addition can be on raw materials, intermediate goods or manufacture goods. It can also be extended to value addition at wholesaling or retail points. The final price, the price paid by consumers, has to cover all the values added at the successive stages. The base of the consumption VAT is the total private consumption in the country which is the chosen target for any form of indirect taxation.

The consumption type of value - added however, can in the process of computing the base, give rise to the possibility of obtaining a negative value-added for a given assessment period. Under such circumstances, the problem of refunding the taxes previously paid by the firm on its purchases arises. As an alternative, and in order to gain the administrative advantage of avoiding refunds of taxes previously paid, carry forward is some times allowed. In a closed and static economy, the sum of values added at various stages equals the aggregate of all retail sales. Since the stock of inventories remains constant in such an economy, the total value of sales to consumers at the retail stage can be fully captured through Consumption type of VAT. However, in a dynamic economy all economic activities are not reflected in this type of VAT. Since VAT is confined to consumption, it does not interfere with capital formation in any manner. In an open economy, the value added on goods produced abroad is not reflected in the value addition in the consuming country. Since the value added in abroad can not be directly taxed, a tax on imports or on the wholesale transaction immediately after importation becomes necessary. As a result of this the value added domestically exceeds the retail sales because of the consumption of imported goods. Similarly, in the case of exports, the value added by the producing country is not reflected in the retail sales. To strike a convenient balance, the normal practice is to impose a VAT on imports and exempt exports. The most attractive feature of Consumption VAT is that it is totally neutral to various methods of production, capital and current expenditure, savings and consumption. This quality of VAT enhances economic efficiency as it does not distort consumer's preference or producers' choice. This feature would perhaps justify the world wide popularity and acceptance of Consumption VAT.

II. **Income VAT**

The second important form of VAT is the Income variant which allows deduction only to the extent of depreciation on capital goods. The base of Income VAT is the same as that of a comprehensive income tax which imposes tax on consumption including investment and gives deduction for deprecation on capital goods. The Income VAT is used by Argentina, Peru and the State of Michigan and is approximated by Turkey's recently enacted VAT. Otherwise most of all the countries adopting the comprehensive VAT have chosen the Consumption type of VAT.

III. **Gross Product VAT**

In the Gross Product VAT, subtraction is given only for purchases of current consumption goods and not allowed for the replacement of capital goods. The value added in the case of Gross Product VAT, far exceeds the retail sales in a particular year. At present Finland, Morocco and Senegal impose a modified version. The main drawback of this form of VAT is, it disallows deduction of both purchases of capital goods and depreciation and discriminates strongly against the use of capital goods.

IV. **A Comparison Of The Three Variants**

It is clear that the Gross product VAT has the broadest base among the three variants and the Consumption VAT has the narrowest. The broadness of the Gross product VAT base is bought, however, at a potentially high economic price. By imposing a tax burden on gross purchases of capital goods without giving any relief even on depreciation, the Gross product VAT discourages investment. To the extent that business succeed in shifting at least part of their capital costs forward, taxing capital goods would result in cascading if the Gross product VAT uses the credit invoice method. By similar reasoning, these shortcomings, albeit to a lesser extent, are also present with Income VAT. While, the Consumption VAT, being a general tax on consumption, is economically the most neutral and is, therefore, generally regarded as the superior variant among the three. It is also the most widely adopted variant in countries that have a VAT.

3.2.2 Methods of Computation of VAT

There are several methods to calculate the value added by a firm. The three commonly used methods are Addition, Subtraction and Tax Credit.

Addition Method

This method aggregates all the factor payments including profits to arrive at the total value addition on which the rate is applied to calculate the tax. This type of calculation is used mainly with Income VAT. This method is not suitable for exempting exports and valuation of imports under the Destination principle. Another drawback of this method is that is does not facilitate matching of invoices for detecting evasion.

Subtraction Method

The value added by the firm is arrived at by subtracting total purchases from sales. This is the simplest method and at first sight it looks just like the Tax Credit method. In this method tax is collected by applying the rate on the value addition

Tax Credit or Invoice method

Tax Credit method is generally preferred to subtraction method for the facility it offers for calculating export refund. It allows for deduction of taxes paid on inputs from the taxes payable on sales. The tax payable is calculated by deducting the aggregate of the taxes indicated on the invoices received for the purchase of inputs from the tax to be paid on the sales. This method is also suitable even if intermediate firms in the chain of transactions are zero - rated. An important advantage of this method is that it readily allows matching of invoices preferably through computers which can detect tax evasion more efficiently.

3.2.3 Exemption and Zero -Rating

According to Tait "a linguistic quirk of the VAT is that 'exemption' actually means that the 'exempt' trader has to pay VAT on his inputs without being able to claim any credit for this tax paid on his inputs. On the other hand zero -rating means that a trader is folly compensated for any VAT he pays on inputs and, therefore, genuinely is exempt from VAT (Tait, 1998)". Exemption is usually given to an entire sale of a firm which is below a certain size. A trader whose goods are exempted has to pay all taxes on the inputs he purchases. But, he is not eligible to get Tax Credit on the inputs. Hence, this trader falls outside the VAT chain and treated as the final purchases. Thus, under VAT system 'exemptions' do not provide complete relief from the tax. Exempt traders need not register with the tax authorities nor keep records for VAT. So, exemption helps simply the administration of VAT.

Exemption relieves the exempt traders value added from the tax, but all his purchases including capital goods are taxed. Exemptions will there fore, increase the amount of tax finally paid on intermediate goods - opposite effect that the exemption was supposed to provide. In the case of final goods, exemption eliminates the tax on value added in the final stage only.

Zero-rating adopts a different approach by relieving the firm or product entirely of the tax burden which includes the taxes on the inputs which are collected at earlier stages. A zero -rated trader claims all the VAT on his inputs and bears no tax on his outputs and the purchaser of such a trader's sales buys the good or service free of VAT. The use of zero rates is justified when a good genuinely is to be freed from VAT. Across the country, when examined, it is found that zero rating is used much less extensively.

Study by Tait shows that some of the essential goods like food, medical services, drugs, education, housing, clothing, books, and news papers were zero rated. Thus, the zero rate technique is often applied to basic necessities as a way of relieving low income households o f some of the tax burden.

3.2.4 Rate Structure of VAT

VAT can operate either with a single rate or with multiple rates. Higher the number of rates, the more complicated the operation of VAT. The introduction of several rates complicates the administration of VAT. So, the easiest form of VAT to administer would be one with a single rate. But for various social-economic reasons governments have found it necessary to introduce multiple rate. But the number of rates should be limited. Many countries employ multiple rates in their Value Added Taxes. When multiple rates are used, in addition to zero rate, low rates prescribed for granting concessions. Generally, luxuries are taxed at a rate higher than the normal to curb consumption and make the tax structure more progressive. Such rate differentiation can achieve the objective of tax policy only at retail level in Tax Credit method when the commodity or service is finally passed on to the consumer. Multiple rates have no impact if they are applied at earlier stages as they only make the producer or wholesaler pay lesser tax on the value addition. The retailer subsequently gets a smaller tax credit against the standard rate which is invariably higher than the tax liability at earlier stages.

In contrast, under the Subtraction method, it is possible to apply different rates at each stage of transaction. With multiple rates there is a heavy burden on the retailer as he is required to keep a complete account of exempted goods, goods having concessional rates, standard rates etc. which increase the cost of compliance and even induces unintended evasion.

Some countries prefer single rate despite its inherent regressivity. About a half Of the total number of VAT operating countries now uses two to four rates. In place of a lower rate on a particular good, the taxable amount of that good, its tax base, can beset at a fraction of the actual value. The standard rate is applied then to that fractional value. Writing in 1972, Tait noted that "in Sweden this is the method adopted to lower the rate of VAT on buildings, the tax base for buildings is reduced to 60% of the market price and similarly the base for services, for example, water supplies, roads, bridges etc is reduced to 20% of normal".

3.3 Value added tax in Nigeria

VAT was introduced by The Federal Government of Nigeria in January, 1993. It was believed by many Nigerians that the tax was introduced as a means of avoiding taking loans from international agencies (Ochei, 2010 cited in Adereti, Sanni and Adesina, 2011).

According to analysts, the tax was intended to be a super tax to eradicate completely many other taxes related on goods and services.

VAT was then imposed on virtually all goods and services, whether produced or rendered in Nigeria or not. Exemptions however were granted in respect of medical and pharmaceutical products, basic food items, fertilizers, agricultural and centenary medicine, books and educational items, farming and transport equipment, etc. VAT effectively replaced the former sales tax, which, under the constitution, was supposed to be charged by states and not the Federal Government. Although very few literature exists on the subject of VAT in less developing countries, extensive studies have nevertheless been done on the alternation prominence of Indirect Tax in developing countries in general and Nigeria in particular. The core function of taxation as a revenue generating tool in developing countries has been studied by eminent scholars.

VAT is a consumption tax levied at each stage of the consumption chain and borne by the final consumer of the product or service. Each person is required to charge and collect VAT at a flat rate of 5% on all invoiced amounts, on all goods and services not exempted from paying VAT, under the Value Added Tax Act 1993 as amended (Adereti, Sanni and Adesina, 2011). Where the VAT collected on behalf of the government (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 (Oserogho and Associates, 2008). Where the reverse is the case, the taxpayer is entitled to a refund of the excess VAT paid or more practically, to receive a tax credit of the excess VAT from the government. All exports are zero rated for VAT, i.e. no VAT is payable on exports. Also, VAT is payable in the currency of the transaction under which goods or services are exchanged.

According to Adereti, Sanni and Adesina (2011) every person, whether resident in Nigeria or non - resident in Nigeria, who sells goods or renders services in Nigeria under the VAT Act (as amended) is obligated to register for VAT within six months of its commencement of business in Nigeria. Registration is with the Federal Board of Inland Revenue (FBIR).

The VAT Act (as amended) provides that a foreign non-resident person or company that carries on economic activities in Nigeria is also obligated to register for VAT, using the address of the person with whom it has a subsisting economic activity for purposes of correspondence with FBIR and for compliance with the VAT Law. The foreign non-resident person or company is required upon registration for VAT to include in its invoice VAT at 5% with instructions 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 foreign nonresident person. A taxable person, whether Nigerian 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 $67.00 for the first month that the failure occurs and a further penalty of $34 for each subsequent month in which the failure continues. In addition to the fines for non registration, Section 32 of the VAT Act (as amended) authorizes the FBIR to seal up the premises from where the economic activity in question is being carried on within the territory of Nigeria (Adereti, Sanni and Adesina, 2011).

The value added tax generated ₦13.67 billion in the first half of 1994 and about 24 percent above the pro rata revenue of ₦11 billion projected for the period. The figures obtained from the Federal Inland Revenue Services (FIRS) also showed that out of the total collection over ₦7.791 billion was realized from VAT on import while non-import for the period fetched ₦865.886 billion. Monthly collections showed that the highest yield of ₦2.914 billion was recorded in May, while the lowest below the estimated monthly yield, and were realized in February. The month of January yielded ₦42.3 billion, March, ₦862.253 billion and June, ₦862.186 billion. The federal government had estimated revenue of ₦22 billion from VAT for 1996, compared to over ₦19 billion collected in 1995. The government recorded a development that encouraged the federal government to reduce personal tax relief in 1995. By the end of 1995, the new tax scheme shot up its contribution to the revenue pool of the government to total of ₦20.26 billion. Consequently, government has announced its intention to shifts its focus from income tax to the tax on consumption which it claimed is less prone to tax evasion and its, progressive in nature. The government has earned about ₦7.01 billion from VAT in the first three months of 1996 (Igweonyia, 2011).

VAT is a tax regime to which every state and local government areas in the federation contributes. On the other hand, the efficient and speedy manner in which FIRS accounts for monthly revenue has enabled the government to allow VAT revenue to all state governments on a monthly basis. The 768 local government areas in Nigeria in 1994 shared VAT revenue of ₦61 million, while Federal capital territory (FCT) received ₦3.17million revenue in 1994 and 1995 respectively (FIRS).

How has this performance sustained over the years?

The VAT revenue to the government from 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018 were ₦564,890 billion , ₦659,160 billion, ₦802,700 billion , ₦803,000 billion, ₦767,300 billion , ₦828,200 billion , ₦972,100 billion and ₦1.108 trillion respectively (CBN Statistical Bulletin & FIRS Collection Profile 2010 to 2018). It seems growing, but definitely not in tandem with expected economic reality in Nigeria, especially if purchasing power is considered.

3.4 Budget Deficit

A budget deficit occurs when expenses exceed revenue and indicate the financial health of a country. The government generally uses the term budget deficit when referring to spending rather than businesses or individuals, Accrued deficits form national debt. Generally government budget includes revenue, expense, budget surplus/ deficit and financing/ investment for one year period. Budget deficit means that government total revenue less than its total expense (Anyanwu, 1997).However, when a deficit occurs in a country, it becomes important to find remedy for financing such deficits so as to eradicate its negative effects. Budget deficit is a major problem for every country in the current world.

In cases where a budget deficit is identified, current expenses exceed the amount of income received through standard operations. A nation wishing to correct its budget deficit may need to cut back on certain expenditures, increase revenue-generating activities, or employ a combination of the two.

There are several theoretical explanation on budget deficit, these are; The Keynesian Proposition also known as the standard view, The Ricardian Equivalence Hypothesis (REH), The neoclassical view, Loanable theory and the new performance theory. The two major ones are the keynesian proposition and the Ricardian equivalence hypothesis and they are highly controversial.

3.5 Theories of Budget Deficit

The Keynesian proposition or The standard view of budget deficit

The Keynesian Proposition which is the standard theory of budget deficit or the conventional view posits that households respond to an increase in current disposable income which is equal to the tax cut partly with higher desired private savings and partly with higher consumer demand and because of this increase in desired national savings declines. National saving is the sum total of private saving and public saving. This theory further suggests that a decision to finance government spending by budget deficit as a result of tax cut instead of current taxes reduces national saving and that the reduction in national savings is partly reflected in lower domestic investment and partly increases borrowing from abroad, both of which reduces future national income and future domestic production. The reduction in domestic investment is as a result of increases in interest rate, thereby, establishing a connection between budget deficit and interest rate.

A tax cut financed by government borrowing would have many to stimulate consumer spending. Higher consumer spending affects the economy in both the short run and long run.

In the short run, higher consumer spending would rise the demand for goods and services and thus rise output and employment. Interest rate would also rise; however, as investors compete for a smaller flow of saving and according to Mundell- Fleming model of an open macro economy, higher interest rates would discourage investment and would encourages capital to flow in from abroad. The naira would rise in value against foreign currencies, and Nigerian firms would become less competitive in world markets.

In the long run, the smaller National saving caused by the tax cut would mean a smaller capital stock and a greater foreign debt. Therefore, the output of the nation would be smaller, and a greater share of that output would be owed to foreigners.

In buttressing the Keynesian proposition, Ball and Mankiw (1995) gave a deep insight on the

immediate effects of budget deficits have many effects which follow form a single initial effect: national saving.

Deficits reduce national saving. National saving is the sum of private saving (the after – tax income that households save rather than consume) and public saving (the tax revenue that the government saves rather than spends). When government runs a budget deficit, public saving is negative which reduces national saving is most likely less than one – for – one, for a decrease in public saving produces a partially offsetting increase in private saving. For example, consider a #1 tax cut. This tax cut reduces public saving by #1, but also rises household‟s spend part of this windfall but fall in public saving.

The Ricardian Equivalence Hypothesis (REH)

The second but more controversial school of thought on budget deficit is known as the Ricardian

Equivalence Hypothesis (REH). Despite its theoretical appeal, the conventional view of the relationship between budget deficits and interest rate is not broadly shared. Ricardian economists argue that the above seemingly sensible assumption is incorrect. Although a debt-financed tax cut would increase current disposable income, it would also imply that at some point in the future, the government must raise taxes to pay off the debt and accumulated interest. As a result, the tax cut would merely give consumers a transitory increase in income that would eventually be taken back. If consumers understand this, then they would know that their permanent, or lifetime, resources had not changed. Hence, the tax cut would have no effect on consumption, and households would save all of their extra disposable income to pay for the future tax liability. Because there would be no effect on consumption, there would also be no effect on national saving. If national saving did not change, then the budget deficit would not have the effects the Keynesian economists listed. In particular, output, employment, foreign debt, and interest rates would be unaffected in both the short run and the long run. The tax cut would have no effect on economic well being. Many researchers have invoked the Ricardian equivalence hypothesis to *The Keynesian-Ricardian Dichotomy on Budget Deficits in Nigeria,*they argue that budget deficits mainly result from tax cuts that tend to reduce both public revenues and public savings. While these tax cuts have the effect of reducing public savings and enlarging the budget deficit, they increase private savings by an equivalent amount. Proponents of this view argue that alterations in the composition of public financing i.e, debt versus taxes have no effect on real interest rates, aggregate demand and private spending.

The Ricardian Equivalence Hypothesis states that a deficit financed tax cut will lead to a decrease in public savings and an increase in private saving. Such decline in public savings is fully offset by increase in private saving and thus, national income is unaffected i.e, remains the same. In other words, budget deficit has no effect on national saving, interest rate, current account balance, future domestic production, or future national income. Gale and Orszag (2004). The general principle is that government debt is equivalent to future taxes, and if consumers are sufficiently forward-looking, future taxes are equivalent to current taxes. Hence, financing the government by debt is equivalent to financing it by taxes. This view is called Ricardian Equivalence after the famous nineteenth-century economist David Ricardo, because he first noted the theoretical argument.

To illustrate the Ricardian equivalence, let us assume that government purchases remain constant and that the government decides a cut in taxes. The Ricardian equivalence states that lump-sum changes in tax revenues will not affect the level of total consumption, total savings, the rate of interest, money demand, national debt, current account balance and other important macroeconomic variables. Suppose that the government reduces taxes by N1. The tax cut should lead people to increase consumption, because the current tax cut increases their current incomes. However, given that the government has not changed its expenditures for goods and services, the N1 tax cut today must also increase current borrowing by N1. Because the additional debt of N1 will be repaid in the future, tax revenues will be higher in the future implying lower future disposable incomes for the people. The decline in future disposable incomes will cause people to consume less today, offsetting the positive effects on consumption of the N1 current tax cut. In this way, the total effect of a current tax cut on desired consumption is zero, because the positive effects of increased current disposable income and the negative effects of declined future disposable income cancel each other out. Also considering that government deficits do not influence total consumption and savings, the level of interest rate remains constant and the demand for money is not affected. Within the IS-LM model, the rationale of the Ricardian theorem indicates that budget deficit increases do not affect the equilibrium point of the IS and LM curves. Thus, government deficits do not influence the equilibrium level of interest rate and other key macroeconomic variables such as consumption, savings, inflation etc. The argument raised by the Ricardian equivalence is that government bonds are not net wealth. According to Barro (1974, 1987) and other advocates of the Ricardian equivalence, public debt financing by bond issue postpones taxation imposition for the future. Consequently, future taxation is equivalent to current taxation and therefore people realize that their government bonds will be paid off with increases in future taxes.

The implication of Ricardian equivalence is that debt-financed tax cut leaves consumption unaffected. Households save the extra disposable income to pay the future tax liability that the tax cut implies. This increase in private saving exactly offsets the decrease in public saving National saving- the sum of private and public saving – remains the same. The tax cut therefore has none of the effects that the traditional analysis predicts.

The Ricardian Equivalence Hypothesis (REH) also postulates that a deficit financed spending by a tax cut has the same present value as the initial tax cut. This means that taxes do not change unless government decides to change the present value of its expenditure. The notion behind the above postulate is that economists hold that there is no such thing as a free meal. Thus, if government decides to cut down taxes today to finance spending (deficit), that tax will be paid for sooner or later in future.

The neoclassical view of budget deficits

The Neoclassical model has three central features. Each of them plays an important role in determining the impact of budget deficits;

a. The consumption of each individual is determined as the solution to inter temporal optimization problem, where both borrowing and lending are permitted at the market rate of interest.

b. Individuals have finite lifespans. Each consumer belongs to a specific cohort or generation and the lifespans of successive generations overlap.

c. Market clearing is generally assumed in all 'periods.

There is now a large literature that investigates the empirical validity of the first feature. Consumer behave as though they solve an inter-temporal optimization problem with access to perfect capital markets (King, 1983) and (Hayashi, 1985). Much of this literature builds upon HaIJ's (1978) förmulation of the stochastic permanent income hypothesis. Despite numerous problems with estimation and interpretation, the evidence on balance supports the view that a sizable minority (roughly 20%) of individuals fails to behave in a way that is consistent with unconstrained inter-temporal optimization.

In the case of some Liquidity constrained or myopic consumers, this would not alter the conclusion that a permanent increase in the ratio of debt to national income depresses capital accumulation. Permanent deficits reduce the interest sensitivity of savings and larger increases in interest rat are required to equilibrate capital markets. Accordingly, the introduction of Liquidity constrained consumers might well strengthen the conclusion that permanent deficits depresses capital accumulation.

On the other hand, in the case liquidity constrained individuals, termporary deficits will have immediate and ,substantial negative effects on the savings. Because for the constrained individuals, the margina! propensity to consume out of liquid resources is unity.

The second characteristic finite lifespan defines the central difference between the Neoclassical and Ricardian frameworks.

The third characteristic for employment is the primary distinction between the Neoclassical and Keynesian paradigms. It is useful to summarize the main empirical implications of Neoclassical view of budget deficits:

If consumers are rational, farsighted and have access to perfect capital markets, then permanent deficits significantly depress capital accumulation and temporary deficits have either a negligible or pervasive effect on the most economic variables (including consumption, savings and interest rates). if many consumers are either liquidity constrained or myopic, the impact of permanent deficits remains qualitatively unchanged. However temporary deficits should depress savings and raise interest rates in the short run. Thus the Neoclassical paradigm does not tie down the effects of temporary deficit, and evidence that bears on the effects of temporary deficits is not useful for testing this paradigm. It is clear that the fundamental lessons of the Neoclassical framework concern the effects of permanent deficits.

Loan-Able Funds Theory

This theory considers interest rate mechanism as the major determinate of savings and investment in a given economy. That is, a sustainable level of investment and savings can only be achieved through interest rate mechanism. Increase in government spending automatically skyrocket interest rate for capital market to achieve equilibrium, which has a ripple effect on the private investors. In this case, malfunctioning of the mechanism is of no advantage to the private investors as the price for loan is on the increase. This implies that private investors are crowd out. This theory specified that increase in Budget deficit will stimulate aggregate demand for loan-able fund hence, bring about high competition between government and private investor leaving interest rate on the increase and thereby crowd out private investors. However, savings are determined by the household consumption-savings decision at full employment income thus it is aggregate supply which places a constraint on the supply of loan able funds.

The New Performance Theory

This theory was developed in the 1980‟s as a response to criticism of the neoclassical performance model. The endogenous performance theory holds that policy measures can have an impact on the long run performance rate of an economy. The main implication of recent performance theory is that policies which embrace budget deficit and external debt will promote performance. Conversely, policies which have the effect of restricting or slowing change by projecting or favouring particular industries or firms are likely over time to slow performance to the disadvantage of the community Olamuyiwa

In summary, The Neoclassical School proposes an adverse relationship between budget deficits and macroeconomic variables. The Keynesian School proposes a positive relationship between budget deficits and macroeconomic variables while the Ricardian School, also known as Ricardian equivalence, or the Barro-Ricardo equivalence suggests that government budget deficits do not affect the total level of demand in an economy.

Lerner's View

Lerner argues that if borrowed fund from abroad is used in financing current consumption, it is possible that inter-generational effect is likely to take place. That is, if the government of a country borrows to finance present consumption of her economic like payment of salary, and all other recurrent activities that does not yield profitable returns, then future generation will be burden in repaying such debt. Conversely, if borrowed loan is used to finance capital investment where the generated returns from such investment is great than the borrowed fund, then no debt burden will be transfer to the future generation. The researcher here is of the opinion that, the irrelevance of government fiscal policy as opined by Barro's provocative hypothesis is not justifiable enough. Whether or not the debt burden will be transfer to the future generation is a function of expected returns on the investment in which the fund (borrowed fund) is lunch into. Consider a situation where the borrowed fund is centred on a capital investment which contribute to increase productive capacity such that the generated revenue from such investment is greater than the borrowed fund, then debt burden is not transferred to the future generation.

Therefore, government budget deficit policy is relevant while Ricardo theory will only hold when returns from investment are less than the borrowed fund.

3.6 Budget deficit in Nigeria

The Nigerian economy was caught in the deficit trap since early 1980s when the world oil market collapsed, and since then, there have been frantic efforts to exit the trap but all to no avail (Wosowei, 2013). Nevertheless, the fiscal policy adoption of Nigeria financing deficits are attributable to major factors causing rapid monetary growth, exchange rate depreciation and rising inflation.

Overtime, the Nigerian government has been funding its deficit through borrowing domestically and externally, there are also other forms of deficit financing ; printing of money and the use foreign reserves.

Budget deficits have been blamed for the economic crisis that beset the economy about two decades ago resulting in over indebtedness and the debt crisis, high inflation, poor investment performance, and growth (Ezeabasili et al., 2012). In Nigeria, public expenditure has led to increase in the fiscal imbalances that siphon funds from the private sector investment, retarding growth and reducing standard of living (Mpia&Ogrike, 2014). Fiscal imbalances create potential large burden on future generations as workers may be forced to finance unfunded social programmes. Budget deficits, therefore, lead to incurring debts which is a stock of liabilities of the government (Udu&Agu, 2000). Budget deficit is generally associated with recession because of the effect on revenues and expenditures (Dernberg, 1985).

Available data from the CBN (2012) statistical bulletin, show that deficit of -8.62% of GDP was recorded in 1970 which rose to a surplus of 2.58% of GDP in 1971 and declined to -0.82% of GDP in 1972. In 1974, Nigeria experienced a remarkable improvement in the overall fiscal balances from 1970 to 2013 as surplus rose from 1.92% of GDP in 1973 to a surplus unit of about 9.54% of GDP, Nigerian overall fiscal balance deteriorated between 1980 and 1994 and recorded greater deficit of about -12.44% of GDP in 1982 on the average. However, between 1995 and 2013, the Nigerian economy recorded a surplus of about 1.19% of GDP on the average with other years experiencing different deficit percentages to GDP. From 2013 till date the country has been running on fiscal deficits with their respective percentage given as follows; -2.33% in 2013, -2.13% in 2014, -3.17% in 2015, -4.01% in 2016, -5.40% in 2017, -4.31% in 2018

3.7 Economic Performance (GDP)

The performance of a country is usually assessed in terms of the achievement of economic objectives. These objectives can be long term, such as sustainable growth and development, or short term such as the stabilization of the economy in response to sudden and unpredictable events called economic shocks. To know how well an economy is performing against these objectives economists employ a wide range of economic *indicators*. Economic indicators measure macro-economic variables that directly or indirectly enable economists to judge whether economic performance has improved or deteriorated. Tracking these indicators is especially valuable to policy makers, both in terms of assessing whether to intervene and whether the intervention has worked or not.

Traditionally, the key measures of economic performance in macroeconomics include:

- Economic growth – real GDP growth
- Inflation – e.g. target CPI inflation of 2%
- Unemployment – target of full employment
- Current account – satisfactory current account, e.g. low deficit.

Other measures of economic performance can include:

Government borrowing/national debt, Real disposable incomes, Income inequality (Gini coefficient), Labour productivity, Investment levels, Exchange rate,Misery index (inflation rate +

Unemployment rate), Poverty levels,Measures of well-being surveys which measure overall living standards. e.g. ONSwell-being index.

Human development index (HDI) a measure of economic development. it is a composite index which includes real GDP per capita and also factors such as education, healthcare and environmental factors.

In recent years, some economists have suggested we place greater emphasis on measures of well-being and downplay the role of economic growth.

Economic growth(Real GDP) is usually considered to be the most important economic statistic and is frequently used for international comparisons.If there is positive economic growth, then national income is rising, and this should enable higher living standards. Economic growth usually helps other objectives, such as unemployment, government borrowing and real disposable incomes.

In this work, Gross domestic product(Real GDP) will be proxied as the exogenous variable used in measuring economic performance. It refers to the market value or money value of all goods and services produced in a country at a particular period of time.

3.8 Empirical Literature Review

Ikpe and Nteegah (2013) empirically examined the influence of VAT on price stability in Nigeria using partial equilibrium analysis. The analysis was carried out by applying multiple regression analysis, using data from 1994 to 2010 periods. The results revealed that VAT exerts a strong upward pressure on price levels, most likely due to the burden of VAT on intermediate outputs. The study ruled out the option of VAT exemptions for intermediate outputs as a solution, due to the difficulty in distinguishing between intermediate and final outputs. Instead, it recommended a detailed post-VAT cost benefit analysis to assess the social desirability of VAT policy in Nigeria.

Gbegi and Okoye (2013) using secondary data spanning 2001 to 2010 and employing the use of table and simple percentages while the hypotheses formulated were tested using Product Moment Correlation Coefficient and Student t test. The findings revealed that revenue generated through VAT has a significant influence on wealth creation in Nigeria and also that revenue generated through VAT has a significant effect on total tax revenue in Nigeria. Ekeocha (2010) however, made a simulation study advocating value added tax rate from 5 to 15%. He argued that an increase in the rate of value added tax will affect the country's revenue base.

Yakubu and Jubril (2013) investigated the relative impact of value added tax on economic growth in Nigeria. Johansen co integration test was employed. The result of co integration test does not provide any evidence of long-run equilibrium relationship among the variables. An unrestricted vector auto regressions (VARs) technique was employed. Impulse response functions (IRFs) and Forecast error Variance decompositions (FEVDs) were computed through 1000 Monte Carlo simulations. The results derived from the impulse response function (IRF) and forecast error variance decomposition (FEVD) entailed that value added tax have positive impact on economic growth in Nigeria , they also added that where variation in this variables growth rate will cause variation in real economic activity with about 50% in the near future. The study concluded that the policy makers in Nigeria should continue this fiscal policy with other macroeconomic indicators. They recommended that this policy will enhance the Nigerian economy positively, more specifically in this time of economic crisis in the world.

Bakare (2013) investigated the enormity of the impact of the value added tax on output growth in Nigeria. The study employed the use of ordinary least square regression analytical technique, the study found that a positive and significant relationship exist between value added tax and output growth in Nigeria. The results further showed that the past values of value added tax could be used to predict the future behavior of output growth in Nigeria. The study therefore concluded that Value Added Tax has the potential to assist in the diversification of revenue sources, thereby providing enough funds for economic growth and development and reducing dependence on oil for revenue. Hence, the findings support the need for the government to satisfy the principle of economic justice in the allocation of VAT revenue. The study then suggested that the revenue generated from VAT should be efficiently utilized for building infrastructure required for sustainable growth and development.

Chinnwe (2013) evolved survey research design to investigate the value added tax remittance of developing countries. These findings revealed that there was continuous decrease in revenue returns. The study therefore recommended that the Nigerian government should make adequate provision for retrieving the proceeds of Value Added Tax and other agents of collection.

Basila (2010) empirical investigated the relationship between VAT and GDP in Nigeria. Applying time series data set spanning the period from 1994 to 2008 using Pearson's Product Moment Correlation (PPMC) The test revealed a strong at about 96% strength. Further, a test of significance confirmed that VAT revenue is significantly different at 99% confidence level in relation to GDP. It also shows that there is a strong positive correlation between VAT revenue and GDP.

Chigbu and Ali (2014) empirically analyzed the relationship between VAT and economic growth in Nigeria. Using the Engle and Granger cointegration technique on annual data covering 1994 to 2012, the result of their findings showed that VAT has positive effect on economic growth. The results also showed absence of both long-run and short-run relationship between VAT and economic growth. The study recommended that government should therefore put in place measures to enhance productivity so as to increase the contribution of VAT to economic growth in Nigeria.

Okubor and Izedonmi (2014) examined the contribution of VAT to the development of the Nigerian Economy. They employed time series data on the GDP, VAT Revenue, Total Tax Revenue and Total (Federal Government) Revenue from 1994 to 2010. They used both simple regression analysis and descriptive statistical method. The result of their findings revealed that VAT Revenue and total revenue account as much as 92% significant variations in GDP in Nigeria. Also, a positive and significant correlation exists between VAT revenue and GDP. According to the authors, both economy variables fluctuated greatly over the period with VAT Revenue to be more stable. The study therefore recommended that all identified loopholes be plugged for VAT revenue to continue to contribute more significantly to economic growth of Nigeria.

Naiyeju (2014) argued that the positive result received from any tax depends on the extent of how it is properly managed. The extent of how the tax law is interpreted and implemented as well as the publicity brought into it will determine how a particular tax is able to meet its objectives. VAT rate in Nigeria has been determined in a way that minimizes disincentive efforts on economic activities (Owolabi&Okwu, 2011).

Ariyo (1997) in his study on productivity of the Nigerian tax system reported a satisfactory level of productivity of the tax system before the oil boom. The report underscored the urgent need for the improvement of the tax information system to enhance the evaluation of the performance of the tax system and facilitate adequate macroeconomic planning and implementation.

Ajakaiye (2000) worked on the impact of VAT on key sectorial and macroeconomic aggregates, using a Computable General Equilibrium (CGE) model considered suitable for Nigeria. The study developed three scenarios. In order to approximate the presumed Nigerian situation, the study assumed that government pursued an active fiscal policy involving the re-injection of the VAT via increases in government final consumption expenditure in combination with a presumed non-cascading treatment of the VAT. Two other simulations considered an active fiscal policy combined with a cascading treatment of VAT and a passive fiscal policy combined with a non-cascading treatment. As it turned out, the scenario of a cascading treatment of VAT with an active fiscal policy not only had the most deleterious effects on the economy, it was also the one that most closely approximated the situation in Nigeria. VAT revenues under this scenario are more than 3% lower than the first scenario, the general price index increases by 12%, and wage and profit incomes fall by 8.54% and 12.27% respectively. Overall, the GDP declines by 11.34%. Such a situation, as observed by the researcher, poses a great threat to the sustainability of VAT. A United Nations (2000) expert group stated that tax revenue contributes substantially to development. The stark reality in most developing countries is that while there are several budgetary pressures as a result of ever increasing demand for government expenditure, there is a limited scope for raising extra tax revenues.

Desai, Foley and Hines (2004) stated that governments have at their disposal many tax instruments that can be used singly or in concert to finance their activities. These tax alternatives include personal and corporate income taxes, sales taxes, value added taxes, capital gains taxes and numerous others. In choosing what tax instruments to use and what rates to impose, governments are typically influenced by their expectations of the How productive is Value Added Tax Revenue in Nigeria between 1994 and 2016? effects of taxation on investment and economic activities, including Foreign Direct Investments (FDI). The researchers stated that there are extensive empirical studies that high corporate income tax rates are associated with low levels of FDI.

Olaoye (2009) worked on the administration of VAT in Nigeria. The objective of the study was to seek ways of improving government revenue generation base in order to improve on the economy. The study among other things, recommended that more awareness was needed on VAT.

Kleiman (1993) examined the extent to which international differences in taxation may explain departure of national price levels from Purchasing Power Parity (PPP). Investigating a sample of 51 Countries for which price level data were available from stage IV of the project on the international comparison of purchasing powers and the real products for 1980. The study suggests that the overall burden of central government taxation, especially of indirect domestic taxes raises the general price level. Consistent with the accepted view that direct tax cannot be shifted forward; no such effect is associated with the direct tax burden. Contrary to expectations, however, the burden of domestic indirect taxes expresses itself in the prices of tradables rather than of non tradables.

Omokhuale (2016) evaluated empirically the contribution of value added tax (VAT) to Nigeria from 2000-2012. Data were collected from Central Bank of Nigeria (CBN) statistical bulletin and Federal Inland Revenue bulletin. Ordinary least square techniques were used to estimate the model, which reveals a strong positive significant relationship between values added tax and Nigeria economy.

Dennis, (2010), investigated the relationship between Value Added Tax (VAT) and Gross Domestic Product (GDP) in Nigeria. The study finds that VAT is not effective as revenue earner; this implies that significant parts of GDP which represent aggregate national income as well as aggregate national expenditure are not collected as tax.

Adereti, Sanni, and Adesina (2011) studied the contribution of VAT to GDP in Nigeria. Their findings show that VAT revenue to total tax revenue averaged 12.4% which they considered low compared to other African countries such as Ivory Coast, Kenya and Senegal that had 30%. The study also observed a positive and significant correlation between VAT and GDP.

Joseph and Uma 2015, empirically examine the nexus between interest rate and budget deficit in the context of Nigeria applying error correction model (VECM) Spanning from 1970 to 2010. From the findings it was discover that budget deficit has a positive and significant impact on interest rate in the long run implying that rising interest rate occur as a result of higher budget deficit hereby canvassing support for the Keynesian proposition. Sequel to this, the researcher postulate that appropriate monetary – fiscal policies mix should be put in place.

Ogunmuyiwa 2016 examined whether budget deficit promotes economic performance in Nigeria using time-series data from 1970-2007. The regression equation was estimated using econometric techniques such as Augmented Dickey-Fuller test, Granger causality test, Johansen co-integration test and Vector Error Correction Method (VECM). The results revealed that causality does not exist between budget deficit and economic performance in Nigeria.

Ayadi and Ayadi 2017 examined the impact of the huge budget deficit, with its servicing requirements on economic performance of the Nigerian and South African economies. The Neoclassical performance model which incorporates using both Ordinary Least Square (OLS) and Generalized Least Square (GLS) techniques of estimation. Their findings revealed that debt and its servicing requirement has a negative impact on the economic performance of Nigeria and South Africa. equation was estimated using econometric techniques such as Augmented Dickey-Fuller test, Granger causality test, Johansen co-integration test and Vector Error Correction Method (VECM). The results revealed that causality does not exist between budget deficit and economic performance in Nigeria.

Suliman et al 2013 study the effect of budget deficit on the economic performance of Nigeria using Annual time series data spanning from 1970-2010. The empirical analysis was carried out using econometric techniques of Ordinary least squares (OLS), Augmented Dickey-Fuller unit root test, Johansen Co-integration test and error correction method. The co-integration test shows long-run relationship amongst the variables and findings from the error correction model revealed that budget deficit as contributed positively to performance of the Nigerian economy. They hence recommend that political and economic stability should be embraced to ensure effective debt management.

Odionye and Uma (2013) employ augmented Granger causality test approach in examining the relationship between budget deficit and interest rate in Nigeria using Vector Error Correction model (VECM) for the period of 1970:1 – 2010:1. The results reveal that in the long run co-integrating equation, budget deficit exert a positive and significant impact on interest rate implying that a high budget deficit will increase interest rate in the country. The result supports the Keynesian proposition. Also, evidence from Johansen co-integration result indicates that there is a long run relationship between budget deficit and interest rate.

Sowa (1994) utilizes Error Correction Model (ECM) in estimating an inflation equation for Ghana over the period 1963 - 1990. The study shows that inflation in Ghana is influenced more by output volatility than by monetary factors, both in the long run and in the short run. In Nigeria, Onwioduokit (1995) employs Granger causality test in investigating the causal relationship between inflation and fiscal deficits using annual data from 1970 to 1994. The variables in the empirical model are ratio of fiscal deficit to gross domestic product (GDP), level of fiscal deficit and inflation rate. The study shows that fiscal deficit causes inflation without a feedback effect but however feedback exist between inflation and the ratio of fiscal deficit to gross domestic product.

Oladipo and Akinbobola (2011) employ Granger causality pair-wise test in determining the causal relationship between budget deficit and inflation in Nigeria. The study find that there is no causal relationship from inflation to budget deficit but from budget deficit to inflation in Nigeria. This indicates that budget deficit affects inflation through fluctuations in exchange rate in the Nigerian economy.

Eze and Ogiji (2016) investigated the impact of deficit financing on economic stability in Nigeria, using Ordinary Least Square (OLS) estimation technique. The result showed that deficit finance is positively related to economic growth.

Nwaeke and korgbeelo (2016) in their study using ordinary least square estimation procedure, to provide empirical evidence on the relationship between deficit financing and selected macroeconomic variables in Nigeria. They found that budget deficit irrespective of the source of financing have no significant impact on inflation in Nigeria and budget deficit financed from external loans is negatively but insignificantly related to economic growth.

The study conducted by Adesuyi and Falowo (2013), to asses and investigate the impact fiscal deficit has on the economy given some variables, using Ordinary Least Square (OLS)

estimation technique. The result showed that fiscal deficit has made a significant contribution to the GDP and economic growth of the country.

In the study of Keho (2010), used time series data to investigate the casual relationship between budget deficit financing and economic growth in the member countries of West Africa and monetary union. The study made use of Granger casualty test and the empirical evidence showed mixed results. In three cases, the study did not find any casualty between budget deficit and growth. In the remaining four countries, deficits have adverse effect on economic growth.

Eze and Nwambeke (2015) examined the effect of deficit financing on unemployment rate in Nigeria using Ordinary Least Square (OLS) estimation technique. The study found that deficit financing is positively related to unemployment rate indicating that sound policies are needed to achieve economic stability in Nigeria through reduction of the level of unemployment rate in Nigeria.

Onyeiwe (2012) investigated the relationship between domestic debt and the growth of Nigeria economy. Parsimonious model, error correction model and ordinary least square (OLS) were used for analysis. The study indicates that the level of domestic debt in Nigeria has negative effect on economic growth. Paris Club and Promissory Note were inversely related to economic development in Nigeria. The study recommended that debt services should be cancelled to encourage survival of SMEs in Nigeria.

Edame and Okoi (2015) examined the impact of fiscal deficit on economic growth in Nigeria during the democratic and military regime using Chow test. It was found that there is a significant difference between the impacts of Fiscal deficits on economic growth in the two regimes.

Akinmulegun (2014) studied deficit financing and its effect on economic growth in Nigeria employing the econometric technique of Vector Auto Regression (VAR) Model. It was discovered that deficit financing has not contributed significantly to economic growth in Nigeria. The study recommends that government should reduce unnecessary public spending, ensure greater budget discipline and adopt a financial structural transformation that can help to reduce wastage in public spending.

Osuala and Ebieri (2014) empirically analyzed the impact of fiscal policy on economic growth in Nigeria using Ordinary Least Square (OLS) estimation technique. It was discovered specific fiscal policy variables that have significant and positive impact on economic growth in Nigeria government recurrent and capital expenditure.

Ezeabasili, Mojekwu and Herbert (2012) examined the relationship between fiscal deficit and inflation in Nigeria using Ordinary Least Square (OLS) estimation technique. The result reveals a positive but insignificant relationship between inflation and fiscal deficit in Nigeria.

Monogbe, Dornubari and Emah (2015) empirically investigated deficit finance and the Nigeria economic performance from 1981 – 2014. Econometrics model were used to carry out the following statistical test, descriptive statistic, OLS, series of diagnostics test, granger causality test, ECM, finally, impulse Response. Findings reveal that deficit financing through borrowing from foreign country has a contagious implicating effect but significant association to economic performance in the Nigeria context. This is evident by the result of the F statistic of the granger causality test and the ECM which established the fact that external debt does not granger cause economic growth. However, the result of the OLS reveals that increase in total money supply will influence economic growth; this is to the tune of 1% increase in total money supply to the economy will lead to about 18.4% increase the real gross domestic product all thing been equal. This will in turn reduce interest rate and trigger investments opportunities.

Onuorah and Ogbonna (2013) investigated the effect of deficit finance on Nigerian economic growth using the Ordinary Least Square (OLS) estimation technique. Their findings revealed that deficit financing is statistically significant and positively related to economic growth in Nigeria.

3.9 Gap in Literature

With the numerous methodologies and estimation techniques employed and results obtained from the different studies on the assessment of the impact of the revenue from VAT and budget deficits on economic growth in view, the pertinent question still remains whether the VAT, the persistent budget deficits and its financing have effect on Nigerian's economic growth, Notwithstanding these various approaches that have been adopted by various researchers, in order to add value to the existing studies, this study will not only extend its scope beyond those of earlier studies by modifying the available models but will also fill knowledge gap by extending the periods captured to 2018(i.e with the most recent data available).

CHAPTER FOUR

THEORETICAL FRAMEWORK, MODEL SPECIFICATION AND ESTIMATION TECHNIQUES

4.1 Introduction

Fiscal policy is thought to stifle economic growth by distorting the effect of tax and inefficient government spending. Therefore, in the light of the above, the question that comes to fore is what has been the effect of value added tax and budget deficit on economic performance.

Moreover, fiscal policy consists of the manipulation of government finances by raising or lowering taxes or levels of spending to promote economic stability and performance. This role of government sector in economic management is performed through the formulation and implementation of economic policy generally and fiscal policy in particular. It is designed to achieve the objective of price stability, growth, balance of payments equilibrium, full, employment, mobilization of resources and investment. These objectives have influenced government's economic policy design and development efforts in Nigeria since independence.

Different opinions have indeed continued to emerge on how fiscal policy can affect economic activities. studies have shown that there is both a positive and negative relationship among value added tax, budget deficit and economic performance. Although these studies have been proven through empirical and scientific calculations. Taking into account our interest we would be adapting the model developed by Onodugo (2013) and shojai (1999) respectively and introducing new variables. This study would expound both models and then interact the variables in them to form one encompassing model, so as to adequately estimate and capture the interrelationship among the aforementioned variables (VAT, BD and GDP).

Functionally and mathematically, this can be stated implicitly as thus:

$Y = f(BD, VAT)$................................*(1)*

$Y_t = \alpha + \beta_1 BD_t + \beta_2 VAT_t$................. *(2)*

This can be re written as an econometric model by introducing the error term (u_t)

$GDP_t = \alpha + \beta_1 BD_t + \beta_2 VAT_t + u_t$ .... *(3)*

Where:

GDP - economic performance proxied as Gross domestic product (GDP)

BD - budget deficit

VAT - value added tax

α – constant

$\beta_1 - \beta_2$ slope coefficients.

u_t – error term

This model developed by shojai (1999) is used to assess the effect of value added tax and budget deficit on the economic performance (GDP). The vector error correction model of the Ordinary Least Square (OLS) is employed to ensure the fulfillment of the assumptions thereof. These assumptions include, linearity of the model, its non stochastic characteristic, having mean value of 0, and distribution with equal variance etc

The hypothesized relationship in equation (1) & (2) respectively would be the building blocks for our model and also for the purpose of this study incorporating other macro economic exogeneous variables that influences economic performance (GDP) other than budget deficit and value added tax. This variables are known as control variables and can hereby be mathematically expressed as :

$RGDP = F(CPI, RIR, EXCH)$...............(4)

$RGDP_t = \alpha + \beta_1 CPI_t + \beta_2 RIR_t + \beta_3 EXCH_t$ .... (5)Where;

CPI - consumer price index as proxy for inflation

RIR – real interest rate

EXCH – exchange rate

4.2 Model Specification

Aggregating the empirical model used to estimate the effect of value added tax, budget deficit and the control variables on economic performance from equations 2 & 4 we can mathematically express our model as

$RGDP_t = F(VAT_t, BD_t\ CPI_t, RIR_t, EXCH_t)$ …………………….(1)

The model assumes a linear relationship between the dependent and independent variables. It estimates the nature and magnitude of impact of the independent variables (value added tax, budget deficit, exchange rate, real interest rate and consumer price index) on the dependent variable (gross domestic product).

We convert the above model into an econometric model by introducing the error term (ϵ_t)

$GDP_t = \beta_0 + \beta_1 VAT + \beta_2 BD + \alpha_1 CPI + \alpha_2 RIR + \alpha_3 EXCH + \epsilon_t$…………..(2)

$GDP_t = \beta_0 + \beta_1 VAT + \beta_2 BD + \sum_{i=1}^{3} \alpha_{i} + \epsilon_t$

Transforming equation (2) to natural logarithm we obtain:

$\ln GDP = \beta_0 + \beta_1 \ln VAT + \beta_2 \ln BD + \alpha_1 \ln CPI + \alpha_2 \ln RIR + \alpha_3 \ln EXCH + \epsilon_t$…….(3)

The use of the log linear method improves the validity of the estimates and conclusion based on them. Ekpo (1997), Friends and Puckett (1964), Boyd and SchonFeld (1997), all agreed that the use of the log linear equations aims at reducing, if not completely removing the heteroscedasticity errors, which may result from unsealed both sides of the equations.

Therefore, equation (3) becomes the base equation for this study and forms the underlying framework by which subsequent estimations, analysis and discussion would be carried out.

The vector error correction model (VECM) also known as a restricted VAR is a differenced auto regressive model (VAR) and by so doing a lag is lost.

This is written compactly as:

$$\Delta \ln Y_t = \beta_0 + \sum_{i=1}^{k-1} \beta_i \Delta \ln Y_{t-i} + \lambda ECT_{t-1} + u_t$$

Thus we have,

$$\Delta \ln GDP_t = \beta_0 + \sum_{i=1}^{k-1} \beta_i \Delta \ln X_{t-1} + \lambda ECT_{t-1} + u_t \text{.........(4)}$$

Where k-1 = lag length length reduced by 1

lnX = logged values of the explanatory variables

$\beta_{i,}$ =short run dynamic coefficients of the model’s adjustment long run equilibrium

λ =speed of adjustment parameter with a negative sign.

Dependent variable

Real Gross domestic product (GDP): gross domestic product is the total value or monetary value of all goods and services produced within the geographical borders of a country during a specified period of time, normally a year. It is an important indicator of the economic performance of a country.

A priori expectation of the Independent or Explanatory variables

Value added tax: Value added tax (VAT) is simply called the goods and services tax (GST), it is levied on the value added that results from each exchange. It is an indirect tax collected from someone other than the person who actually bears the cost of the tax. It is expected to have a positive relationship and a significant impact on the gross domestic product.

Budget deficit: The government generally uses the term budget deficit when referring to spending rather than businesses or individuals, Accrued deficits form national debt. Generally government budget includes revenue, expense, budget surplus/ deficit and financing/ investment for one year period. Budget deficit means that government total revenue less than its total expense (Anyanwu, 1997). evidence indicates that budget deficit may indeed have a negative effect on economic performance .

A priori expectation of the Control Variables:

Consumer price index: Consumer price(CPI) index is used as the proxy for inflation. This variable captures the effect of macroeconomic policies and the worse the macroeconomic policy (increase in inflation) the lower the real gross domestic product, that is, there is a negative relationship between both variables from theory.

Real interest rate: This is the interest rate that has been adjusted to remove the effect of inflation to reflect the real cost of funds to the borrower and the real yield to the lender or an investor. The expected effect of the real interest rate on the economy is negative

Exchange rate: Exchange rate is the annual value of exchange rate at the end of the period (usually a year) by the country. Theoretically , the variable of exchange rate is expected to have a positive relationship with the GDP variable. The higher the exchange rate the higher the level of output

4.3 Model Estimation Techniques

The estimation techniques employed for this study were subjected to preliminary test consisting of unit root test, co-integration test and vector error correction model and ordinary least squares estimation technique. The unit root test is one that tests for stationarity (i.e. order of integration or spuriousness of individual series used in study). There are a lots of unit root tests but the most popular of them among econometricians are Augmented Dickey-Fuller (ADF) developed by Dickey and Fuller (1979, 1981) and Phillip-Perron developed by Phillips and Perron (1988). For this study, we would be adopting the use of Augmented Dickey-Fuller unit root test which would test stationarity of all the series and would appropriately adjusts the series since we have 40 sample points in the data series. Augmented Dickey-Fuller test relies on rejecting a null hypothesis of unit root (this hypothesis says that the series are non-stationary) in favour of alternative hypothesis of stationarity.

The co-integration test describes the long-run relationship between the series under consideration and also if the series are in the same order of integration. The assumption of co-integration is that if in the long run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant. A lack of co-integration means that the series have no long-run relationship. The co-integration test (Johansen Co-integration Test) which was developed by Johansen (1988); and Johansen and Juselius (1990) will be used in this study to achieve our objective of finding out if there will be a long run relationship between the series. The study would adopt the Vector error correction model (VECM), More specifically, recent work indicates that the correct approach for making empirical inferences on the time series properties of these variables and their relationship (short run and long run) is a vector-error correction model (VECM), the justification for this is that it allows for a cointegrating relationship among the variables (Engle and Granger, 1987). The entire VECM, on the other hand, enables one to examine the causal relationships and short-run responses of the independent variables on the dependent variables.

The analysis of this study is conducted electronically with the use of E-Views software.

CHAPTER FIVE

DATA ANALYSIS, PRESENTATION AND INTERPRETATIONSOF EMPERICAL RESULTS

5.0 Introduction

The presentation and analysis of the data is in two section; the first sectioncontains the descriptive analysis while the second sectioncontains the inferential analysis. Consequently, it entails the application of statistical techniques to provide the basis for the testing of the research hypotheses and thereafter the policy implications of the findings.

5.1 Descriptive Statistics

This comprises the variables, observations, mean, standard deviation, skewness and kurtosis of the data on variables employed in the research within the study period as presented in Table 5.1 and analyzed Using 40 observations for each of the variables to estimate the relationship that exist among value added tax, budget deficit and economic performance proxied as real gross domestic product in Nigeria from 1980 to 2018 for the descriptive statistics.

Table 5.1.1 descriptive statistics

	VAT	RGDP	RIR	ER	CPI	BD
Mean	3.475619	31.08044	1.794563	3.388423	2.780788	11.56618
Median	3.963734	30.84250	1.899952	4.573729	3.363311	11.67196
Maximum	7.081693	31.87638	2.900322	6.139721	5.452142	16.10675
Minimum	0.000000	30.41674	-0.121718	-0.603707	-0.894700	6.805833
Std. Dev.	2.828636	0.508676	0.867381	2.079940	2.081669	2.829545
Skewness	-0.195067	0.396778	-0.986592	-0.701247	-0.466593	0.020578
Kurtosis	1.377620	1.628850	3.074405	2.167568	1.750031	1.735016
Jarque-Bera	4.640535	4.182970	3.898989	4.433221	4.055432	1.935604
Probability	0.098247	0.123504	0.142346	0.108978	0.131636	0.379917

Sum	139.0248	1243.218	43.06950	135.5369	111.2315	335.4193
Sum Sq. Dev.	312.0461	10.09130	17.30405	168.7198	169.0005	224.1772
Observations	40	40	24	40	40	29

Table 5.1.1 presents the summary statistics of all the variables used for this study. The value of the real gross domestic product is 31.08044, value added tax is 3.475619, budget deficit is 11.56618 nominal exchange rate is 3.388423, consumer price index is 2.780788 and real interest rate is 1.794563,. However, the maximum statistics of real gross domestic product has the highest value of 31.87638 while real interest rate has the lowest value of 2.900322 In terms of the minimum, real gross domestic product has the highest minimum with 30.41674 and at the same time consumer price index has the lowest minimum value of -0.894700. Also, real gross domestic product and budget deficitexhibit positive skewness while value added tax, real interestrate, exchange rate and consumer price index are negatively skewed. This negative skewness implies that their median values are greater than their mean values and a left-sided divergence of the variables from their symmetry. All the variables except real interest rate have kurtosis of less than equal 3 (kurtosis of a normal distribution) suggesting that the data set mirrors or have a lighter tail than a normal distribution. Hence, they have both mesokurtic and plytokurtic distribution. The Jarque-Berra statistics provides a measure of the test of normality which indicates that real grosss domestic product, exchange rate , real interest rate and consumer price index are normally distributed at 10% level of significance while value added tax is not normally distributed at 10%.

5.2 Inferential statistics

This comprise of the unit root test for stionarity, the cointegrationtest for long run relationship, vector error correction method and other diagnostic test to check for Autocorerelation, heteroscedasticity, multicolinerity, and normality test.

Table 5.2a Augmented Dickey Fuller Test At LevelI(0)

	With intercept				With intercept and trend			
Variables	**ADF statistics**	**P-value**	**Order of integration**	**Remark**	**ADF statistics**	**p-value**	**Order of integratio n**	**remark**
RGDP	-0.86775	0.7869	I(0)	Non-stationary	-1.92999	.6157	I(0)	Non-stationary
VAT	-3.86416	0.0072	I(0)	stationary	-3.19367	0.1083	I(0)	Non-stationary
BD	-5.47818	0.0000	I(0)	Stationary	-5.47818	-5.44260	I(0)	stationary
CPI	-2.10250	0.2448	I(0)	Non-stationary	-1.17248	0.9020	I(0)	Non-stationary
RIR	-3.47530	0.0141	I(0)	stationary	-4.21935	0.0098	I(0)	stationary
ER	-1.64719	0.4495	I(0)	Non-stationary	-1.38841	0.8488	I(0)	Non-stationary

Table 5.2bAugmented Dickey Fuller Test At First Difference

With intercept				
variables	**ADF statistics**	**P-value**	**Order of integration**	**Remark**
RGDP	-3.91396	0.0048	I(1)	Stationary
VAT	-4.11733	0.0026	I(1)	Stationary
BD	-7.6912	0.0000	I(1)	Stationary
CPI	-3.65237	0.0091	I(1)	Stationary
RIR	-6.66061	0.0000	I(1)	Stationary
ER	-5.32712	0.0001	I(1)	Stationary

Source: *Author's computation from E-views 10*

Table 5.2a and 5.2b above shows the results of unit root test for ADF. it shows that in the process of comparing the test statistic value against the Mackinnon critical value at 1%, 5% and 10% level of significance, it was noticed that real interest rate and budget deficit was stationary at level while real gross domestic product ,exchange rate, value added tax and consumer price index were found to be stationary at first differenced. Hence, having tested for the stationarity of the variables, we proceed to test for the long run relationships of the variables which give us the co-integration result in table below.

5.3 Johansen Co-Integration Test

Table 5.3a Unrestricted Co-integration Rank Test (Trace value)

Hypothesized No of CE(S)	Eigen Value	Trace statistic	0.05critical value	Prob**
None *	0.884680	169.7719	95.75366	0.0000
At most 1 *	0.861567	116.9308	69.81889	0.0000
At most 2 *	0.700005	69.47392	47.85613	0.0001
At most 3 *	0.610939	40.57816	29.79707	0.0020
At most 4 *	0.410199	17.92171	15.49471	0.0211
At most 5*	0.196492	5.250433	3.841466	0.0219

Trace value test indicates 6 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-value
Source: *Author's computation from E-views 10*

Table 5.3b Max –Eigen Value Test

Hypothesized No of CE(S)	Eigen Value	Max-Eigen statistic	0.05critical value	Prob**
None *	0.884680	51.84107	40.07757	0.0015
At most 1 *	0.861567	47.45692	33.87687	0.0007
At most 2 *	0.700005	28.89575	27.58434	0.0338
At most 3 *	0.610939	22.65646	21.13162	0.0303
At most 4 *	0.410199	12.67128	14.26460	0.0879
At most 5 *	0.196492	5.250433	3.841466	0.0219

Max-eigenvalue test indicates 4 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values.
Source: *Author's computation from E-views 10*

Table above depicts the results of Johansen Cointegration test. It shows the estimated result of the long run relationship between the variables that is logRGDP, logVAT, logBD, logCPI, logRIR, and logEXCH using the Johansen co-integration test. It was observed that the trace statistic in tableindicated co-integrating equations at the 5% level of significance. Similarly, the maximum Eigen value statistic also indicates 4 co-integrating equation at the 5% level of significance. These results suggest that there is co-integration or long–run relationship among the variables employed in this study. Thus, we further proceed to conduct vector error correction test, given the one-year time lag used to show the speed of adjustment of the dependent variable to the changes in the explanatory variables in the short and long run and the result is presented in table below

Table 5.3c NormalisedLong Run Coefficient Of The Co-Integration Vector

VARIABLE	GDP	logVAT	logBD	logRIR	logER	logCPI
COEFFICEINT	1.000000	0.002318	-0.001256	0.006258	0.218272	-0.786337
ST ERROR		0.03457	0.00102	0.00497	0.01791	0.06970
T STATISTIC		0.006705	-1.23137	1.25914	12.1871	11.281736

Source: *Author's computation from E-views 10*

The table 5.3c above shows that in the long run value added tax, real interest rate, and exchange rate has a negative impact on the gross domestic product while budget deficit and consumer price index has a positive impact on gros domestic producton the average , ceteris paribus. It is important to notethat the signs of the coefficients are reversed in the long run hence the above interpretation of the table. The coefficients of LnVAT, LnBD, LnRIR are statistically insignificant as their T-statistics is less than 2(rule of thumb) while LnER and LnCPI are statistically significant.

Table 5.4a Vector Error Correction Estimates

Vector Error Correction Estimates
Sample (adjusted): 1996 2019
Included observations: 24 after adjustments
Standard errors in ( ) & t-statistics in [ ]

CointegratingEq:	CointEq1	CointEq2	CointEq3
LOGRGDP(-1)	1.000000	0.000000	0.000000
LOGVAT(-1)	0.000000	1.000000	0.000000
LOGBD(-1)	0.000000	0.000000	1.000000
LOGRIR(-1)	-0.001036	0.017973	-5.773162
	(0.00346)	(0.02393)	(0.65192)
	[-0.29918]	[0.75111]	[-8.85565]
LOGCPI(-1)	-0.773921	-2.564785	5.150537
	(0.01854)	(0.12818)	(3.49206)
	[-41.7415]	[-20.0100]	[1.47493]
LOGER(-1)	0.209024	0.800997	-5.884054
	(0.01689)	(0.11677)	(3.18126)
	[12.3751]	[6.85978]	[-1.84960]
C	-29.09000	1.527869	11.32277

Error Correction:	D(LOGRGDP)	D(LOGVAT)	D(LOGBD)	D(LOGRIR)	D(LOGCPI)	D(LOGER)
CointEq1	-0.221426	0.088858	61.34062	-21.67194	1.864681	-0.742013
	(0.11836)	(1.03680)	(83.7481)	(15.9491)	(0.47475)	(2.03666)
	[-1.87075]	[0.08570]	[0.73244]	[-1.35882]	[3.92770]	[-0.36433]
CointEq2	0.111925	0.135125	-40.72681	3.040211	-0.207920	-0.651753
	(0.02898)	(0.25387)	(20.5068)	(3.90534)	(0.11625)	(0.49870)
	[3.86181]	[0.53225]	[-1.98602]	[0.77848]	[-1.78858]	[-1.30690]
CointEq3	0.000494	-0.000946	-1.771873	0.149343	-0.003082	-0.028101
	(0.00076)	(0.00666)	(0.53781)	(0.10242)	(0.00305)	(0.01308)
	[0.64969]	[-0.14204]	[-3.29462]	[1.45813]	[-1.01083]	[-2.14856]
D(LOGRGDP(-1))	0.027247	-2.073485	31.52531	18.80744	-1.385458	1.098550
	(0.19079)	(1.67121)	(134.993)	(25.7083)	(0.76525)	(3.28288)
	[0.14281]	[-1.24071]	[0.23353]	[0.73157]	[-1.81046]	[0.33463]
D(LOGVAT(-1))	0.052806	0.098805	54.07401	0.029312	0.072650	1.481138
	(0.04572)	(0.40048)	(32.3487)	(6.1 6054)	(0.18338)	(0.78668)
	[-1.15501]	[0.24672]	[1.67160]	[0.00476]	[0.39618]	[1.88276]
D(LOGBD(-1))	6.51E-05	8.39E-06	0.111047	-0.114470	0.001412	0.017311
	(0.00043)	(0.00379)	(0.30630)	(0.05833)	(0.00174)	(0.00745)
	[0.15038]	[0.00221]	[0.36255]	[-1.96241]	[0.81321]	[2.32399]
D(LOGRIR(-1))	0.002427	-0.035149	-4.975224	0.150264	-0.001987	-0.159568
	(0.00340)	(0.02978)	(2.40571)	(0.45815)	(0.01364)	(0.05850)
	[0.71391]	[-1.18018]	[-2.06809]	[0.32798]	[-0.14571]	[-2.72747]
D(LOGCPI(-1))	0.184298	0.237520	-54.70339	0.504876	-0.280499	-1.348484
	(0.05662)	(0.49596)	(40.0614)	(7.62935)	(0.22710)	(0.97425)
	[3.25504]	[0.47891]	[-1.36549]	[0.06618]	[-1.23513]	[-1.38413]
D(LOGER(-1))	0.020674	-0.157226	-13.03429	-2.052811	-0.134051	0.079212

	(0.01523)	(0.13340)	(10.7757)	(2.05215)	(0.06109)	(0.26205)
	[-1.35748]	[-1.17857]	[-1.20960]	[-1.00032]	[-2.19449]	[0.30228]
C	0.036873	0.246460	-2.351022	-0.544020	0.209965	-0.041172
	(0.01346)	(0.11787)	(9.52112)	(1.81322)	(0.05397)	(0.23154)
	[2.74018]	[2.09093]	[-0.24693]	[-0.30003]	[3.89016]	[-0.17781]
R-squared	0.881405	0.483632	0.767845	0.538992	0.678574	0.501030
Adj. R-squared	0.805166	0.151681	0.618602	0.242629	0.471943	0.180264
Sum sq. resids	0.003399	0.260819	1701.775	61.71991	0.054687	1.006440
S.E. equation	0.015582	0.136492	11.02521	2.099658	0.062500	0.268120
F-statistic	11.56103	1.456938	5.144946	1.818691	3.283991	1.561979
Log likelihood	72.29264	20.20925	-85.19100	-45.38916	38.95565	4.005093
Akaike AIC	-5.191054	-0.850771	7.932584	4.615763	-2.412971	0.499576
Schwarz SC	-4.700198	-0.359915	8.423439	5.106619	-1.922115	0.990431
Mean dependent	0.047633	0.168692	1.016700	0.205827	0.109179	0.127227
S.D. dependent	0.035302	0.148193	17.85246	2.412650	0.086008	0.296137

Determinant resid covariance (dof adj.)	4.72E-08
Determinant resid covariance	1.86E-09
Log likelihood	36.90210
Akaike information criterion	3.424825
Schwarz criterion	7.253500

Table 5.4b Summary of Vector Error Correction Model

Dependent Variable: D(LOGRGDP)
Method: Least Squares (Gauss-Newton / Marquardt steps)
Sample (adjusted): 1996 2019
Included observations: 24 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.221426	0.118362	-1.870747	0.0824
C(2)	0.111925	0.028982	3.861809	0.0017
C(3)	0.000494	0.000760	0.649694	0.5264
C(4)	0.027247	0.190788	0.142811	0.8885
C(5)	0.052806	0.045719	-1.155013	0.2674
C(6)	6.51E-05	0.000433	0.150378	0.8826
C(7)	0.002427	0.003400	0.713911	0.4870
C(8)	0.184298	0.056619	3.255038	0.0058
C(9)	0.020674	0.015229	-1.357482	0.1961
C(10)	0.036873	0.013456	2.740176	0.0159

R-squared	0.881405	Mean dependent var	0.047633
Adjusted R-squared	0.805166	S.D. dependent var	0.035302
S.E. of regression	0.015582	Akaike info criterion	-5.191054
Sum squared resid	0.003399	Schwarz criterion	-4.700198
Log likelihood	72.29264	Hannan-Quinn criter.	-5.060829
F-statistic	11.56103	Durbin-Watson stat	2.112132
Prob(F-statistic)	0.000046		

Table 5.4a and 5.4b above shows us both the long run and the short run components of the vector error correction model. The long run estimate shows long run causality between all the

variables, LnRGDP, LnVAT, LnBD, LnCPI, LnRIR, and LnEXCH. The error correction term of cointegration 1 (CointEq1) is the equation we are interested in because it's the error correction term of the dependent variable, The ECT is negative and gives the speed of adjustments within which the model will restore itself to equilibrium following any disturbance in the long run. The coefficients of ECT with respect to LnRGDPis negative and statistically insignificant with value of -1.87, indicating that there is a convergence/correction from the short run changes or disturbances towards long run equilibrium and has an adjustment speed of 22.24%.

The vector error correction estimate, table 5.4b, shows a system of equation which clearly depicts how all the variables interact within each other. These equations can also be seen as the short run coefficient of the model, that is, C(4), C(5), C(6) C(7), C(8), C(9) and C(10). Owing to the fact that RGDP is our key variable, we would interpret our results from table 5.4b as follows; a percentage change in LnBD, LnRIR, and LnCPIis associated with 0.00006%, 0.24% and 18.43% Increase respectively in LnRGDP on the average, ceteris paribus, in the short run. While a percentage change in LnVAT, and LnER is associated with 5.28%, and 2% increase respectively in RGDP on the average, ceteris paribus, in the short run.

The t-test for the variables, LnVAT, LnBD, LnCPI, LnRIR, and LnEXCHwere -1.15, 0.15, 3.2, 0.71 and -1.35 respectively. By implication, the t-test indicates that LnVAT, LnER has a negative relationship with RGDP and are statistically insignificant, LnBD and LnRIR has a positive and statistically insignificant relationship with LnRGDP while LnCPI has a positive and statistically significant relationship with LnRGDP.

Similarly, the coefficient of determination (R^2) is 0.88 which shows that about 88% variations in the gross domestic product were explained by the independent variables. Also, its adjusted counterpart is 0.80 which shows 80% growth in the gross domestic product can be attributed to the independent variables. The F-statistic gives a value of 11.56 which shows the significance of the overall model. Thus it tells us that the explanatory variables are simultaneously significant in forecasting tax the gross domestic product in Nigeria. Also, the Durbin-Watson statistics value of 2.11 indicates that there is no serial correlation in the model.

Policy Implications of Findings

1. The findings shows that value added tax haspositively and insignificantly influenced the real gross domestic product of the country. By implication, it implies that a rise in the value added tax tends to result to an increase in government tax revenue and by extension an increase in the total revenue of Nigeria. The findings also conform to theory that value added tax plays a crucial role in the performance and growth of the Nigerian economy since it replacement of sales tax, To this end , government should ensure an efficient vat administration and utilization in terms of tax collection system coupled with an optimum vat rate.
2. The findings shows that budget deficit has a positive and insignificant effect on gross domestic product, this implies that budget deficit expand total spending(aggregate demand) and thereby short term economic growth. The insignificant effect can be attributed to the continuous crowding out effect, low productivity of the deficit spending in Nigeria and the after effect of inflation which eventually reduces the value of the real Gross domestic product. Aanother implication of this is that further increase in budget deficit as a supplement in financing government expenses will only stimulate economic performance if and only if it is effectively utilized towards the capital sector of the economy otherwise,

increase in budget deficit will debar economic performance in Nigeria in the long run as it is the nation's current situation with high level of debt.

3. The result of this study shows that consumer price index which stands as proxy for inflation has a positive and significant effect on gross domestic product which negates the apriori expectation and most empirical literature. This implies that the gross domestic product increases as inflation rates increases as a result of low unemployment as explained by the Philips curve. However inflation rates should be controlled or curbed so as to ensure price stability in the economy

4. Real interest rate has a positive and insignificant relationship on real gross domestic product this implies that an increase in the real interest rate will lead to an increase in the gross domestic product. In Theory, this usually happens in the short run as it will attract more foreign investment but in the long run reduce domestic investment as there will be no incentive to invest due to high interest on loans. To this end, government should be proactive to know when to influence the interest rate to encourage investment domestically and from abroad.

5. Lastly, the findings show that exchange rate has a positive effect on real gross domestic product which conform to economic theory. By implication, this means that an increase in exchange rate by way of devaluation or depreciation increases economic growth in terms of international trade. The government is hereby advised to implement import substitution policy, expenditure switching policy and giving out incentives and minimum tax rates for exportable goods.

CHAPTER SIX

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSION

6.1 Summary of Findings

The following are the findings from the study:

1. Value added tax has a positive effect on the real gross domestic product in Nigeria
2. budget deficit has a positive and insignificant effect on real gross domestic product
3. consumer price index has a positive and significant effect on gross domestic product
4. Real interest rate has a positive and insignificant relationship on real gross domestic product.
5. Lastly, the findings show that exchange rate has a positive effect on real gross domestic product which conforms to economic theory.

Based on the above summary of finding, we hereby suggest the following recommendation;

6.2 Policy Recommendation

1. Value added tax has been a very important source of revenue in Nigeria since its inception. In the light of this government should supervise the collection of vat to ensure orderly, fair and equitable dealings in the collection of vat revenue and to forestall illegal deals by privilege insiders so as to raise the revenue as effectively and efficiently as possible.
2. Government and policy makers should carefully study the present state of the economy before deciding on measures through which this deficit will be financed and where possible slash down its operation best suited for the private sector and size of public servants
3. The Consumer price index plays a vital role in the determination of the real GDP and it is also a strong measure of inflation in the country. Therefore the government should use

effective fiscal and monetary policies in maintaining stable prices in the economy, hence a lower CPI(inflation rate indicates a healthy economy

4. Real interest rate has as way of improving g the gross domestic product especially in the real and financial sector of the economy in terms savings and investment. Government should regulate the interest rate using a strong monetary policy that will encourage domestic investment and at the same savings and also the improvement of the financial sector.
5. The central bank of Nigeria should put in place strict foreign exchange policy control to ensure that the value of naira against other currency properly determined . un ethical practices by banks leading depreciation of the naira should be investigated and erring operators sanctioned accordingly.

6.3 Conclusion

This study examined empirically value added tax, budget deficit and economic performance in Nigeria using data spanning between the periods 1980 to 2018, by employing the use of Augmented Dickey Fuller test for stationarity test, Johansen Co-integration test for long run relationship among the variables and Vector Error Correction technique for short run and long run adjustment. From the study, the findings revealed that value added tax and exchange rate was found to be positively related to gross domestic product of the country wgich conformed to the apriori expectation in theory. Meanwhile, budget deficit, consumer price index, real interest rate where found to have a positive relationship with economic performance(RGDP) which negate the apriori expectation.

On the whole, there is the need to discourage the continuous running of budget deficits in the economy as the consequences currently is too glaring to over emphasize, A country that is currently using over 50% of its total revenue for debt servicing as a result of deficit financing. This discontinuation can only be achieved if the Nigerian economy is fully diversified with an efficient tax system like the VAT which is difficult to evade and avoid. Although budget deficit has its advantage being a fiscal policy tool, the government should consider it only as a last resort after exploring all other effective available options. In addition, government should undergo tax reform as it is inevitable for every nation that wants to live up to the expectation of her citizens and wants to be people oriented. It is a strategic option for government to raise revenue to meet up its public expenditure and sustainable development. It is inevitable because taxes introduced some decades ago cannot always achieve the macro objectives of today except if reformed in line with the current economic realities; hence taxes need to be reformed from time to time.

Contribution to Knowledge

This study was able to find the inter-relationship between value added tax, budget deficit and gross domestic product (aproxy for economic performance) using the Vector Error Correction Model estimation technique

Areas for Further Study

If this study were to be carried out again, there are a number of changes that would be made to achieve a better research results. One of the limitations of the study was the difficulty in getting data and incoherent data from different sources, hence data will be collected from only one or two reliable and authentic source to maintain consistency and authenticity. We would also use different control variables that also affect the dependent variable other than the ones used in this study. Another thing that will be done differently will be the application of a different estimation technique like the (Auto Regressive Distributed Lag Model) ARDL because of the nature of the data.

BIBLIOGRAPHY

Abual-Foul, B. & Baghestani, H., 2004. The Causal Relation between Government Revenue and Spending: Evidence from Egypt and Jordan. *Journal of Economics and Finance*, 28, No: 2, pp. 260-269.

Abdenour R. & Tounsi S., (2015). "*Non-Linear Effects of Fiscal Policy on Economic Growth: Moroccan Case*". University of Mohamed V Rabat Online at mpra.ub.unimuenchen.de/ 69830.

Adereti, S.A., Sanni M.R. & Adesina J.A. (2011). Value Added Tax and economic Growth of Nigeria. *European Journal of Humanities and Social Science*. 10(1), 456-471.

Adu, F. & Ackah, I., (2015). "*Revisiting the Government Spending and Growth analysis in Ghana: A disaggregated Analysis*". Africa Centre for Economic Transformation, Accra and, Department of Economics, University of Portsmouth, UKmpra.ub.uni-muenchen.de/65043

Ahmad J. S. Mehrnoosh A. and Abedini M. (2012). *Value Added Tax & Export: Evidence from Panel Data Regression*.

Ajakaiye D. Olu & Odusola A. F. (1996) "*Price Effects of Value Added Tax in Nigeria*" Policy Analysis Series, 2(2), 48-68

Ajakaiye, D.O (2000): *Macroeconomic Effects of VAT in Nigeria: A Computable General Equilibrium Analysis*.

Akosah, N. K (2013). *Threshold effect of budget deficits on economic growth in Ghana*. Working Paper, Research department, Bank of Ghana.

Akram, N., et al. (2011). Fiscal Situation in Pakistan and its consequences for Economic Growth and Poverty. *American International Journal of Contemporary Research*, 1(1).

Alina C. & Stephan D. (2008), *Inflation Smoothing and the Modest Effect of VAT in Germany.*

Amadi, S. N. and Osaro, O. (2000); Security Pricing and Nigeria Capital Market 1985–1994: Some Reflections. *African Journals of Business and economics Research* vol. 1 pp 35- 48.

Anand, R. & Sweder Van Wijnbergen. 1989. "*Inflation and the Financing of Government Expenditure: An Introductory Analysis with an Application to Turkey*." World Bank Economic Review 3, no. 1 (January): 17-38.

Angus O. U. & David I. (2011), Impact of VAT on economic development of emerging nations

Anyanwu, J. C. (1997). *Nigeria Public Finance*. Onitsha, Joance Education Publishers.

Ariyo, A. (1997). *Productivity of the Nigerian Tax System: 1970-1990*. AERC Research Paper 67, Nairobi, African Economic Research Consortium.

Asogu, J. O. (1998). *An Econometric Analysis of the Relative Potency of Monetary and fiscal Policy in Nigeria*. Central Bank of Nigeria Economic and Financial Review Vol. 36 No. 2

Ayşe Kaya & Hüseyin Şen, (2013). How to Achieve and Sustain Fiscal Discipline in Turkey: Rising Taxes, Reducing Government Spending or A Combination of Both? *Romanian Journal of Fiscal Policy Volume* 4, Issue 1(6), January-June 2013, Pages 1-26

Ayua, I. A. (2013). *The Nigerian tax law*. Ibadan: Spectrum Law Publishing.

Baghestani, H., & McNown, R. (1994). Do revenue or expenditure respond to budgetary disequilibria? *Southern Economic Journal*, 61(2), 311–322. http://dx.doi.org/10.2307/1059979

Ball Laurence N. & Mankiw Gregory, (1995), *what do budget Deficits do*?. In 1995 Symposium Proceedings – Budget Deficits and Debt: Issues and Options. Html version Http;//www.economics.harvard.edu/faculty/mankiw/files/whatdobudgetdeficitsdo.pdf

Balassa, Bela. 1988. "*Public Finance and Economic Development*." PPR Working Paper 31.World Bank, Washington, D.C. (December): 1095-1117.

Barro, Robert J., (1974), Are Government Bonds Net Worth? *Journal of political Economy*, Vol. 8, No 6 (Nov/Dec),pp. 1095-1117.

Barro R. (1979). On the Determination of Public Debt. *Journal of Political Economy*, 87, 940-971.

Barro Robert J, (1987), Government Spending Interest rates, Prices and Budget Deficits in the United Kingdom, 1701-1918, *Journal of Monetary Economics*, vol. 20, No.2, Sept., pp. 221-247.

Barro Robert J, (1989), The Ricardian Approach to Budget Deficits. Journal of Economic Perspectives, vol. 3, No.2, (spring), pp. 37-54.

Beard, T.R. & Mcmillin, W.D. (1994), the Impact of Budget Deficits in the interwar period, Journal of Macroeconomics, 13, No.2, Spring , PP. 239-266.

Bernheim, Douglas. 1987. "*Ricardian Equivalence: An Evaluation of Theory and Evidence*." NBER Macroeconomics Annual, vol. 2, pp. 263-303.

Bhatia, H.L, (2003). *Public Finance, 24th Revised Edition*, Vikas.

Blejer, Mario I. & K. Chu, eds. 1988. *Measurement of Fiscal Impact: Methodological Issues*. International Monetary Fund Occasional Paper 59. Washington, D.C.

Blinder, 2016, Blinder, A.S., 2016. *Keynesian economics. A Publication of the Library Of Economics and Liberty*. Retrieved from http://www.econlib.org/library/Enc/Keynesian Economics.html.

Bovenberg, L.A, (1988), *Long Term Interest Rates in the United States: An Empirical Analysis*, IMF Staff papers, 35, No. 2, June, pp. 382-390.

Bikas, E. & Rashkauskas., J. (2011). *Value Added Tax Dimension: The Case of Lithuania*. Ekonomika, 90(1)

Budget (1997).Budget of economic growth and development: Approved budget 97 Fiscal year. Abuja: Federal Government Press

Buiter, Willem H. 1985. "*A Guide to Public Sector Debt and Deficits*." Economic Policy 1(November): 14-61.1988. Some Thoughts on the Role of Fiscal Policy in Stabilization and Structural Adjustment in Developing Countries. NBER Working Paper 2603. Cambridge, Mass.: National Bureau of Economic Research.

Bumpei M. (2011). *The effect of the VAT Rate change on aggregate consumption and economic growth*.

Central Bank of Nigeria (various years). *Annual Statistical Bulletin*. Lagos: CBN Press.

Central Bank of Nigeria (1986). *Annual Report and Statement of Accounts*, December, p.86

Central Bank of Nigeria (1998) .*Annual Report and Statement of Accounts, December*.

Central Bank of Nigeria (2000).*The changing structure of Nigerian economy and implications for developing*, p.176, August.

CBN (2006). *Economic and financial reviews*. Lagos: CBN Press.

CBN (2014) Central Bank of Nigeria Statistical Bulletin, www.cbn.ng

Cheng, B, S. (1998), *The causality between Budget Deficits and Interest rates in Japan*: An application of time Series Analysis, Applied Economics letters, 5, No. 7. July, pp. 419-422.

Corbo, Vittorio, Morris Goldstein, and Mohsin Khan, eds. 1987. *Growth-Oriented Adjustment Programs*. Washington, D.C.: International Monetary Fund and World Bank.

Cuthbertson, S. Hall G. and Taylor, M. P. (1992): Applied Econometrics Techniques

Denis, B. (2010). Investigating the Relationship Between VAT and GDP in Nigerian Economy. Journal of Management and Corporate Governance, 2

Dickey, D. A., & Fuller, W. A. (1979). "Distribution of the estimators for autoregressive time series with a unitroot". *Journal of the American Statistical Association,74(366a), 427–431*

Easterly, W., and Rebelo S., (1993). "Fiscal Policy and Economic Growth: An Empirical Investigation". *Journal of Monetary Economics, Vol. 32, pp. 417-458.*

Eltony, M. N. (2002): *"Measuring Tax Effort in Arab Countries".* Arab Planning Institute, Kuwait.

Ekpo, A. H. (1997); *FDI in Nigeria: Evidence from time series Data*. CBN Economic and Financial Review vol. 1 35, No. 1pp 58 – 78.

Eric E. And Jonathan S. (1996), *Taxation And Economic Growth*

Evans, P. (1987), Do Budget Deficits Raise Nominal Interest Rates? *Journal of Monetary Economics*, 20, No. 2, Sept, pp. 281 -300.

Ezeabasili, V. N. and Mojekwu, J. N. (2011), Analysis of fiscal deficits and interest rates in Nigeria*. Journal of Economics and International Finance*, vol. 3, pp 236 – 245

Federal Inland Revenue Service (FIRS) (1993*): Value Added Tax Decree* No 102 of 1993, Abuja, Nigeria.

Falegan, S. B. (1978) *Trend in Nigeria Budget and Balance of Payments* Friend and M. Puckett (1964): Dividend and Stock Prices" American economic Review, vol. 2, pp 212-258

Famoyin, V.O. (2016*). Foundation of economics of West Africa*. *Nigeria*: Ilesanmi Press and Sons Limited.

Friedman, M., (1978). *"The limitations of tax limitations"*. Policy Review, 5, 7–14.

Gale, William G and Orszag, Peter R, (2004*), Budget Deficits, National Saving and Interest Rates*. A paper prepared for the Brookings, panel on Economic Activity, Sept. 9-10. Html version:http:www.brookings.edu/views/papers/20040910orzaggale.pdf.

Gujarati, Danodar N., (2004), *Basic Econometrics*. Tata McGraw-Hill Publishing Company Limited, New Delhi. 4th ed.

Gupta, S.A. (2016).*Determinants of tax revenue efforts in developing countries*. IMF Working Paper No.07/184. Washington, DC: The International Monetary Fund.

Haruna, A. (2014*).Public Finance and Budgeting Principles: Practice and Issues*. Zaria: ABU Press.

Hashemzadeh, Nozar and Wilson Loretta. (2006), The Dynamics of current Account and Budget Deficits in Selected Countries of the middle East and North Africa. *In International Research Journal of Finance and Economics*, Euro journals publishing, Inc. Html version:http://www.eurojournals.com/finance.htm.

Igbaekemen, G. O. (2014). Impact of Value Added Tax on the Nigerian Economy: A descriptive analysis. *Journal of Economics and Sustainable Development*, 5(19), 96-104

Igweonyia, O. V. (2011). *The analysis of value added tax and its impact on the Nigeria economy. Enugu*: Banking & Finance Department Publication, UNN Enugu Campus.

International Encyclopedia of the Social Sciences (2018) Taxation. Retrieved March 18, 2018 from encyclopedia.com: http://www.encyclopedia.com/social-sciences/applied- and-social-sciences-magazines/taxation.

James A. and Moses A.(2012*), Impact of Tax Administration on Government Revenue in a Developing Economy – A Case Study of Nigeria.*

Jose, Cosreia-Nunes and Loukas, S. (1995*), Budget Deficits and Interest Rates: Is there A Link?* International Evidence. Oxford Bulletin of Economics and Statistics

Keen, M and Lockwood, B. (2006). 'Is the VAT a Money Machine?*' National Tax Journal, Vol. LIX, (4)*

Keho, Y., (2010). "Budget Deficits and Economic Growth: Causality Evidence and Policy Implications for WAEMU Countries*". European Journal of Economics, Finance and Administrative Sciences,* 18, 99-104.

Krajewski, P., and Mackiewicz, M.,(2007). *"Budget Deficit in Poland – the Sources of Growth".*

Laumas, G. S, (1989), Anticipated Federal Budget Deficits, Monetary Policy and the Rate of interest, *Southern Economic Journal* 56, No. 2, Oct., pp. 375-382.

Leyira C. M., Chukwuma E., A. and Asian U. (2012), *Tax System in Nigeria – Challenges and the Way Forward.*

Lin, S., (2007). *China's Value-Added Tax Reform, Capital Accumulation and Welfare Implications*. China Economic Review, 19: 197-214.

Mashkada, T.L. J., (2013). "*Macroeconomic Consequences of Fiscal Deficit in Developing Countries*: A Comparative Study of Zimbabwe and Selected African Countries." University of Stellenbosch

McGowan, J and Billings, B. A. (1997). "An Analysis of the European Community VAT: Implications for U.S. Tax Policy". *Journal of International Accounting Auditing & Taxation,* 6(2), I - 148.

Michael., K and Ben, L (2007) *"The Value-Added Tax: Its Causes and Consequences"* IMF, Working Paper 183.

Michael W. (1997), Taxation and Economic Development: *The State of the Economic Literature*

Mohammad N. and Abdullah K. P., (2012*), Effect of VAT And Tax on Economy*: An Analysis In The Context Of Bangladesh.

Mohanty, R.K., (2018). *"Fiscal Deficit and Economic Growth Linkages in India: Impact of FRBM Act*. In Challenges and Issues in Indian Fiscal Federalism". pp. 89-105. India Studies in Business and Economics. Singapore: Springer, 2018.

Musa, W.E. (2009). Tax Planning and Economic Development. *International Research Journal on Economics*, 5 (4), 134-141.

Musgrave R., (1966*). "Principles of Budget Determination*". In H. Cameran and W.

Henderson (Eds.), *Public Finance*: Selected readings (pp 15-27). New York: Random House.

Naiyeju, J. (2014).*Value Added Tax: The facts of the positive tax*. Lagos:Kupag Publishers

National Tax Policy (2010).NTP – FGN. Finance policies and producers. FIRS

Nellor, D. (1987). "*The effect of value-added tax on the tax ratio",* IMF Working Paper, 87 (47), 1-28.

Nigerian Institute Of Advanced Legal Studies Lagos, Nigeria (2011), *Colloquim On The Tax payers money*

Nwezeaku, N.C. (2005). *Taxation in Nigeria: Principles and practice*. Owerri, Nigeria: Springfield Publisher Ltd.

OECD (2007) "Consumption Taxes: *the Way of the Future*?" OECD Policy Brief Oct. 2007

Ojo S (2003*). Fundamental Principles of Nigerian Tax Sagribra Tax Publications*, Lagos, Nigeria

Okafor, G. T. (2012). Revenue generation in Nigeria through E-taxation*. European Journal of Economics, Finance and Administrative Sciences,* 3(6), 49- 54.

Okezie AS (2003), *Personal Income Tax in Nigeria* (Principles & Practice) ASO Publications Aba, Nigeria.

Okwori, J. & Ochinyabo, S. (2014). A log linear assessment of the effect of Value Added Tax (VAT) on revenue generation in Nigeria*. Journal of Emerging Trends in Economics and Management Sciences (JETEMS)*, 5(7), 95-100.

Olanipekun, d. B. (2012), A Bound Testing Analysis of Budget and Current Account Balance in Nigeria (1960 – 2008) *International Business Management Journal* 6 14: 408-416

Olaoye C.O. (2009). A Review of Value Added Tax Administration in Nigeria.https://www.academia.edu/1104753/A_Review_of_Value_Added_Tax_VAT_Administration_in_Nigeria

[Olaoye, C. O. (2013). Value Added Tax (VAT) and inflation in Nigeria (1990 to 2003*). Asian Journal of Humanities and Social Sciences (AJHSS*), 1(1), 123-135. Retrieved from http://ajhss.org/pdfs/Value%20Added%20Tax......pdf

Olaoye, C. O. (2016). Determinants of value added tax, interest rate, inflation and influence on revenue generation in Nigeria. *International Journal of Economics, Commerce and Management,* 5(10), 322-338.

Oloidi, G. A. &Oluwalana, L. O. (2014).Another approach to evaluating the productivity of value added tax in Nigeria. Retrieved from www.iiste.org/Journals/index.php/DCS/article/download/14413/14722

Oluba, Martin N. (2008), How years of Fiscal Deficits emasculated the Nigerian Economy. *Journal of Economic Reflections*, Martinoluba. Com, vol. B, No. 5, April, pp.1-2

Omokhuale, I.(2016). Evaluation of the contribution of value added tax to the Nigeria economy. *International Journal of Economic and Business Review*,4(2),33-46.

Omorotionmwan Josef (2008), much Ado about Budget, *THISDAY Newspaper* page 18 April 24.

Onaolapo, A.A. &Aworemi, R.J.&Ajala, O. A. (2013).Assessment of Value Added Tax and its effects on revenue generation in Nigeria**.** *International Journal of Business and Social Science, 4(1), 220-225.*

Open Developing Economy". *Review of Applied Economics* 2, no. 1 (2006): 129–39.

Oserogho and Associates (2008*): Legal Alert March 2008 VAT & Foreign Non Resident Companies in Nigeria.*

Osoro, N.E. (1991). *Tax reform in Tanzania: motivations, directions and implications*. A progress report presented to the African Economic Research Consortium. Nairobi, Kenya, 26-30 May.

Osoro, N.E. (1993). *Revenue Productivity Implications of Tax Reform in Tanzania*. AERC Research Paper 20, September, Nairobi, p.24

Owolabi S.A and Okwu, A. T (2011):Empirical Evaluation of Contribution of Value Added Tax to Development of Lagos State Economy.

Olatunji, C.O. (2009). *A Review of Value Added Tax (VAT)*. International Business Management 3(4) 61-68

Rana, E.A., and A.N.M. Wahid, (2017). *"Fiscal Deficit and Economic Growth in Bangladesh: A Time-Series Analysis"*. American Economist 62, no. 1 (2017): 31–42.

Robert C. M. and Elizabeth J. W.(1996*), A Trade-Off Analysis of Value-Added Customer Service Dimensions in Supplier Choice*.

Saeed., A., Ahmad ., and Zaman., K(2012) Validity of the Value Added Tax in the SAARC Region. *The Romanian Economic Journal*, 143- 170

Saleh, A. S.m (2003). "*The budget deficit and economic performance*: A survey" (No. 3–12).

Salti, N. and Chaaban, J. (2010). "The Poverty And Equity Implications Of A Rise In The Value Added Tax: A Microeconomic Simulation For Lebanon*". Journal of Economic Literature classification, 1-30*

Solow, R.M., (1956). "A contribution to the theory of economic growth". *The Quarterly Journal of Economics. 70, 65-94.*

Smith, A. M C., Islam, A., and Moniruzzaman, M (2011*) Consumption Taxes in Developing Countries* – The Case of the Bangladesh VAT. IMF Working Paper, 82. http://hdl.handle.net/10063/2167

Samimi, A. J., and Abdolahi, M. (2011). Value Added Tax & Export: the Case of Selected Countries around the World. *Journal of Economics and Behavioural Studies* 2(6), 298-305

Soyode L. and Kajola S.O. (2006*) Taxation Principles and Practice in Nigeria*. Lagos, Silicon Company

Shalizi, Z and Squire, L. (1988). *Consumption Taxes in Sub-Africa*: Building on Existing Instruments. In M. Gillis, C.S Shour and Sicat, G.P, eds, Value And Taxation in Developing Countries, Washington, D.C, The World Bank, Washington D.C.

Tan, E.C., (2006). *"Fiscal Deficits, Inflation and Economic Growth in a Successful Open Developing Economy*". Review of Applied Economics 2, no. 1 (2006): 129–39.

Vamvoukas, G. A. (1997), A Note on Budget Deficits and Interest Rates*: Evidence from a small Economy, Southern Economic Journal*, 63, No 3, January, pp. 803-811.

Vamvoukas, G. A. (2008), Testing Keynesian Proposition and Ricardian Equivalence: More Evidence on the Debate, *In journal of Business and economics Research,* may, Vol. 6, No. 5 24. Robert C, Robert Cl. and Tom N. (2010), The Macroeconomic Effects of an Add-on Value Added Tax

Waidyasekera D. D. M. (2010), *Role of taxation in development strategy*.

World Bank (1993).Determinants of Value-Added Tax Revenue: A Cross-Section Analysis. Retrieved from http://documents.worldbank.org/curated/pt/421821468766164422/pdf/multi-page.pdf

Zuze,M., (2016). "Fiscal Deficit-Economic Growth Nexus in Zimbabwe: A Vector Auto Regression Analysis". *International Journal for Innovative Research and Development.* Vol:5, Issue:2, pp.273-283

Zaman, Q, Okasha, and Iqbal, M (2012). *Value Added Tax-Theoretical Aspects and Empirical Evidence for Pakistan Journal.*

APPENDIX 1

UNIT ROOT TEST

Null Hypothesis: LOGRGDP has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.102824	0.7045
Test critical values:	1% level	-3.621023	
	5% level	-2.943427	
	10% level	-2.610263	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGRGDP)
Method: Least Squares
Date: 06/22/21 Time: 03:06
Sample (adjusted): 1983 2019
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGRGDP(-1)	-0.014818	0.013437	-1.102824	0.2781
D(LOGRGDP(-1))	0.281727	0.159441	1.766963	0.0865
D(LOGRGDP(-2))	0.374930	0.144469	2.595226	0.0140
C	0.475302	0.415957	1.142671	0.2614

R-squared	0.400539	Mean dependent var	0.035574
Adjusted R-squared	0.346042	S.D. dependent var	0.045547
S.E. of regression	0.036833	Akaike info criterion	-3.663063
Sum squared resid	0.044769	Schwarz criterion	-3.488910
Log likelihood	71.76666	Hannan-Quinn criter.	-3.601666
F-statistic	7.349805	Durbin-Watson stat	1.910278
Prob(F-statistic)	0.000665		

Null Hypothesis: D(LOGRGDP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.120509	0.0026
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

*MacKinnon (1996) one-sided p-values.
Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGRGDP,2)
Method: Least Squares
Date: 06/22/21 Time: 03:04
Sample (adjusted): 1982 2019
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRGDP(-1))	-0.474854	0.115242	-4.120509	0.0002
C	0.017397	0.007148	2.433727	0.0200

R-squared	0.320480	Mean dependent var	0.003484
Adjusted R-squared	0.301605	S.D. dependent var	0.046475
S.E. of regression	0.038839	Akaike info criterion	-3.607586
Sum squared resid	0.054305	Schwarz criterion	-3.521397
Log likelihood	70.54413	Hannan-Quinn criter.	-3.576920
F-statistic	16.97859	Durbin-Watson stat	2.493702
Prob(F-statistic)	0.000212		

Null Hypothesis: LOGVAT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.864160	0.0072		
Test critical values:	1% level		-3.724070	
	5% level		-2.986225	
	10% level		-2.632604	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGVAT)
Method: Least Squares
Date: 06/22/21 Time: 02:57
Sample (adjusted): 1995 2019
Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGVAT(-1)	-0.097411	0.025209	-3.864160	0.0008
C	0.716208	0.137622	5.204165	0.0000

R-squared	0.393647	Mean dependent var	0.202100
Adjusted R-squared	0.367284	S.D. dependent var	0.221240
S.E. of regression	0.175982	Akaike info criterion	-0.560251

Sum squared resid	0.712303	Schwarz criterion	-0.462741
Log likelihood	9.003136	Hannan-Quinn criter.	-0.533206
F-statistic	14.93173	Durbin-Watson stat	1.426096
Prob(F-statistic)	0.000788		

Null Hypothesis: D(LOGVAT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.911344	0.0001
Test critical values:	1% level	-3.737853	
	5% level	-2.991878	
	10% level	-2.635542	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGVAT,2)
Method: Least Squares
Date: 06/22/21 Time: 03:02
Sample (adjusted): 1996 2019
Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGVAT(-1))	-0.789253	0.133515	-5.911344	0.0000
C	0.124952	0.040339	3.097585	0.0053

R-squared	0.613655	Mean dependent var	-0.038855
Adjusted R-squared	0.596094	S.D. dependent var	0.225966
S.E. of regression	0.143609	Akaike info criterion	-0.963786
Sum squared resid	0.453719	Schwarz criterion	-0.865615
Log likelihood	13.56544	Hannan-Quinn criter.	-0.937742
F-statistic	34.94399	Durbin-Watson stat	2.339611
Prob(F-statistic)	0.000006		

Null Hypothesis: LOGBD has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.478188	0.0000
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGBD)
Method: Least Squares
Date: 06/22/21 Time: 03:08
Sample (adjusted): 1981 2019
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGBD(-1)	-0.908406	0.165822	-5.478188	0.0000
C	5.215663	2.015219	2.588137	0.0137

R-squared	0.447848	Mean dependent var	0.218418
Adjusted R-squared	0.432925	S.D. dependent var	14.90202
S.E. of regression	11.22187	Akaike info criterion	7.723527
Sum squared resid	4659.423	Schwarz criterion	7.808837
Log likelihood	-148.6088	Hannan-Quinn criter.	7.754135
F-statistic	30.01055	Durbin-Watson stat	2.021981
Prob(F-statistic)	0.000003		

Null Hypothesis: D(LOGBD) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.691291	0.0000
Test critical values:	1% level	-3.621023	
	5% level	-2.943427	
	10% level	-2.610263	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGBD,2)
Method: Least Squares
Date: 06/22/21 Time: 03:09
Sample (adjusted): 1983 2019
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGBD(-1))	-2.181731	0.283663	-7.691291	0.0000
D(LOGBD(-1),2)	0.372860	0.159101	2.343550	0.0251
C	0.474604	1.942293	0.244353	0.8084

R-squared	0.823208	Mean dependent var	-0.039769
Adjusted R-squared	0.812809	S.D. dependent var	27.29168
S.E. of regression	11.80792	Akaike info criterion	7.853022
Sum squared resid	4740.514	Schwarz criterion	7.983637
Log likelihood	-142.2809	Hannan-Quinn criter.	7.899070
F-statistic	79.15827	Durbin-Watson stat	2.201090
Prob(F-statistic)	0.000000		

Null Hypothesis: LOGCPI has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.408725	0.5679
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGCPI)
Method: Least Squares
Date: 06/22/21 Time: 03:15
Sample (adjusted): 1982 2019
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGCPI(-1)	-0.015705	0.011148	-1.408725	0.1677
D(LOGCPI(-1))	0.383894	0.155801	2.464000	0.0188
C	0.144877	0.050077	2.893114	0.0065

R-squared	0.241827	Mean dependent var	0.162047
Adjusted R-squared	0.198503	S.D. dependent var	0.144604
S.E. of regression	0.129459	Akaike info criterion	-1.175255
Sum squared resid	0.586583	Schwarz criterion	-1.045972
Log likelihood	25.32985	Hannan-Quinn criter.	-1.129257
F-statistic	5.581811	Durbin-Watson stat	1.741713
Prob(F-statistic)	0.007869		

Null Hypothesis: D(LOGCPI) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.652378	0.0091
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGCPI,2)
Method: Least Squares
Date: 06/22/21 Time: 03:17
Sample (adjusted): 1982 2019
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGCPI(-1))	-0.549934	0.150569	-3.652378	0.0008
C	0.090231	0.032099	2.811044	0.0079

R-squared	0.270367	Mean dependent var	0.002480
Adjusted R-squared	0.250099	S.D. dependent var	0.151526
S.E. of regression	0.131217	Akaike info criterion	-1.172736
Sum squared resid	0.619843	Schwarz criterion	-1.086547
Log likelihood	24.28198	Hannan-Quinn criter.	-1.142070
F-statistic	13.33987	Durbin-Watson stat	1.758344
Prob(F-statistic)	0.000820		

Null Hypothesis: LOGER has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.647197	0.4495
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGER)
Method: Least Squares

Date: 06/22/21 Time: 03:13
Sample (adjusted): 1981 2019
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGER(-1)	-0.036306	0.022041	-1.647197	0.1080
C	0.293367	0.085749	3.421229	0.0015

R-squared	0.068321	Mean dependent var	0.172908
Adjusted R-squared	0.043141	S.D. dependent var	0.285866
S.E. of regression	0.279632	Akaike info criterion	0.339234
Sum squared resid	2.893175	Schwarz criterion	0.424545
Log likelihood	-4.615066	Hannan-Quinn criter.	0.369843
F-statistic	2.713259	Durbin-Watson stat	1.825891
Prob(F-statistic)	0.107986		

Null Hypothesis: D(LOGER) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.327129	0.0001
Test critical values:	1% level	-3.615588	
	5% level	-2.941145	
	10% level	-2.609066	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGER,2)
Method: Least Squares
Date: 06/22/21 Time: 03:14
Sample (adjusted): 1982 2019
Included observations: 38 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGER(-1))	-0.883086	0.165771	-5.327129	0.0000
C	0.154363	0.055065	2.803316	0.0081

R-squared	0.440805	Mean dependent var	0.004163
Adjusted R-squared	0.425272	S.D. dependent var	0.384597
S.E. of regression	0.291566	Akaike info criterion	0.424095
Sum squared resid	3.060387	Schwarz criterion	0.510284
Log likelihood	-6.057814	Hannan-Quinn criter.	0.454761
F-statistic	28.37831	Durbin-Watson stat	1.996393
Prob(F-statistic)	0.000006		

Null Hypothesis: LOGRIR has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.475308	0.0141
Test critical values:	1% level	-3.610453	
	5% level	-2.938987	
	10% level	-2.607932	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGRIR)
Method: Least Squares
Date: 06/22/21 Time: 03:10
Sample (adjusted): 1981 2019
Included observations: 39 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGRIR(-1)	-0.480863	0.138366	-3.475308	0.0013
C	0.302581	0.375249	0.806348	0.4252

R-squared	0.246094	Mean dependent var	0.071196
Adjusted R-squared	0.225719	S.D. dependent var	2.620938
S.E. of regression	2.306249	Akaike info criterion	4.559042
Sum squared resid	196.7950	Schwarz criterion	4.644353
Log likelihood	-86.90132	Hannan-Quinn criter.	4.589651
F-statistic	12.07777	Durbin-Watson stat	1.995740
Prob(F-statistic)	0.001319		

Null Hypothesis: D(LOGRIR) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic - based on SIC, maxlag=2)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.660612	0.0000
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGRIR,2)
Method: Least Squares
Date: 06/22/21 Time: 03:11
Sample (adjusted): 1984 2019
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRIR(-1))	-1.908938	0.286601	-6.660612	0.0000
D(LOGRIR(-1),2)	0.691792	0.229375	3.015993	0.0050
D(LOGRIR(-2),2)	0.574629	0.141455	4.062260	0.0003
C	0.226993	0.366057	0.620103	0.5396

R-squared	0.748925	Mean dependent var	-0.041927
Adjusted R-squared	0.725387	S.D. dependent var	4.156799
S.E. of regression	2.178311	Akaike info criterion	4.499416
Sum squared resid	151.8412	Schwarz criterion	4.675362
Log likelihood	-76.98948	Hannan-Quinn criter.	4.560826
F-statistic	31.81730	Durbin-Watson stat	1.844074
Prob(F-statistic)	0.000000		

APPENDIX 11
COINTEGRATION TEST

Date: 06/11/21 Time: 16:00
Sample (adjusted): 1996 2019
Included observations: 24 after adjustments
Trend assumption: Linear deterministic trend
Series: LOGRGDP LOGVAT LOGBD LOGCPI LOGRIR LOGER
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.884680	168.7719	95.75366	0.0000
At most 1 *	0.861567	116.9308	69.81889	0.0000
At most 2 *	0.700005	69.47392	47.85613	0.0001
At most 3 *	0.610939	40.57816	29.79707	0.0020
At most 4 *	0.410199	17.92171	15.49471	0.0211
At most 5 *	0.196492	5.250433	3.841466	0.0219

Trace test indicates 6 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.884680	51.84107	40.07757	0.0015
At most 1 *	0.861567	47.45692	33.87687	0.0007
At most 2 *	0.700005	28.89575	27.58434	0.0338
At most 3 *	0.610939	22.65646	21.13162	0.0303
At most 4	0.410199	12.67128	14.26460	0.0879
At most 5 *	0.196492	5.250433	3.841466	0.0219

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGRIR	LOGER
22.41466	0.051963	-0.028157	-17.62547	0.140277	4.892497
10.40483	-5.460832	-0.235091	4.742506	1.248295	-0.815969
27.82304	-7.294234	-0.032355	-2.991332	0.026882	0.163396
3.614008	-2.776061	-0.121843	4.355475	0.082820	0.553007
2.325728	-0.004642	0.063163	-1.443808	0.400662	0.354677

2.480464	-6.353644	0.020192	7.035070	0.125362	1.963380

Unrestricted Adjustment Coefficients (alpha):

D(LOGRGDP)	0.008562	-0.001140	-0.014430	0.000750	-0.000715	-0.002820
D(LOGVAT)	0.028342	0.003512	-0.020952	-0.016628	-0.055905	0.022167
D(LOGBD)	-0.638750	7.632038	-0.134854	2.031014	-4.290525	-1.391773
D(LOGCPI)	0.049065	0.003636	0.026132	-0.023546	0.008037	-0.010904
D(LOGRIR)	-0.699189	-0.550151	-0.009906	-0.082515	-0.953717	-0.212918
D(LOGER)	-0.082516	0.130661	-0.009055	-0.145299	0.013942	0.025227

1 Cointegrating Equation(s): Log likelihood -1.274232

Normalized cointegrating coefficients (standard error in parentheses)

LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGRIR	LOGER
1.000000	0.002318	-0.001256	-0.786337	0.006258	0.218272
	(0.03457)	(0.00102)	(0.06970)	(0.00497)	(0.01791)

Adjustment coefficients (standard error in parentheses)

D(LOGRGDP)	0.191916
	(0.10501)
D(LOGVAT)	0.635269
	(0.59617)
D(LOGBD)	-14.31738
	(63.6882)
D(LOGCPI)	1.099769
	(0.30563)
D(LOGRIR)	-15.67208
	(9.50053)
D(LOGER)	-1.849572
	(1.36215)

2 Cointegrating Equation(s): Log likelihood 22.45423

Normalized cointegrating coefficients (standard error in parentheses)

LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGRIR	LOGER
1.000000	0.000000	-0.001350	-0.780874	0.006758	0.216967
		(0.00093)	(0.01999)	(0.00452)	(0.01687)
0.000000	1.000000	0.040478	-2.356302	-0.215714	0.562822
		(0.00457)	(0.09875)	(0.02230)	(0.08333)

Adjustment coefficients (standard error in parentheses)

D(LOGRGDP)	0.180053	0.006671
	(0.11555)	(0.02554)
D(LOGVAT)	0.671809	-0.017705
	(0.65692)	(0.14517)
D(LOGBD)	65.09267	-41.71047
	(52.0292)	(11.4979)
D(LOGCPI)	1.137597	-0.017304
	(0.33621)	(0.07430)

D(LOGRIR)	-21.39631	2.967952
	(9.90744)	(2.18944)
D(LOGER)	-0.490069	-0.717804
	(1.26636)	(0.27985)

3 Cointegrating Equation(s): Log likelihood 36.90210

Normalized cointegrating coefficients (standard error in parentheses)

LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGRIR	LOGER
1.000000	0.000000	0.000000	-0.773921	-0.001036	0.209024
			(0.01734)	(0.00324)	(0.01580)
0.000000	1.000000	0.000000	-2.564785	0.017973	0.800997
			(0.11990)	(0.02238)	(0.10923)
0.000000	0.000000	1.000000	5.150537	-5.773162	-5.884054
			(3.26652)	(0.60981)	(2.97579)

Adjustment coefficients (standard error in parentheses)

D(LOGRGDP)	-0.221426	0.111925	0.000494
	(0.11072)	(0.02711)	(0.00071)
D(LOGVAT)	0.088858	0.135125	-0.000946
	(0.96983)	(0.23748)	(0.00623)
D(LOGBD)	61.34062	-40.72681	-1.771873
	(78.3391)	(19.1823)	(0.50307)
D(LOGCPI)	1.864681	-0.207920	-0.003082
	(0.44409)	(0.10874)	(0.00285)
D(LOGRIR)	-21.67194	3.040211	0.149343
	(14.9190)	(3.65311)	(0.09581)
D(LOGER)	-0.742013	-0.651753	-0.028101
	(1.90512)	(0.46649)	(0.01223)

4 Cointegrating Equation(s): Log likelihood 48.23033

Normalized cointegrating coefficients (standard error in parentheses)

LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGRIR	LOGER
1.000000	0.000000	0.000000	0.000000	-0.665875	1.738469
				(0.19887)	(0.41489)
0.000000	1.000000	0.000000	0.000000	-2.185316	5.869604
				(0.65881)	(1.37441)
0.000000	0.000000	1.000000	0.000000	-1.348573	-16.06270
				(1.36143)	(2.84022)
0.000000	0.000000	0.000000	1.000000	-0.859054	1.976230
				(0.25666)	(0.53544)

Adjustment coefficients (standard error in parentheses)

D(LOGRGDP)	-0.218717	0.109844	0.000402	-0.109889
	(0.11102)	(0.02828)	(0.00080)	(0.05642)
D(LOGVAT)	0.028763	0.181286	0.001080	-0.492630
	(0.96192)	(0.24507)	(0.00690)	(0.48888)
D(LOGBD)	68.68072	-46.36503	-2.019337	56.70268
	(76.3840)	(19.4608)	(0.54802)	(38.8208)
D(LOGCPI)	1.779584	-0.142554	-0.000213	-1.028273

	(0.38812)	(0.09888)	(0.00278)	(0.19725)	
D(LOGRIR)	-21.97014	3.269277	0.159397	9.384677	
	(14.9694)	(3.81382)	(0.10740)	(7.60790)	
D(LOGER)	-1.267126	-0.248393	-0.010397	1.468285	
	(1.34879)	(0.34364)	(0.00968)	(0.68550)	

5 Cointegrating Equation(s): Log likelihood 54.56597

Normalized cointegrating coefficients (standard error in parentheses)

LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGRIR	LOGER
1.000000	0.000000	0.000000	0.000000	0.000000	1.913917
					(0.55468)
0.000000	1.000000	0.000000	0.000000	0.000000	6.445399
					(1.83213)
0.000000	0.000000	1.000000	0.000000	0.000000	-15.70737
					(2.77262)
0.000000	0.000000	0.000000	1.000000	0.000000	2.202577
					(0.71587)
0.000000	0.000000	0.000000	0.000000	1.000000	0.263484
					(0.62133)

Adjustment coefficients (standard error in parentheses)

D(LOGRGDP)	-0.220379	0.109847	0.000357	-0.108857	-0.000834
	(0.11103)	(0.02823)	(0.00082)	(0.05648)	(0.00392)
D(LOGVAT)	-0.101257	0.181545	-0.002451	-0.411913	-0.015980
	(0.80917)	(0.20576)	(0.00595)	(0.41164)	(0.02854)
D(LOGBD)	58.70212	-46.34511	-2.290339	62.89738	7.882967
	(65.1351)	(16.5628)	(0.47917)	(33.1351)	(2.29758)
D(LOGCPI)	1.798276	-0.142591	0.000295	-1.039877	0.013394
	(0.38152)	(0.09701)	(0.00281)	(0.19408)	(0.01346)
D(LOGRIR)	-24.18823	3.273704	0.099157	10.76166	-1.174050
	(12.0489)	(3.06383)	(0.08864)	(6.12942)	(0.42501)
D(LOGER)	-1.234701	-0.248458	-0.009516	1.448155	0.144837
	(1.34507)	(0.34203)	(0.00990)	(0.68426)	(0.04745)

APPENDIX III

VECTOR ERROR CORRECTION RESULT

Vector Error Correction Estimates
Date: 06/10/21 Time: 12:24
Sample (adjusted): 1996 2019
Included observations: 24 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1	CointEq2	CointEq3			
LOGRGDP(-1)	1.000000	0.000000	0.000000			
LOGVAT(-1)	0.000000	1.000000	0.000000			
LOGBD(-1)	0.000000	0.000000	1.000000			
LOGRIR(-1)	-0.001036	0.017973	-5.773162			
	(0.00346)	(0.02393)	(0.65192)			
	[-0.29918]	[0.75111]	[-8.85565]			
LOGCPI(-1)	-0.773921	-2.564785	5.150537			
	(0.01854)	(0.12818)	(3.49206)			
	[-41.7415]	[-20.0100]	[1.47493]			
LOGER(-1)	0.209024	0.800997	-5.884054			
	(0.01689)	(0.11677)	(3.18126)			
	[12.3751]	[6.85978]	[-1.84960]			
C	-29.09000	1.527869	11.32277			
Error Correction:	**D(LOGRGDP)**	**D(LOGVAT)**	**D(LOGBD)**	**D(LOGRIR)**	**D(LOGCPI)**	**D(LOGER)**
CointEq1	-0.221426	0.088858	61.34062	-21.67194	1.864681	-0.742013
	(0.11836)	(1.03680)	(83.7481)	(15.9491)	(0.47475)	(2.03666)
	[-1.87075]	[0.08570]	[0.73244]	[-1.35882]	[3.92770]	[-0.36433]
CointEq2	0.111925	0.135125	-40.72681	3.040211	-0.207920	-0.651753
	(0.02898)	(0.25387)	(20.5068)	(3.90534)	(0.11625)	(0.49870)
	[3.86181]	[0.53225]	[-1.98602]	[0.77848]	[-1.78858]	[-1.30690]
CointEq3	0.000494	-0.000946	-1.771873	0.149343	-0.003082	-0.028101
	(0.00076)	(0.00666)	(0.53781)	(0.10242)	(0.00305)	(0.01308)
	[0.64969]	[-0.14204]	[-3.29462]	[1.45813]	[-1.01083]	[-2.14856]
D(LOGRGDP(-1))	0.027247	-2.073485	31.52531	18.80744	-1.385458	1.098550
	(0.19079)	(1.67121)	(134.993)	(25.7083)	(0.76525)	(3.28288)
	[0.14281]	[-1.24071]	[0.23353]	[0.73157]	[-1.81046]	[0.33463]
D(LOGVAT(-1))	-0.052806	0.098805	54.07401	0.029312	0.072650	1.481138

	(0.04572)	(0.40048)	(32.3487)	(6.16054)	(0.18338)	(0.78668)
	[-1.15501]	[0.24672]	[1.67160]	[0.00476]	[0.39618]	[1.88276]
D(LOGBD(-1))	6.51E-05	8.39E-06	0.111047	-0.114470	0.001412	0.017311
	(0.00043)	(0.00379)	(0.30630)	(0.05833)	(0.00174)	(0.00745)
	[0.15038]	[0.00221]	[0.36255]	[-1.96241]	[0.81321]	[2.32399]
D(LOGRIR(-1))	0.002427	-0.035149	-4.975224	0.150264	-0.001987	-0.159568
	(0.00340)	(0.02978)	(2.40571)	(0.45815)	(0.01364)	(0.05850)
	[0.71391]	[-1.18018]	[-2.06809]	[0.32798]	[-0.14571]	[-2.72747]
D(LOGCPI(-1))	0.184298	0.237520	-54.70339	0.504876	-0.280499	-1.348484
	(0.05662)	(0.49596)	(40.0614)	(7.62935)	(0.22710)	(0.97425)
	[3.25504]	[0.47891]	[-1.36549]	[0.06618]	[-1.23513]	[-1.38413]
D(LOGER(-1))	-0.020674	-0.157226	-13.03429	-2.052811	-0.134051	0.079212
	(0.01523)	(0.13340)	(10.7757)	(2.05215)	(0.06109)	(0.26205)
	[-1.35748]	[-1.17857]	[-1.20960]	[-1.00032]	[-2.19449]	[0.30228]
C	0.036873	0.246460	-2.351022	-0.544020	0.209965	-0.041172
	(0.01346)	(0.11787)	(9.52112)	(1.81322)	(0.05397)	(0.23154)
	[2.74018]	[2.09093]	[-0.24693]	[-0.30003]	[3.89016]	[-0.17781]
R-squared	0.881405	0.483632	0.767845	0.538992	0.678574	0.501030
Adj. R-squared	0.805166	0.151681	0.618602	0.242629	0.471943	0.180264
Sum sq. resids	0.003399	0.260819	1701.775	61.71991	0.054687	1.006440
S.E. equation	0.015582	0.136492	11.02521	2.099658	0.062500	0.268120
F-statistic	11.56103	1.456938	5.144946	1.818691	3.283991	1.561979
Log likelihood	72.29264	20.20925	-85.19100	-45.38916	38.95565	4.005093
Akaike AIC	-5.191054	-0.850771	7.932584	4.615763	-2.412971	0.499576
Schwarz SC	-4.700198	-0.359915	8.423439	5.106619	-1.922115	0.990431
Mean dependent	0.047633	0.168692	1.016700	0.205827	0.109179	0.127227
S.D. dependent	0.035302	0.148193	17.85246	2.412650	0.086008	0.296137

Determinant resid covariance (dof adj.)	4.72E-08
Determinant resid covariance	1.86E-09
Log likelihood	36.90210
Akaike information criterion	3.424825
Schwarz criterion	7.253500

APPENDIX IV
PRESENTATION OF DATA

	LOGRGDP	LOGVAT	LOGBD	LOGCPI	LOGER	LOGRIR
1980	30.75483	NA	8.281572	-0.894700	-0.603707	-1.978666
1981	30.61410	NA	7.497873	-0.705627	-0.481739	-4.880693
1982	30.54364	NA	9.409863	-0.631469	-0.395325	-2.227874
1983	30.42796	NA	8.814182	-0.422730	-0.322398	-2.779245
1984	30.41674	NA	8.579379	-0.258738	-0.265885	2.174597
1985	30.47419	NA	8.712662	-0.187019	-0.112302	1.587381
1986	30.47480	NA	9.711637	-0.131422	0.562197	2.167346
1987	30.50630	NA	9.374107	-0.024449	1.390296	-2.266232
1988	30.57707	NA	10.09913	0.410647	1.512259	-1.806577
1989	30.59609	NA	10.31789	0.819219	1.996703	-2.587765
1990	30.70742	NA	10.69721	0.890277	2.084216	3.554236
1991	30.71100	NA	11.17760	1.012556	2.293493	0.874887
1992	30.75627	NA	-6.970731	1.381280	2.850616	-3.401453
1993	30.73571	NA	12.28058	1.833408	3.094011	-2.651515
1994	30.71739	2.029200	11.85326	2.284686	3.090861	-3.461723
1995	30.71667	3.033076	-7.600903	2.831856	3.086270	-4.141881
1996	30.75777	3.481240	-11.06818	3.088576	3.085775	-2.362340
1997	30.78672	3.563883	-9.210340	3.170431	3.085850	3.190245
1998	30.81220	3.627004	12.49417	3.265708	3.085847	3.136050
1999	30.81803	3.867026	13.25376	3.329794	4.525457	2.499518
2000	30.86697	4.060443	-12.24315	3.396829	4.622001	-0.977574
2001	30.92446	4.576462	12.99929	3.569720	4.711611	3.191238
2002	31.06708	4.687671	-13.30935	3.690845	4.792298	1.825865
2003	31.13798	4.915592	12.91275	3.822152	4.861535	2.991806
2004	31.22645	5.095589	-12.75189	3.961896	4.889507	-1.685482
2005	31.28885	5.261135	-12.68482	4.126253	4.877289	-1.245629
2006	31.34768	5.449750	-12.21995	4.205430	4.857109	-2.428697
2007	31.41151	5.961907	12.36510	4.257854	4.834758	2.913904
2008	31.47696	6.108425	-11.45907	4.367407	4.775301	2.598548
2009	31.55427	6.292199	14.29795	4.476599	5.003287	3.594225
2010	31.63128	6.246959	14.60890	4.605170	5.012620	0.928469
2011	31.68300	6.490957	-14.65561	4.708088	5.036054	2.438726
2012	31.72443	6.566047	14.48406	4.823359	5.059422	2.528080
2013	31.78901	6.687961	14.65146	4.904716	5.058226	3.111192
2014	31.85020	6.688311	15.29412	4.982256	5.066087	3.124845
2015	31.87638	6.642921	15.78648	5.068520	5.259786	3.304284
2016	31.86008	6.719254	16.06871	5.214137	5.535332	2.598744
2017	31.86810	6.879714	16.33427	5.367060	5.722899	2.456751
2018	31.86821	7.010348	16.35937	5.168817	5.859572	2.858727
2019	31.85987	7.081693	16.79989	5.452142	6.139720	0.797974

	RGDP	VAT	BD	CPI	ER	RIR

1980	2.27E+13	0	1975.200	0.408730	0.546781	-3.547418
1981	1.97E+13	0	902.1000	0.493799	0.617708	-65.85715
1982	1.84E+13	0	6104.100	0.531810	0.673461	-4.586180
1983	1.64E+13	0	3364.500	0.655256	0.724410	-8.022386
1984	1.62E+13	0	2660.400	0.772026	0.766527	4.342493
1985	1.72E+13	0	3039.700	0.829428	0.893774	2.343231
1986	1.72E+13	0	8254.300	0.876848	1.754523	4.310292
1987	1.77E+13	0	5889.700	0.975847	4.016037	-4.769645
1988	1.90E+13	0	12160.90	1.507793	4.536967	-2.962676
1989	1.94E+13	0	15134.70	2.268726	7.364735	-6.612412
1990	2.17E+13	0	22116.10	2.435804	8.038285	17.46624
1991	2.18E+13	0	35755.20	2.752629	9.909492	0.990847
1992	2.28E+13	0	-532.5000	3.979994	17.29843	-14.98717
1993	2.23E+13	0	107735.3	6.255168	22.06540	-7.052475
1994	2.19E+13	7.6080	70270.60	9.822597	21.99600	-15.92023
1995	2.19E+13	20.7610	-1000.000	16.97694	21.89526	-31.45257
1996	2.28E+13	32.5000	-32049.40	21.94579	21.88443	-5.260784
1997	2.35E+13	35.3000	-5000.000	23.81774	21.88605	12.12661
1998	2.41E+13	37.6000	133389.3	26.19865	21.88600	11.48467
1999	2.42E+13	47.8000	285104.7	27.93258	92.33810	6.047248
2000	2.54E+13	58.0000	-103777.3	29.86923	101.6973	-1.140889
2001	2.69E+13	97.1700	221048.9	35.50664	111.2313	12.13870
2002	3.11E+13	108.6000	-301401.6	40.07868	120.5782	3.023542
2003	3.33E+13	136.4000	202724.7	45.70243	129.2224	9.935713
2004	3.64E+13	163.3000	-172601.3	52.55690	132.8880	-2.604847
2005	3.88E+13	192.7000	-161406.3	61.94540	131.2743	-1.593680
2006	4.11E+13	232.7000	-101397.5	67.04941	128.6517	-5.627968
2007	4.38E+13	388.3500	117237.1	70.65815	125.8081	9.187171
2008	4.68E+13	449.6300	-47378.50	78.83894	118.5460	6.684909
2009	5.06E+13	540.3400	810008.5	87.93512	148.9017	18.18000
2010	5.46E+13	516.4400	1105440.	100.0000	150.2980	1.067736
2011	5.75E+13	659.1536	-1158500.	110.8400	153.8616	5.685580
2012	5.99E+13	710.5551	975700.0	124.3822	157.4994	6.224809
2013	6.39E+13	802.6835	1153500.	134.9246	157.3112	11.20162
2014	6.80E+13	802.9647	2193417.	145.8029	158.5526	11.35621
2015	6.98E+13	767.3335	3588820.	158.9389	192.4403	13.59615
2016	6.87E+13	828.1991	4759059.	183.8531	253.4920	6.686234
2017	6.92E+13	972.3484	6206622.	214.2321	305.7901	5.790567
2018	6.92E+13	1108.0400	6364323.	175.7067	350.5741	8.690985
2019	6.86E+13	1189.9811	9887147.	233.2572	463.9239	0.885398