TAX REVENUE AND ECONOMIC GROWTH IN NIGERIA

BY

LIBABATU SAMAILA GARBA

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DECLARATION

I hereby declare that this research is conducted and carried out by me, and to the best of my knowledge, it has never been previously submitted for the award of higher degree in any institution of learning in Nigeria. All materials consulted have been duly acknowledged in the references. In addition, I take responsibility for any errors found in the work.

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CERTIFICATION

This thesis titled "Tax Revenue and Economic Growth In Nigeria" by Garba Samaila Libabatu meets the regulations governing the award of degree of Master of Science in Accounting and Finance of Ahmadu Bello University, Zaria. Hence, it is approved for its contribution to knowledge and literary presentations.

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Dean, School of Post Graduate Studies   Date

DEDICATION

Wholly dedicated to the Almighty God who had declared that this will come to pass. To

my beloved husband Timothy Avong, and my bundle of Joy, My Kids, Jedidah, Eliel and

Deuel.

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ABSTRACT

The contribution of taxation to any economy globally cannot be overemphasized. Apart from the revenue function it performs for the government, it is also used to assist the national government to achieve the country's macro-economic objectives in the areas of fiscal and monetary policies. Over the years, It has been observed that a substantial part of revenue generated in Nigeria is from taxes, yet the role of taxation in promoting economic activities and growth is not felt, mainly because of feasible evidences which cannot be seen nor perceived by the citizens in terms of infrastructure and basic amenities. Past documentations have revealed that revenue from taxes in developed nation's have high impact on its economic growth which clearly seen by the amenities provided by such nations. Thus the main objective of this study is to explore the relationship between taxation in Nigeria and her economic growth. Time series data were applied in carrying out this research work. Multiple Linear Regression analysis was used to analyze the data by employing d use of Vector Error Correction Model. The findings reveal that petroleum profit tax, company income tax and value added tax have a positive impact on Nigeria's economic growth while custom excise and duties impacted negatively but overall, a significant relationship between tax revenue and the Nigerian economic growth exists. The utilization of the generated revenue from taxes calls for serious concern, and requires a special attention of policy makers, non-compliance with tax laws on the part of the tax payers is a hindrance and ineffective administration of tax has given enough loop holes for tax evasion, the consequence of which is poor revenue. We recommend among others that only skilled and professionals and trustworthy hands be responsible for tax administration and the general public should be educated right from the grass root on the importance of taxes to the entire nation.

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CHAPTER ONE

INTRODUCTION

1.1   Background to the Study

The Nigerian Tax System has undergone significant changes in recent times. The Tax Laws are being reviewed with the aim of repelling obsolete provisions and simplifying the main ones. Under current Nigerian law, tax revenue is enforced by the 3 tiers of Government, which are Federal, State, and Local Government with each having its sphere clearly spelt out in the Taxes and Levies Act, 1998.

The whole essence of tax revenue is to generate revenue to advance the welfare of the people of a nation with focus on promoting economic growth and development of a country through the provision of basic amenities for improved public services via proper administrative system, and structures. Tax revenue plays a crucial role in promoting economic activity growth and development. Through tax revenue, government ensures that resources are channeled towards important projects in the society, while giving succor to the weak. The role of tax revenue in promoting economic activity and growth may not be felt if poorly administered. This calls for a need for proper examination of the relationship between revenue generated from taxes and the economy, to enable proper policy formulation and strategy towards its efficiency. According to Olashore (1999), the Nigerian economy has remained in a deep slumber with macroeconomic indicators reflecting an economy in dire need of rejuvenation, revival and indeed radical reform. Also in the view of Oni (1998), tax administration needs to be revamped and refunds of taxes as well as duty drawbacks administration are inefficient.

A critical challenge before tax administration in the 21st century Nigeria is to advance the frontiers of professionalism, accountability and awareness of the general public on the imperatives and benefits of tax revenue in our personal and business lives which include: promoting economic activity; facilitating savings and investment; and generating strategic competitive advantage. If tax administration does not for any reason meet the above challenges, then there is a desperate need for reform in the area of the tax regime, and in the administration of taxes.

A country's tax system is a major determinant of other macroeconomic indexes, specifically, for both developed and developing economies; there exists a relationship between tax structure and the level of economic growth and development. Indeed, it has been argued that the level of economic growth has a very strong impact on a country's tax base (Kiabel, 2009, and Vincent, 2001), and tax policy objectives vary with the stages of development. Similarly, the economic criteria by which a tax structure is to be judged and the relative importance of each tax source vary over time (Vincent, 2001). For example, during the colonial era and immediately after the Nigeria's political independence in 1960, the sole objective of tax revenue was to raise revenue. Later on, emphasis shifted to the infant industries protection and income redistribution objectives. In his discussion of the relationship between tax structure and economic development, (Vincent, 2001) divided the period of economic development into two, the early period when an economy is relatively underdeveloped and the later period when the economy is developed. During the early period, there is limited scope for the use of direct taxes because the majority of the populace resides in the rural areas and is engaged in subsistence agriculture. Because their incomes are difficult to estimate, tax assessment at this stage is based on presumptions prone to wide margins of error.

Tax revenue is a powerful tool of economic reform and a major player in every economy of the world. It is never static but dynamic and should reflect current realities prevailing in the economy. The tax system is an opportunity for government to collect additional revenue besides other sources of income, which is needed in discharging its pressing obligations. A good system of tax also offers itself as one of the most effective means of mobilizing a nation's internal resources and it lends itself to creating enabling and conducive environment to the promotion of economic growth and development (Ogbonna, 2010).

Further, the rudimentary nature of the economy precludes retail form of taxes. At this stage also, taxes are difficult to collect because of the lack of skills and facilities for tax administration (Kiabel, 2009). Given this, a complicated tax structure is not feasible and the amount of revenue from personal income tax will depend on taxpayers' compliance and the efficiency of the tax collector. An important source of government revenue during the early stage of economic development is the foreign trade sector because exports and imports are readily identifiable and they pass through few ports. However, revenue from export and custom duties is not stable because of periodic fluctuations in the prices of primary products. This tends to complicate plan implementation in many developing countries (Kiabel, 2009).

Tax revenue mobilization as a source for financing development activities in Nigeria has been a difficult issue primarily because of various forms of resistance, such as evasion, avoidance and corrupt practices attending to it. These activities are considered as sabotaging the economy and are readily presented as reasons for the underdevelopment of the country. (Adegbie *et al*, 2010:2). Government exists in order to effectively collect taxes from available economic resources and make use of same to create economic prosperity such that available and willing human and other resources are gainfully employed, infrastructures provided, essential public

services (such as the maintenance of law and order) are put in place etc. Tax resistance only makes the development process unattainable. (Onairobi, 1998). It could be deduced that changing or fine-tuning, tax rates is used to influence or achieve macroeconomic stability. Some of the most recently cited examples are the governments of Canada, United States, Netherland, United Kingdom, who derive substantial revenue from Company Income tax, Value Added Tax, Import Duties and have used same to create prosperity (Adegbie *et al*, 2010:3). Thus it can be said that the economic development of a country depends on various reasons one of which is the presence of an effective and efficient tax revenue policy. In Nigeria the contribution of tax revenue has not met the expectations of Government. Government has equally expressed this disappointment and has accordingly vowed to expand the non-oil tax revenue. (Festus and Samuel, 2007). It is in the light of the foregoing that this study examines the extent to which the tax system has contributed to economic growth of Nigeria.

1.2   Statement of The Problem

There is a general lack of consensus among scholars on the contribution of tax revenue to the economic growth of nations. For instance, whereas Ariyo (1997) in his study on productivity of the Nigerian tax system documented a satisfactory level of productivity of the tax system before the oil boom, Festus and Samuel (2007) established that the role of tax revenue in promoting economic activities and growth is not felt in Nigeria. The two studies reflect that the oil boom has not improved the economic state of the country since before the boom, there was a level satisfactory and after the boom, the growth of economic activities deteriorated. The emergence of oil as a major tax revenue is one of the means a country's government devises in solving the economic problems of the country and to enhance government expenditure which is

expected to be beneficial to the citizens of such country through the provision of social and economic infrastructures (Adereti et al 2011). In Nigeria, this has not been the case because despite the tax revenue and expenditure reported year in year out by the government, the physical state of the nation in terms of infrastructure and social amenities is backward. This is evident in the lack of electricity supply, portable drinking water, basic health care delivery, bad roads, just to mention but a few.

The gap in terms of the period covered is also a contributory factor to the disparity in the outcomes of relationship between tax revenue and an economy. The advent of the oil boom encouraged some laxity in the management of non-oil revenue sources like the company income tax and custom and excise duties. This calls for an urgent need in the improvement of the tax system to enhance the evaluation of the performance and facilitate adequate macroeconomic planning and implementation (Adereti et al 2011).

Bonu and Pedro (2009) investigated the impact of income tax rates (ITR) on the economic development of Botswana which shows that the impact of income tax revenue over the nations GDP is not impressive in developing nations. This calls for the need to further investigate the current tax performance vis-à-vis the Nigerian economy.

1.3   Objectives of the Study

Broadly, the objective of this study is to identify the impact of tax revenue on the Nigerian economic growth from 1981-2010. Other specific objectives include:

- To investigate the impact of petroleum profit tax on the growth of the economy of Nigeria.

- To investigate the impact of company income tax on the growth of the economy of Nigeria.

- To investigate the impact of custom and excise duties on the growth of the economy of Nigeria.

- To investigate the impact of value added tax on the growth of the economy of Nigeria.

1.4   Research Questions

The study would examine the following questions:

(1)   Does tax revenue have any significant impact on the economy of Nigeria?

(2)   What is the impact of Petroleum profit tax on the development of Nigeria's economy?

(3)   What is the impact of Company income tax to the development of the economy of Nigeria?

(4)   What is the impact of Customs excise and Duties to the development of the economy of Nigeria?

(5)   What is the impact of Value Added tax to the development of the economy of Nigeria?

1.5   Research Hypotheses

From the objectives of this study, the following hypothesis have been formulated:

Hypothesis One

$H0_1$: Taxation does not have any significant impact on the growth of the Nigerian economy.

Hypothesis Two

$H0_2$: Petroleum Tax has no significant impact on Nigerian economic growth.

Hypothesis Three

H0$_3$: Company Income Tax has no significant impact on Nigerian economic growth.

Hypothesis Four

H0$_4$: Custom and Excise Duties has no significant impact on Nigerian economic growth.

Hypothesis Five

H0$_5$: Value Added Tax has no significant impact on Nigerian economic growth.

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1.6 Scope of the Study:

The scope of this study covers the impact of tax revenue on the Nigerian economic growth over a period of 31 years (from 1981-2010). The trend of Company Income tax, Petroleum profit tax, Customs and excise duty and Value added tax are examined for the period to determine their correlation with the Nigerian economy which will be captured as Gross Domestic Product(GDP). The focus will be based on data obtained at the Federal Inland Revenue Service (FIRS).

1.7 Significance of the Study:

Tax revenue is one of the sources of revenue to the government. This can be used to achieve economic growth, maintain equilibrium in the economy by combating elements of depression, inflation or deflation, achieve equity in income and wealth distribution and address issues of poverty and promote socioeconomic development, hence the need to find out the extent tax revenue impacts on Nigeria's economic growth

The research findings would be of importance to policy makers at national level as they design policies aimed at enhancing economic growth and development through a better tax

revenue system. Policy makers, especially the Federal Inland Revenue Service will use the outcome of the study to gauge its performance, and determine the level of input it would have to make to impact positively to the Nigerian economy.

Students, academicians and other scholars who wish to undertake further research on taxation will find the literature arising from this study to be of great value, as it will be added to the existing literature.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

Tax revenue is a veritable source of government revenue; however, it is still debatable in the literature especially in determining the optimal tax revenue to be imposed to enhance development without unjustly inflicting welfare cost. Economic theories of taxation approach the question of how to minimise the loss of economic welfare through taxation and also discuss how a nation can perform redistribution of wealth in the most efficient manner. This research work focuses on the effect of tax revenue on economic growth and development in Nigeria. This chapter provides reviews of diverse literatures as well as the theoretical and conceptual frame work of the study.

2.2   Conceptual Issues

2.2.1   Taxation and tax administration in Nigeria.

According to the black law dictionary (1999), tax is a ratable portion of the produce of the property and labor of the individual citizens, taken by the nation, in the exercise of its sovereign rights, for the support of government, for the administration of the laws, and as the means for continuing in operation the various legitimate functions of the state. The Institute of Chartered Accountants of Nigeria (2006) and the Chartered Institute of Tax revenue of Nigeria (2002) view tax as an enforced contribution of money, enacted pursuant to legislative authority. If there is no valid statute by which it is imposed; a charge is not tax. Tax is assessed in accordance with some reasonable rule of apportionment on persons or property within tax jurisdiction.

Anyanwu (1997) defined tax revenue as the compulsory transfer or payment (or occasionally of goods and services) from private individuals, institutions or groups to the government. Sanni (2007:5) advocated tax as an instrument of social engineering which can be used to stimulate general or special economic growth. From Onairobi (1994); Taxes are generally either of two types; Direct and Indirect. A direct tax is levied on income or profit while an indirect tax is levied on expenditures. Good examples of Direct Tax include Personal Income Tax, Capital Gain Tax, Profit Tax and Wealth Tax. Examples of Indirect Tax include Excise Taxes, Export Taxes, Import Duties, Expenditure Tax, Sales Tax and Value Added Tax.

Jarkir (2011) **iterated** that tax is a contribution exacted by the state; it is a non penal but compulsory and unrequited transfer of resources from the private to the public sector, levied on the basis of predetermined criteria. The classical economists were of the view that the only objective of tax revenue was to raise government revenue. But with the changes in circumstances and ideologies, the aim of taxes has also been changed. These days apart from the objective of raising the public revenue, taxes is levied to affect consumption, production and distribution with a view to ensuring the social welfare through the economic development of a country.

According to Nzotta (2007), four key issues must be understood for tax revenue to play its functions in the society. First, a tax is a compulsory contribution made by the citizens to the government and this contribution is for general common use. Secondly, tax imposes a general obligation on the tax payer. Thirdly, there is a presumption that the contribution to the public revenue made by the tax payer may not be equivalent to the benefits received. Finally, a tax is not imposed on a citizen by the government because it has rendered specific services to him or his family. Thus, it is evident that a good tax structure plays a multiple role in the process of economic development of any nation which Nigeria is not an exception (Appah, 2010).

Sen (1999) explained that under current Nigerian law, tax revenue is enforced by the 3 tiers of Government, that is Federal, State, and Local Government with each having its sphere clearly spelt out in the Taxes and Levies (approved list for Collection) Decree, 1998.

Successive governments have expressed concern about the low level of productivity of the Nigerian tax system. This has been attributed largely to the deficiencies in the tax administration and collection system, complex legislation, and apathy, especially on the part of those outside the tax net (Ndekwu, 1991: Ariyo, 1997). This is because as a means of meeting their expenditure requirements, many developing countries undertook tax reforms in the 1980s. However, most of these reforms focused on tax structure rather than on tax administration geared towards generating more revenue from existing tax sources. (Osoro, 1991; Ariyo, 1997).

In the words of Enegbu et al (2011), the Nigerian tax system has undergone several reforms geared at enhancing tax administration with minimal enforcement cost. The recent reforms include the introduction of TIN, (Taxpayer Identification Number), which became effective since February 2008, automated tax system that facilities tracking of tax positions and issues by individual tax payer, E-payment system which enhances smooth payment procedure and reduces the incidence of tax touts, Enforcement scheme which engages special tax officers in collaboration with other security agencies to ensure strict compliance in payment of taxes.

Section 8(q) of FIRS Establishment Act 2007 has led to an improvement in the tax administration in the country, thus, the integrated tax offices and authorities now have autonomy to assess, collect and record tax. Despite this improvement, there are still a number of contentious issues that require urgent attention and among them are appropriate tax authority to administer several taxes, the issue of multiple taxes severally administered by all the three tiers

of government which sometimes imposes welfare cost and the issue of the paucity of data base, which contributes to tax avoidance in the country. (Unegbu et al (2011)

Unegbu et al also added that the issue of corruption is still a perennial issue in the country and this reduces the confidence and trust of the tax payers in discharging his civic duty. The issue of infrastructural development is also a crucial issue, in Nigeria; the level of infrastructural facilities is in a deplorable state, most of the facilities (electricity, water, etc) are often privately sourced, thus a number of people wonder what the tax collected are used for and tendency to evade tax payment.

Also in the view of Oni (1998), a critical challenge before tax administration in the 21st century Nigeria is to advance the frontiers of professionalism, accountability and awareness of the general public on the imperatives and benefits of tax revenue in our personal and business lives which include: promoting economic activity; facilitating savings and investment; and generating strategic competitive advantage. If tax administration does not for any reason meet the above challenges, then there is a desperate need for reform in the area of the tax regime we run, and in the administration of taxes.

The concepts of tax and tax revenue in prior researches have been largely discussed in different contexts by tax experts, academic scholars, international organizations as well as different governments. For example, The World Bank (2000) noted that taxes are a compulsory transfer of resources to the government from the rest of the economy, while Appah (2004) described tax as a liability on account on the fact that the taxpayer has an income of a minimum amount and from certain specified source(s).

However, in a simple term for the purpose of this study, tax is a compulsory fee individuals as well as corporate bodies are obliged to comply with as stipulated by the tax laws, while tax revenue is the process of administering the tax laws in the way that achieves government objectives. And so, tax revenue is a major source of fund for any government and the availability of fund is a very crucial aspect of running a State. Although, several options according to Soyode and Kajola (2006) are available to governments for raising fund, tax revenue remains the principal source (Kiabel and Nwokah, 2009).

2.2.2 Brief History of Tax revenue System in Nigeria

Tax and tax administration are fundamental components of any attempt to nation building, and this is particularly the case of any developing or transitional nation like Nigeria. As Bariyima (2008) noted, taxes underwrite the capacity of states to carry out their goals; they form one of the central arenas for the conduct of state-society relations, and they shape the balance between accumulation and redistribution that gives states their social character. That is, taxes build capacity and build legitimacy and consent. Nigeria which was colonized by the British just like some other African countries gained her independence by an act of the British Parliament on 1st October, 1960 and became a republic within the commonwealth in 1963 (Odusola, 2006).

However, the tax system of Nigeria dated back to 1904 when the personal income tax Ordinance was introduced in the northern part of the country before the unification of the country by the colonial masters. It was later implemented through the Native Revenue Ordinance to the western and eastern regions in 1917 and 1928 respectively. Coupled with other amendments in the 1930s, it was later incorporated into Direct Tax revenue Ordinance No. 4 of 1940. Since then, different governments have continued on the improvement of the tax system in Nigeria (Salami, 2011).

Although the Nigerian tax system has undergone several reforms geared toward enhancing tax collection and administration with minimal enforcement cost, there is still nonvoluntary compliance of the taxpayers due to the meager nature of the system leading to an extensive practice of tax evasion and avoidance. It has been a major impediment to economic growth, where tax evasion and avoidance are now prevalent. (Ogbonna and Ebimobowei, 2011). Some of the major tax reforms put in place by the government in addressing the problems of tax administration in Nigeria include: the introduction of Taxpayer's Identification Number (TIN) which became effective since February 2008,

2.2.3 The Nigerian Tax Structure and tax System

Tax revenue has been in existence even before the amalgamation of Nigeria as a political entity in 1914. Direct taxes, which were first introduced into the northern part of Nigeria, were successfully administered because the citizens were already used to one form of tax or another before the formalization of direct taxes. The effectiveness of the administrative arrangement under the emirate system was the major factor. With the amalgamation of the north and the south in 1914, direct tax revenue was introduced into the western territory in 1916, and into the eastern provinces around 1927. The enabling laws and regulations were fashioned after those of Britain. (The legislation and nature of administration of each tax source by each tier of government was discussed earlier.) Ariyo (1998)

Adiegbe (2011) expressed that tax is a legal system approved by the government body to have the charge, to have the direction, to manage and to provide policies; laws and regulations for the tax system to ensure all applicable taxes are collected and remitted to the appropriate authorities. Hence one of the acid tests in determining the success of a tax system is the

management of policy. The two major legal bodies connected to the administration of company income tax, Petroleum profit tax, Personal income tax, Value added Tax, Witholding tax, Education Tax and custom excise duty in Nigeria are Joint Tax Board (JTB) and Federal Inland Revenue Service (FIRS). The Joint Tax Board was established in 1961 to offer advice and coordinate various aspects of tax revenue and also to promote uniformity both in the application of the personal income tax Act 1993, and in the incidence of tax on individual throughout Nigeria . CITA (2004) further confirmed that FIRS is established to carry out the following functions: to exercise the powers and duties conferred on it by any enactment of the federal Government in respect of the above mentioned taxes; to advice the Federal Government on request on double tax revenue arrangement; to promote uniformity both in the application of the personal income tax Act 1993 and the incidence of tax on individuals; to advice the federal Government on request on capital allowances rates and other tax revenue matters, and to impose its decisions on matters of procedure and interpretation of the PITA 1993 on any state of the federation for the purposes of conforming to such agreed interpretation. The Federal Board of Inland Revenue was established with the power to administer company income tax act 1990. The operational arm of FBIR is the Federal Inland Revenue Service (FIRS) which was established in 1993. FIRS has the responsibility of income tax assessment, collection, accounting and administration

The Nigerian tax system has experienced series of reforms since 1904 to date. The effects of the various reforms in the country are as follows: introduction of income tax in Nigeria between 1904 and 1926; grant of autonomy to the Nigerian Inland Revenue in 1945; the Raisman Fiscal Commission of 1957; formation of the Inland Revenue Board in 1958; the promulgation of the Petroleum Profit Tax Ordinance No. 15 of 1959; the promulgation of

Income Tax Management Act 1961;establishment of the Lagos State Inland Revenue Department; the promulgation of the Companies Income Tax Act (CITA) 1979; establishment of the Federal Board of Inland Revenue under CITA 1979; establishment of the Federal Inland Revenue Service Between 1991 and 1992; and tax policy and administration reforms amendment 2001 and 2004. Ogbonna et el (2009).

According to Ola (2006) Tax administration in Nigeria does not measure up to appropriate standards because tax is inequitable. The language of these pieces of legislation is often forbidden and confusing. Many of the supposed tax payers know nothing of the rules under which they are to pay tax or the range of deductible expenses and the allowance available to them; they cannot be at ease to disclose their taxable income. The hallmark of tax convenience in Nigeria now is ability of a taxpayer to go to the tax office, say what he is ready to pay, be assessed accordingly, pay and obtain a tax clearance certificate (Ola, 2006). From the above we can deduce that these has led to administrative inefficiency The literacy level is low and record keeping is not yet a popular culture. There are not enough tax officials to cover the field. Most of the officials are little trained, ill equipped, badly remunerated and corrupt. Ogbonna (2011) added that the Failure of tax administration to recognize the importance of communication and dialogue between government and the citizen in matters relating to tax revenue is a key problem. There is a wide gap in tax administration in Nigeria and countries like USA, United Kingdom, and Canada where tax system is computerized and every tax payer i.e organizations are well captured at source through integrated computer system. This to a large extend is being put in place by the Nigerian Federal Inland Revenue Service (FIRS).

According to Olasatiyan (2011), in his definition of the modern taxes, defined tax as a compulsory charge imposed by a public authority on the income of individuals and companies as

stipulated by the government decrees, acts or cases laws irrespective of the exact amount of services rendered to the payer in return. Thus, taxes constitute the principal source of government revenue and the beauty of any government is for its citizen to voluntarily execute their tax obligations without much coercion and harassment. However, one of the greatest problems facing the Nigerian tax system is the menace of tax leakages in the form of tax evasion and tax avoidance. While tax evasion is the willful and deliberate violation of the tax laws in order to escape tax obligation (Aguola,1999; Kiabel and Ogu,1999), tax avoidance is the active means taxpayers seek to reduce, or remove altogether their tax liability within the provision of the tax laws (Ola, 2001).

Graeme (2003) stated that tax evasion is one of the major social problems inhibiting development in developing countries and eroding the existing welfare state in developed economies in the world, and this has led to a growing attention among policy makers, western countries, international agencies and scholars. As observed by Omoruyi (1983), tax evasion has become the favorite crime of Nigerians, so popular that it makes armed robbery seem like minority interest. And despite government efforts, notwithstanding, the problem of tax evasion and avoidance still persists (Alli, 2009).

Reynold and Wilbur (1990) suggested that tax as a principal source of government revenue should be accorded strict and close monitoring to achieve maximum compliance. The bane of the Nigerian tax system is associated with various tax leakages and mismanagement of tax revenue (Festus and Samuel, 2007).

2.2.4   Federal Government Collectible Taxes in Nigeria

Buba (2007) accentuate the fact that the development of the private sector which is the main engine for national development growth and wealth creation requires large investment in areas like infrastructure, energy, and power. Investment of this magnitude can only come from government. In order to enhance the level of income of the poorer sections of the society, sufficient investment is also required in sectors like education, health, and others that can generate employment. The government can successfully implement all these projects if only it can raise the required revenue whose major source is tax. According to Olawunmi and Ayinla (2007), policy guidance represents the objective of economic policy. The main fiscal policy instruments are tax revenue and public expenditure. It is with this in mind that some forms of government generated taxes and their function are discussed below:

Petroleum Profits Tax

According to Buba (2007), Nigerian law by virtue of the Petroleum Profits Tax Act 1990 requires all companies engaged in the extraction and transportation of petroleum to pay tax. Adigbe (2011) further stated that the taxable income of a petroleum company comprises proceeds from the sale of oil and related substances used by the company in its own refineries plus any other income of the company incidental to and arising from its petroleum operations. Adereti (2011) explained that the taxable income of a petroleum company is subject to tax at 85%, but this percentage is lowered to 65.75% during the first 5 years of operation but where oil companies operate under production sharing contracts they will be liable to tax at a rate of 50%.

This makes the foreign trade sector the major source of revenue in the 1960s. Some structural changes emerged in the revenue profile in the early 1970s whereby indirect taxes gave

way to direct taxes with the emergence of the oil boom (Egwakhide, 1988). The fall in non-oil tax revenue due to the neglect of the traditional (agricultural) sources was matched by an increase in import duties until 1973. Further, there was an appreciable increase in revenue from excise duties in the 1970s due to the enhanced performance of the industrial sector. (Buba 2007)

This overall picture has been sustained up till now given the dominant role of the oil sector as major source of government revenue. This scenario appears to conform to Musgrave's (1969) theory to the effect that as an economy develops, more reliance may be placed on direct tax revenue. Some caution is advisable in confirming the relevance of Musgrave's theory to the Nigerian environment.

Ogbonna and Ebimobowei (2011) conducted a study on the impact of petroleum revenue on the economy of Nigeria for the period 1970 to 2009. The study showed that a strong correlation exists between petroleum revenue and GDP. This was determined from the regression results that showed an R=0.839, R Squared of 0.705, F-value of 90.630 and a corresponding significant value of 0.000 and a t-value of less than 0.05 significant level. They concluded that oil based revenue if invested efficiently in the economy will to a large extent make material difference on GDP. From the result of Ogbonna and Ebimobowei (2011), it can be deduced that PPT has a positive impact on Nigeria's economy but it'll be good to further investigate the roles other taxes play on the economy's GDP both individually and as a lump sum which is one of the objectives this study aims to achieve.

Companies Income Tax

Companies Income Tax Act, 1990 is the current enabling law that governs the collection of taxes on profits made by companies operating in Nigeria excluding companies engaged in

Petroleum exploration activities. This Tax is payable for each year of assessment of the profits of any company at a rate of 30% (Adereti 2011).

According to Ola (2006) Companies' income tax administration in Nigeria does not measure up to appropriate standards. If good old tests of equity, certainty, convenience and administrative efficiency are applied, Nigeria will score low considering the following points: Due to inadequate monitoring, persons in the self-employed and unquoted private companies group evade tax. In a study conducted by Festus and Samuel (2007) on company Income Tax and the Nigerian economy, they conclude that Company income tax is a major source of revenue in Nigeria but non-compliance with tax laws and regulations by tax payers is deep in the system because of weak control. There is the need for a general tax reform in the Nigerian company income tax system.

Value Added Tax (VAT):

VAT is a consumption tax that is relatively easy to administer and difficult to evade and it has been embraced by many countries world-wide (Federal Inland Revenue Service, 1993). Value-added Tax Act, 1993 is the law that regulates the collection of tax due on "vatable" goods or services. (Adereti 2011). It was introduced to replace the old sales tax. It is a consumption tax levied at each stage of the consumption chain, and is borne by the final consumer. It requires a taxable person upon registering with the Federal Board of Inland Revenue to charge and collect VAT at a flat rate of 5% of all invoiced amounts of taxable goods and services. (Ariyo, 1998). Adereti (2011) explained that evidence so far supports the view that VAT revenue is already a significant source of revenue in Nigeria. For example, actual VAT revenue for 1994 was N8.189 billion, which is 36.5% higher than the projected N6 billion for the year. Similarly, actual VAT

revenue for 1995 was N21 billion compared with the projected N12 billion. In terms of contributions to total federally collected revenue, VAT accounted for about 4.06 % in 1994 and 5.93% in 1995. As much as N404.5 billion was collected on VAT (5.1% of total revenue) in 2008. Every person, whether resident in Nigeria or nonresident 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).

Ajakaiye (2000) worked on the impact of VAT on key sectoral 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.

Personal Income Tax

The tax is on the Pay As you Earn (PAYE) basis, that is the tax payable depends on how much is earned by the tax payer. The tax is easy to collect from civil servants as it is deducted from source by the appropriate authorities unlike the private sector who will have to file returns of each tax payer which is not done in most cases (CISLAC and Abu 2012). Documentations from different scholars indicated that even with all efforts through the various tax reforms undertaken by Nigerian government to increase tax revenue over the years, prior statistical evidence has proven that the contribution of income taxes to the government's total revenue remained consistently low and is relatively shrinking. However, of all the taxes, personal income tax has remained the most disappointing, nonperforming, unsatisfactory and problematic in Nigerian tax system (Asada, 2005; Kiabel and Nwokah, 2009; Nzotta, 2007; Odusola, 2006). Specifically, the contribution of personal income tax remained marginal and comparatively low in Nigeria's tax revenue. At the state and local government levels, where the major source of internal revenue is expected to be individual income tax, its contribution to the total revenue of these levels dropped from 20.18 and 7.7% in 1999 to 12.4 and 1.6% in 2008, respectively (CBN, 2008). The PAYE tax payer is payable to both the Federal Inland Service and the state Board of Internal Revenue depending on the sector in which the tax payer is employed. The tax is regulated by personal Income Tax Act 2004.

Custom and Excise Duties:

Customs duties in Nigeria are the oldest form of modern tax revenue. Their introduction dates back to 1860 known as import duties, which represents taxes on imports into Nigeria, charged either as a percentage of the value of imports or as a fixed amount of contingent on

quantity (Buba, 2007). Customs duty is a major source of revenue for the Federal Government which is payable by importers of specified goods (Buyonge, 2008).

Adegbie (2011) studied the Customs and Excise Duties Contribution towards the development and growth of Nigerian economy. The study reveals that there is a strong relationship between customs and excise duties and economic development of Nigeria. This shows that this is a source of income that Nigeria should develop. Also, the study further shows that fraud and financial malpractices have negative impact on the contribution of customs and excise to Nigerian economic development. Going by the statement of Buba (2007), excise duties were also introduced on several goods to broaden the revenue base in Nigeria in 1962. Customs and excise duties is an important component of the non-oil revenue and has remained an important source of revenue before and after the discovery of oil in Nigeria and over the years contributed significantly to national development. He further stated that the Nigeria Custom Service is saddled with the responsibility of collecting duties, excise, fees, tariffs, and other levies imposed by the Federal Government on imports, exports and statutory rates. It is a crucial facilitation of trade and key instrument of state sovereignty. However, the institution is much criticized for corruption and inefficiency and its upper echelon is often driven with intrigue and in-fighting. All these need to change if Nigeria dream of economic development is to be achieved.

2.3   Role of Tax revenue in Economic Growth and Development

A country's tax system is a major determinant of other macroeconomic indexes. Specifically, for both developed and developing economies, there exists a relationship between tax structure and the level of economic growth and development. Indeed, it has been argued that

the level of economic development has a very strong impact on a country's tax base and tax policy objectives vary with the stages of development. (Kiabel, 2009, Vincent, 2001).

According to Olopade and Olopade (2010) Growth means an increase in economic activities. Kuznets (Cited in Likita, 1999) defined a country's economic growth as a long-term rise in capacity to supply increasingly diverse economic goods to its population, this growth capacity is based on advancing technology and the institutional and ideological adjustment that it demands.

Economic growth represents the expansion of a country's potential GDP or output. Rostow – Musgrave model (1999:46) carried out a research on growth of public expenditure where they focused mainly on the utilization of taxes as the major revenue source, concluded that, at the early stages of economic development, the rate of growth of public expenditure will be very high because government provides the basic infrastructural facilities (social overheads) and most of these projects are capital intensive, therefore, the spending of the government will increase steadily. The investment in education, health, roads, electricity, water supply are necessities that can launch the economy from the practitioner stage to the take off stage of economic development, making government to spend an increasing amount with time in order to develop an egalitarian society.

Development in human society is a one-sided process; this in turn remains the goals of every society at all times. The term 'development' until recently meant growth measured by GNP or rise in per capital income. Yet development is not growth. Perhaps it could be growth coupled with social justice, (Kayode,1993). Development implies changes that lead to improvement or progress; it is believed that an economy that raises its per capita level of real

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income over time without transforming its social and economic structure is unlikely to be perceived as developing.

The main purpose of tax is to raise revenue to meet government expenditure and to redistribute wealth and manage the economy (Ola, 2001; Jhingan, 2004; Bhartia, 2009). Jarkir (2011) outlined that for **economic growth** of a country, tax can be used as an important tool in the following manner:

Optimum allocation of available resources: Tax is the most important source of public revenue. The imposition of tax leads to diversion of resources from the taxed to the non-taxed sector. The revenue is allocated on various productive sectors in the country with a view to increasing the overall growth of the country. Tax revenues may be used to encourage development activities in the less developments areas of the country where normal investors are not willing to invest.

In the contemporary society, the public finance is not merely to raise sufficient financial resources for meeting administrative expense, for maintenance of law and order and to protect the country from foreign aggression. Now the main object is to ensure the social welfare. The increase in the collection of tax increases the government revenue. It is safer for the government to avoid borrowings by increasing tax revenue, **encouraging savings and investment:** Since developing countries has mixed economy, care has also to be taken to promote capital formation and investment both in the private and public sectors. Tax revenue policy is to be directed to raising the ratio of savings to national income.

Reduction of inequalities in income and wealth: Through reducing inequalities in income and wealth by using a efficient tax system, government can encourage people to save and invest in productive sectors.

Acceleration of Economic Growth and Price Stability: Tax policy may be used to handle critical economic situation like depression and inflation. In depression, tax is set to increase the consumption and reduce the savings to increase the aggregate demand and vice verse. Thus the tax policy may be used to strengthen incentives to savings and investment. In under developed countries, there is another role to maintain price stability to ensure growth with stability.

Control mechanism: Tax policy is also used as a control mechanism to check inflation, consumption of liquor and luxury goods and to protect the local poor industries from the uneven competition. Tax revenue is the only effective weapon by which private consumption can be curbed and thus resources transferred to the state. Thus the economy can ensure sustainable development.

According to the Wikipedia (2011), Nigeria is ranked 30th in the world in terms of GDP (PPP) as of 2011. This shows that as a developing nation it is not doing badly and can improve if it utilizes its revenue effectively. Currently, Nigeria is the third-largest on the continent of Africa, producing a large proportion of goods and services for the West African region making it is the largest economy in the Region, 3rd largest economy in Africa (behind South Africa and Egypt), and on track to becoming one of the 20 largest economies in the world by 2025.

Musa (2004) pointed out that tax policy influences economic behavior both at the micro and macro level, hence an important stabilization tool for economic policymakers. The level of tax revenue in any nation will affect people's economic behavior, including their choices in working, saving, and investing. (Ola 2001). A high tax regime not only imposes high welfare cost but also drastically affects consumer spending, through reduction of the disposable income. Adereti et al (2011).

Inglehart et al, (2002) believe that the level of spending in any economy is affected by the level of tax revenue. A high tax burden can have a drastic adverse effect on the overall economy. It also contributes or worsens tax evasion and avoidance. Bhartia (2009) also added that while tax rate in the developed countries is high, there is also an adequate social security system that mitigates the welfare cost in form of Job seekers' allowance, Child allowance and various students' scholarships and loan facilities. Naqvi (2003) stated that taxes also influence the types of physical investments that businesses make. This is because the governments taxes return on some types of investments are at higher rates than others. By distorting physical investment decisions, the tax system may sometimes lead to an inefficient pattern of investment.

Akinola (2001) explains how tax revenue plays a crucial role in promoting economic activity and growth. Through tax revenue, government ensures that resources are channeled towards important projects in the society, while giving succor to the weak. The role of tax revenue in promoting economic activity and growth is not felt primarily because of its poor administration.

Persson et al (2002) stated that during the early period, there is limited scope for the use of direct taxes because the majorities of the populace reside in the rural areas and are engaged in

subsistence agriculture. Because their incomes are difficult to estimate, tax assessment at this stage is based on presumptions prone to wide margins of error. Musa (2004) further stated that the early period of economic development is, therefore, characterized by the dominance of agricultural tax revenue, which serves as a proxy for personal income tax revenue, and in Nigeria the various marketing boards served as effective mechanisms for administering agricultural tax revenue. Agricultural tax revenue substituted for personal income tax given the difficulty in reaching individual farmers and the inability to measure their tax liability accurately.

An important source of government revenue during the early stage of economic development is the foreign trade sector because exports and imports are readily identifiable and they pass through few ports. However, revenue from export and custom duties is not stable because of periodic fluctuations in the prices of primary products. This tends to complicate plan implementation in many developing countries (Massel et al., 1982).

Economic development brings with it an increase in the share of direct taxes in total revenue. This is consistent with the experience of developed economies in which direct trades yield more revenue than indirect taxes. For example, personal income tax becomes important as the share of employment in the industrial sector increases. Also, as the dominance of the agricultural sector decreases, sales tax may be broadened because a great deal of output and income will go through the formal market as the economy becomes more monetized.

Economic growth has received much attention among scholars. According to Appah (2010), classical studies estimate that economic growth is largely linked to labour and capital as factors of production. Therefore, tax revenue is considered as an instrument of fiscal policy an important variable which may determine changes in national income in developing countries like Nigeria. Increased tax revenue on imported goods and services have affected the level of such

goods and services that industrialist within our sovereignty are encouraged to produce. And because of high import duty on dairy products, textiles, materials, food drinks etc our economic potential are encouraged through industrial investment locally and the multiplier effect on employment and national growth. Also, high tax rate imposed on imported components of oil industrial inputs and the encouragement of local content in the oil industry are all geared towards increasing economic growth in Nigeria (Kiabel and Nwokah, 2009)

Bonu and Pedro (2009) think that tax policy does affect economic growth. There is enough evidence linking tax revenue and output growth to make the reasonable inference that beneficial changes in tax policy can have modest effects on output growth the composition of the tax system is probably as important for economic growth as is the absolute level of tax revenue. Countries that are able to mobilize tax resources through broad based tax structures with efficient administration and enforcement will be likely to enjoy faster growth rates than countries with lower overall tax collections assessed inefficiently. In short, the design of the tax system is likely to exert a modest, but cumulatively important influence on long-term Growth rates.

Taxes will increase in relative importance as economic development progresses, however, due to growth or non-static nature of the bases of these taxes, several retail outlets also make a sales tax system difficult to implement and a multiple-stage sales tax system even more so (Musgrave, 1969). Further, the rudimentary nature of the economy precludes retail form of taxes. At this stage also, taxes are difficult to collect because of the lack of skills and facilities for tax administration (Hausmann et al, 2000). Given this, a complicated tax structure is not feasible and the amount of revenue from personal income tax will depend on taxpayers' compliance and the efficiency of the tax collector.

Taxes may be imposed on firms or individuals, on expenditures or receipts, and on factor inputs or products, among others, which could lead to a shift from indirect to direct taxes (Musgrave, 1969). His theory relates to a normal development process, which does not consider a situation where the sudden emergence of an oil boom provides an unanticipated source of huge revenue.

Adereti et al (2011) explained that the 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 to finance their activities. These tax alternatives include personal and corporate income taxes, sales taxes, value added taxes, capital gains taxes and numerous others. Unegbu et al (2011) believes that with the present policy of liberalization of the Nigerian economy being vigorously pursued by the Federal Government, Nigeria is fast becoming an investors haven albeit with a few teething problems. What is required for the foreign investor however, is a careful approach to the following areas,: Proper enterprise set-up, procurement of necessary permits and approvals and access to the best professional advice. Tax revenue is very important to the growth and development of any country as tax proceeds helps in rural and urban development in the form of road constructions, hospitals, schools and other social amenities.

2. 4 Review of Empirical Literature.

The core function of tax revenue as a revenue generating tool in developing countries has been studied by eminent scholars. Naiyeju (1996) 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. 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.

Adereti et al (2011) did a study on Value Added Tax and Economic growth in Nigeria. They analyzed Time series data on the Gross Domestic Product (GDP), VAT Revenue, Total Tax Revenue and Total (Federal Government) Revenue from 1994 to 2008 using both simple regression analysis and descriptive statistical method. The Findings of the study showed that VAT Revenue accounts for as much as 95% significant variations in GDP in Nigeria. A positive and significant correlation exists between VAT Revenue and GDP. Both economic variables fluctuated greatly over the period though VAT Revenue was more stable. No causality exists between the GDP and VAT Revenue, but a lag period of two years exists and also, this could be true as VAT is not easily evaded as it is collected at source on the consumption of goods and services. The study will further verify to see if the result will comply with the above findings.

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. Government introduced VAT as a way of improving Government revenue and make funds available for development purposes. The study like in Adereti et al (2011) showed a positive correlation between VAT and GDP. Recommendation was made that more awareness was needed on VAT.

Adegbie and Fakile (2011) examined the relationship between company income tax and Nigeria's economic development for the period 1981 to 2007. They used the GDP to capture the Nigerian Economy which was measured against total annual revenue from company Income Tax for the same period. They employed the use of chi-square and multiple linear regression analysis method to analyze data obtained from both primary and secondary sources. Their variables included various taxes regressed against GDP. With an R squared of 98.6% and an adjusted R squared of 98.4%, revealing that company income tax's impact on GDP is very high and impressive. It further showed that there is a significant relationship between company income tax and Nigerian economic development and that tax evasion and avoidance are the major hindrances to revenue generation. Overall the study examined only Company income Tax which calls for the need to see the impact of all Tax revenues on the Nigerian economy.

Owolabi and Okwu (2011) evaluated the contribution of VAT to the development of Lagos State economy. Development aspects considered included infrastructural development, environmental management, education sector development, youth and social development, agricultural sector development, health sector development and transportation sector development. Result showed that VAT revenue contributed positively to the development of the respective sectors. However, the above studies show there is paucity of comprehensive research on the impact of tax revenue on the Nigerian Economy. Rather, most research has focused only on a single aspect of the tax sources.

In their study of the relationship between company income tax and Nigerian economic development, Festus and Samuel (2007) reported that In Nigeria, the role of tax revenue in promoting economic activities and growth is not felt primarily because of its poor administration, perception and often an undesirable imposition which bears no relation to the responsibilities of

citizenship or to the service provided by the government. Their study further revealed that an efficient and effective tax administration results in increased revenue yield, but this is not possible because of the presence of evasion and avoidance due to loop holes in the tax laws. On the other hand, Adedeji and Oboh (2010) stated that people expect that by sacrificing their private resources to the state in the form of taxes, government is expected to reciprocate by spending public revenue in a way that will enhance their welfare. However, government and tax collectors have been dubiously mismanaging the public treasury. There is high level of manipulation and diversion of tax revenue by the collectors. The dwindling tax revenue as presently witnessed results from lack of encouragement to the taxpayer, due to the fact that there is very little evidence to show for taxes collected. For these reasons, there are increased cases of tax evasion. Therefore, this gap in existing literature on tax revenue and economic growth needs to be filled (Appah, 2004).

Tax revenue is the most important source of revenue for modern governments, typically accounting for about 70-90% or more of their income, while the remainder of government revenue comes from borrowing, both domestic and external. Countries differ considerably in the amount of taxes they collect Jhingan (1995).

Nzotta (2007) stated that as at 2005, in the United States, about 30 percent of the gross domestic product (GDP) is spent on the cost of tax. In Canada about 35 percent of the country's gross domestic product goes for taxes. In France the figure is 45 percent, and in Sweden it is 51 percent. (Engen E, Skinner J. 1996). Reuven and Yoram (2006) agreed that the structure of tax revenue in developing countries is radically different from that of developed countries because about two thirds of the tax revenue in developed countries is obtained from direct taxes, mostly personal income tax and social security contributions. The remaining one-third comes primarily

from domestic sales tax. The situation is exactly reversed in developing countries where about two-thirds of the tax revenue comes from indirect taxes, mostly VAT, sales tax, excises and taxes on trade. The remaining one-third consists largely of corporate income tax. If This is true, then the outcome of the study of Adegbie and Fakile (2011) and Ogbonna and Ebimobowei does not agree with the study of Reuven and Yoram because it shows that company income tax and petroleum profit tax which are both direct taxes contribute largely to Nigeria's GDP.

Tosun and Abizadeh (2005) in their study of economic growth of tax changes in OECD countries from 1980 to 1999 reveal that economic growth measured by GDP per capita has a significant effect on the tax mix of the OECD countries. The analysis reveals that different taxes respond to the growth of the GDP per capita. It is shown that while the shares of personal and property taxes have responded positively to economic growth, shares of the payroll and goods and services taxes have shown a relative decline.

Bonu and Pedro (2009) investigated the impact of income tax rates (ITR) on the economic development of Botswana, the study reveals that the influence of income tax revenue over GDP is not much in economically advanced countries such as Japan, China, UK, USA and Canada. Among the advanced countries, Japan has 4% followed by Canada (9%), UK (10%), China (11%) and USA (12%). In developing nations, the lowest influence of income tax over the GDP is found in Mozambique (2%) followed by Mauritius (4%), Seychelles (5%), Tanzania and Zambia (6% each), Congo (7%), Lesotho (8%), Botswana (9%) whereas a greater influence is found in Malawi (50%), Angola (36%), Zimbabwe (14%), South Africa (13%) and Namibia (12%). According to Gilligan and Richardson (2005), the tax system that is perceived as unfair by the citizens may likely to be less successful and this will encourage the taxpayers to engage in noncompliant behavior, which may have adverse effect on economic growth.

Wasylenko (1997) made a strong analysis of the effect of tax revenue on foreign direct investment. He said that investors from countries that use territorial tax systems are only sensitive to host country taxes. Where home countries use residential tax systems, investors are subject to taxes from both host and home countries but receive a tax credit in the home country for direct taxes paid in the host country. In this case, host country taxes would not matter if they were lower than home country taxes but would affect location of the investment if they were higher. He also noted that tax reforms affect types of jobs created. Generally, reductions in capital or business taxes would attract more capital-intensive firms, which may pay higher wages and benefit those with more education and better job skills. From this literature, it is noted that the basic aspect of the fiscal environment of any country is the quality and quantity of services provided by government which can positively impact on economic growth.

According to Ola (2001), governments impose many types of taxes and the revenue each of these taxes contribute to its GDP vary from country to Country. In most countries, individuals pay income taxes when they earn money, consumption taxes when they spend it, property taxes when they own a home or land, and in some cases estate taxes when they die. In the United States, federal, state, and local governments all collect taxes. Hausmann and Mcpherson (2000) further confirmed that taxes on companies and people's incomes play critical roles in the revenue systems of all developed countries. In the United States, personal income tax revenue is the single largest source of revenue for the government. In 2006 it accounted for nearly 50% of all federal revenues. Nzotta (2007).

Brian (2007) analyzed the "effects of tax revenue on economic growth in Uganda's experience for the period 1987-2005. From the study, tax revenue was found to have had an impact on the economic growth level of the country, with direct taxes having a positive effect

while indirect taxes had a negative impact. However he stated that due to time, financial and data constraints, not all essential issues could be analyzed. The issue arising from this work is the fact that indirect taxes are not easily evaded when it comes to payment because they are paid either on consumption of goods and services or at source and so one expects that they should have a positive impact on a country's economic growth not negative as reported.

According to Appah (2004), the principles of tax revenue mean the appropriate criteria to be applied in the development and evaluation of the tax structure. Such principles are essentially an application of some concepts derived from welfare economists. In order to achieve the broader objectives of social justice, the tax system of a country should be based on sound principles. Jhingan (2004), Bhartia (2009) and Osiegbu *et al.* (2010) listed the principles of tax revenue as equality, certainty, convenience, economy, simplicity, productivity, flexibility and diversity.

Equity principle states that every taxpayer should pay the tax in proportion to his income. The rich should pay more and at a higher rate than the other person whose income is less (Jhingan, 2004). Anyanfo (1996) states that it is only when a tax is based on the tax payer's ability topay can it be considered equitable or just. Sometimes this principle is interpreted to imply proportional tax revenue.Certainty principle of tax revenue states that a tax which each individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the quantity to be paid ought to all be clear and plain to the contributor and every other person (Bhartia, 2009).

Convenience principle of tax revenue states that the time and manner should be convenient to the taxpayer. According to Anyanfo (1996), this principle of tax revenue provides the rationale for Pay - As - You - Earn (PAYE) system of tax payable system of tax collection.

Economy principle states that every tax should be economical for the state to collect and the taxpayer to pay (Appah, 2004; Jhingan, 2004; Bhartia, 2009). Anyanfo (1996) argues that this principle implies that taxes should not be imposed if their collection exceeds benefits. Productivity principle states that a tax should be productive in the sense that it should bring large revenue which should be adequate for the government. This is the major reason why governments in all parts of the globe continuously employ tax reforms.

2.5 Theoretical Framework.

According to Bhartia (2009), a tax revenue theory may be derived on the assumption that there need not be any relationship between tax paid and benefits received from state activities. In this group, there are two theories, namely; Socio-political theory and the expediency theory.

Socio political theory: This theory of tax revenue states that social and political objectives should be the major factors in selecting taxes. The theory advocated that a tax system should not be designed to serve individuals, but should be used to cure the ills of society as a whole.

Benefit received theory: This theory proceeds on the assumption that there is basically an exchange relationship between tax-payers and the state. The state provides certain goods and services to the members of the society and they contribute to the cost of these supplies in proportion to the benefits received (Bhartia, 2009). Anyanfo (1996) argues that taxes should be allocated on the basis of benefits received from government expenditure.

Faculty theory: According to Anyanfo (1996), this theory states that one should be taxed according to the ability to pay. It is simply an attempt to maximize an explicit value judgment about the distributive effects of taxes. Bhartia (2009) argue that a citizen is to pay taxes just

because he can, and his relative share in the total tax burden is to be determined by his relative paying capacity.

Expediency theory: This theory asserts that every tax proposal must pass the test of practicality. It must be the only consideration weighing with the authorities in choosing a tax proposal. Economic and social objectives of the state and the effects of a tax system should be treated irrelevant (Bhartia,2009). (Anyafo, 1996; Bhartia, 2009) explained that the expediency theory is based on a link between tax liability and state activities. It assumes that the state should charge the members of the society for the services provided by it. This reasoning justifies imposition of taxes for financing state activities by inferences, provides a basis, for apportioning the tax burden between members of society. This proposition has a truth in it, since it is useless to have a tax which cannot be levied and collected efficiently.

There are pressures from economic, social and political groups. Every group tries to protect and promote its own interests and authorities are often forced to reshape tax structure to accommodate these pressures. In addition, the administrative set up may not be efficient to collect the tax at a reasonable cost of collection. Tax revenue provides a powerful set of policy tools to the authorities and should be effectively used for remedying economic and social ills of the society such as income inequalities, regional disparities, unemployment, and cyclical fluctuations and so on.

Adolph Wagner advocated that social and political objectives should be the deciding factors in choosing taxes. Wagner did not believe in individualist approach to a problem. He wanted that each economic problem be looked at in its social and political context and an appropriate solution found thereof. Accordingly, a tax system should not be designed to serve individual members of the society, but should be used to cure the ills of society as a whole. This

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theory relates to a normal development process and represents a benchmark against which country specific empirical evidence may be compared.

This study therefore focuses on the expediency theory which enables us to assess the extent to which the Nigerian tax system conforms to this scenario where the link between tax liability and economic activities are linked. If applicable, such a characterization will enhance accurate tax revenue projection and targeting of specific tax revenue sources given an ascertained profile of economic development. It will also assist in estimating a sustainable revenue profile there by facilitating effective management of a country's fiscal policy, among others. This is because the expediency theory focuses on the fact that taxes are collected to achieve economic objectives which enhances the growth and development of a society in all its spheres. The socio-political, benefit and faculty theory are relevant but they lay more emphasis on political, relationship and ability to be objectives.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter gives the methodology employed in the study, involving a discussion of data collection analysis techniques. Against this background, this chapter presents the research design, methods of data collection and techniques analysis of data to be used in the study. Effort is made to describe different tools or techniques employed while analyzing the work. The research focuses on tax revenue and economic growth in Nigeria.

3.2   Research Design

A research design is the framework or the plan of study that is used as a guide in collecting data and analyzing the data. Also, research design is the plan and structure of investigation conceived so as to obtain answers to research questions. In order words research design is the base method or a tool that is applied in the collection of data that is relevant to provide solution to the research problem (Ndagi 1999).

This study adopts the Ex-post facto method of research. This is because data needed for analysis already exists. The study will cover Nigeria's economy with time series rather than cross-sectional data being used. Data relating to revenues from different tax components, investment expenditure and GDP will be collected for the years 1981-2010. The study uses

Vector Error Collection Model (VECM) to examine the relationship between taxation and the Nigerian economy which will be measured using its Gross Domestic Product (GDP).

3.3   Methods of Data Collection

The data for this study will be obtained mainly from secondary sources. The secondary data that relates to relevant information that depicts the tax structure and characteristics of Nigeria will be collected from the Central Bank of Nigeria statistical Bulletin (2010) and Federal Inland Revenue Service (FIRS). The data is made up of Gross Domestic Product (GDP) of Nigeria from 1981 to 2010 while the data for tax revenue covers the same period and captures revenues from petroleum profit tax, company income tax, value added tax, education tax and all consolidated taxes.

3.4   Techniques of Data Analysis:

Basically, this study will involve the use of econometric method of analysis. The method to be used as earlier stated is Vector Error Collection Model (VECM) using the E-Views statistical package. The order of integration will be examined using Augmented Dickey Fuller (ADF) tests. Taxation is represented by revenue from petroleum profit tax, company income tax, customs and excise duties and value added tax for the period under study. Also other robustness test will be carried out like the VEC heteroskedasticity test.

3.4.1   Model Specification:

In order to examine the impact of tax revenue on Nigerian economic growth, a multiple linear model is built. The model captures the contribution of petroleumprofit tx, company

income tax, custom excise and duties and value added tax to GDP. This is represented in the following function:

GDP = f(PPT, CIT, CED VAT)

From the above function, the following model is derived:

GDP = α + β_1PPT$_t$ + β_2CIT$_t$ +β_3CED$_t$ +β_4VAT+ ε

Where GDP is the Gross Domestic Product

PPT: Petroleum Profit Tax

CIT: Company Income Tax

CED: Customs and Excise Duties

VAT: Value Added Tax

α is constant

β 1, β 2, β 3, are the coefficient of the parameter estimate.

ε is the error term.

3.5. Data Estimation and Evaluation Techniques

Various tests were used to evaluate the vector error correction model (VECM) results, which include t-test, R-Squared and f-test. Time series analysis will be carried out to test the data for stationarity or non-stationarity problems using Augmented Dickey-Fuller (ADF), which is an extension of Dickey-Fuller test. After that, the researcher will run a cointegration test to establish

whether the non-stationarity variables are cointegrated and to confirm the existence of a long run equilibrium relationship between the variables. An error correction model will be specified having established the cointegration to present the short run dynamics while preserving the long run equilibrium relationship.

The R-squared is used to test the measure of goodness of fit of the model. Moreover, F-statistics is used to test the joint statistical significance of the explanatory variable and the dependent variable. When f-calculated is greater than f-critical, it shows that there is a joint significant relationship and vice versa.

Finally, an econometric criterion is needed to test the presence or absence of positive serial correlation. The measurement use for this is Durbin Watson statistics. The econometric analysis will cover the period of 1981-2010.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the result of data analysis and tests of hypotheses formulated earlier in the studies. First, stationarity test results are presented and analyzed, and then the analysis of the regression results follows along.

4.2 Data Presentation

The time series data obtained for the purpose of this research work is used to empirically investigate the effect of tax revenue on the growth of the Nigerian economy from the year 1981-2010. The dependent variable is GDP while the explanatory variables are petroleum profit tax, company income tax, custom and excise duties and Value Added Tax. The data were analyzed with E-views 6.0.

Here an attempt was made to present the data collected from the secondary sources. In doing so, our secondary data was basically obtained from the CBN bulletin of 2010 and the Federal Inland Revenue Service for the period of 10 years 1981 to 2010. In order to know the

effect of tax revenue on the growth of the Nigerian economy, the contribution of each of these taxes is compared with the Growth Domestic product GDP is desirable. The data set used for the regression analysis is as per attached in appendix 1.

4.3 Data Analysis and Findings

4.3.1 Stationarity Test Results

A stationarity test on the variables is performed. Economic theory requires that variables be stationary before application of standard econometric techniques. This is to avoid misleading results. In performing the stationarity test a maximum lag of 1 is used, and included the intercept. The result of the stationarity test is presented below.

Table 4.3.1

RESULT OF STATIONARITY (UNIT ROOT) TEST

VARIABLES	*ADF-STATISTICS*	*CRITICAL VALUES*	*ORDER OF INTEGRATION*
GDP	*-7.719135* *(0.0000)*	*1%= -3.699871* *5%= -2.976263* *10%= -2.627420*	*First difference*
PPT	*-5.349843* *(0.0000)*	*1%= -3.69987* *5%= -2.976263* *10%= -2.627420*	*First difference*
CIT	*-4.758119* *(0.0007)*	*1%= -3.689194* *5%= -2.971853* *10%= -2.625121*	*First difference*

CED	-5.086221 (0.0003)	1%= -3.689194 5%= -2.971853 10%= -2.625121	First difference
VAT	-6.203041 (0.0000)	1%= -3.711457 5%=-2.981038 10%= -2.629906	First difference

Source: E-view 6.0 output file.

In order to investigate the order of integration among the variables such as GDP, CIT, CED and VAT, the study has used the Augmented Dickey Fuller (ADF). As stated in the methodology, the tools of unit root tests (ADF) is tested for all the variables by taking null hypothesis as 'presence of unit root' (i.e. presence of non-stationarity) against the alternative hypothesis 'series is stationary'. If the absolute computed value exceeds the absolute critical value, then we reject the null hypothesis and conclude that series is stationary and vice-versa. It is clear from the Table above that the null hypothesis of no unit roots for all the time series are rejected at their first differences since the ADF test statistic values is less than the critical values at one percent levels of significances. Thus, these variables are stationary and integrated of same order, i.e., I (1). Thus it is clear that all the variables have unit root in their level form but at first difference the variables became stationary. Thus, the model follows integrating process.

4.3.2 Regression and Specification Tests Results:

After running the Augmented Dickey fuller test to determine the stationarity of the data presented above, a new model is hereby stated following the stationarity results. This is presented as follows:

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$$\textbf{DGDP} = \boldsymbol{\alpha} + \boldsymbol{\beta_1}\textbf{D (PPT)}_t + \boldsymbol{\beta_2}\textbf{ D (CIT)}_t + \boldsymbol{\beta_3}\textbf{D (CED)}_t + \boldsymbol{\beta_4}\textbf{D (VAT)}_t + \textbf{ECM}$$

interpreted as thus:

D(GDP)=Gross Domestic Product is captured at 1st difference

D (PPT) =Petroleum Profit tax at 1st difference Total Tax is at level

D (CIT) = Company Income Tax at 1st difference

D (CED) =Custom Excise and Duties at 1st difference.

D (VAT) =Value Added Tax at 1st difference.

ECM=Residual result after running the residual test.

4.3.3   Co-integration Test

Since all the variables are not stationary at level but at first difference it is quite possible that there is a linear combination of integrated variables that is stationary; such variables are said to be cointegrated. To understand the cointegrating relationship across these variables the study uses Johansen (1991) Cointegration Test. The Akaike information criterion (AIC), Schwarz information criterion (SBC), Final prediction error (FPE), Hannan-Quinn information criterion (HQ) and the likelihood ratio (LR) test collectively suggest an optimal lag length of one and the cointegration results are provided in the table below;

Table 4.3.2

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**

None *	0.748834	90.14281	69.81889	0.0005
At most 1 *	0.652351	52.83850	47.85613	0.0158
At most 2	0.474712	24.31136	29.79707	0.1876
At most 3	0.151427	6.928519	15.49471	0.5860
At most 4	0.088271	2.495146	3.841466	0.1142

Trace test indicates 2 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 *	0.748834	37.30430	33.87687	0.0187
At most 1 *	0.652351	28.52715	27.58434	0.0378
At most 2	0.474712	17.38284	21.13162	0.1547
At most 3	0.151427	4.433372	14.26460	0.8110
At most 4	0.088271	2.495146	3.841466	0.1142

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Both the trace statistics and max- eigen statistics rejected the null hypothesis of no cointegration at the 0.05 level (90.14281 > 69.81889 and 37.30430 > 33.87687). But the null hypothesis of three cointegration among the variables is not rejected at the 0.05 level (24.31136 < 29.79707 and 17.38284 < 21.13162), (6.928519 < 15.49471 and 4.433372< 14.26460), (2.495146 < 3.841466 and 2.495146 < 3.841466) by both the trace statistics and max-eigen statistics respectively. Hence, the johansen methodology concludes that there exist one cointegrating relationship among GDP, PPT, CIT, CED and VAT. So, estimation of VECM model is required in this context.

4.3.4 Estimated Long Run Relationship Using VECM

The presence of cointegration between variables suggests a long run relationship among the variables under consideration. The long run relationship between GDP, PPT, CIT, CED and VAT for one cointegrating vector for Nigeria in the period 1981 to 2010 is shown in the Table below. For better understanding of the relationship between GDP and PPT, CIT, CED and VAT, the study has estimated the VEC model for the period of 1981 to 2010 in special consideration to each of the independent variables and their impact on the dependent variable separately. The justification for this is to examine whether each of the independent variable will have more influence on GDP than considering the pooled data and its impact on GDP. When the variables are in logarithms and one cointegrating vector is estimated, the coefficients can be interpreted as long run elasticity.

Table 4.3.3

 Vector Error Correction Results

VARIABLES	STD ERROR	T-STATISTICS	P-VALUE
PPT	4.07486	0.56772	2.313364*
CIT	11.7893	1.39071	16.39553*
CED	9.17704	-1.25606	-11.52689*
VAT	0.37487	0.34804	0.130470*

CUMMULATIVE RESULT				
Model		R-Square	Adjusted R-square	Std error of the Estimates	F statistics
1		0.728935	0.530153	4.257323	3.667020

Source: E-VIEW 6.0

During the long run period 1981 to 2010, the T statistic for petroleum profit tax is 0.56772, with standard error of 4.07486, while the p value is 2.313364, this implies that every one percent increase in petroleum profit tax is likely to increase gross domestic product by 2.313364 percent and this estimate is significant at 1% level. Thus, it shows there is positive and significant relationship between petroleum profit tax and gross domestic product. In Nigeria, high petroleum profit tax is instrumental to the growth of the economy, that is, the Nigerian government should ensure that companies dealing with petroleum both in the upstream and downstream sector do not in any way evade tax, as our result indicates that it has positive influence on the economy. As a result of this, we will reject our null hypothesis which stated that petroleum profit tax has no significant impact on gross domestic product. The result agrees with the outcome recorded by Ogbona

The Company Income Tax within a long run period of 1981 to 2010 shows a positive significant relationship with gross domestic product, as the t statistic value is 1.39071 with a standard error of 11.7893, while the p value is 16.39553, this implies that for every one percent increase in company income tax the gross domestic product will increase by 16.39553 percent. Our result signifies that taxes realized from companies in Nigeria are contributing positively to the growth of the economy. This may be as a result of the effectiveness of the bodies in charge of the collection of such taxes at both state and federal level, that is, the State Internal Revenue Board and the Federal Inland Revenue Service. This was also evident in the study of Ola (2006) and Festus and Samuel 2007 where each of the study shows that company income tax has a positive impact on Nigeria's GDP. As a result of this, we will reject the hypothesis which stated that company income tax has no impact on gross domestic product.

The Custom and Excise Duties shows a t statistic of -1.25606 with a standard error of 9.17704 and p value of -11.52689, this implies that custom and excise duties has a negative significant relationship with gross domestic product, that is, for every one percent increase in custom and excise duties, gross domestic product will decrease by 11.52689 percent. The negative relationship signifies that as the custom and excise duties increases, the goods entering the country will decrease because the business men and women will be discouraged and this will have a negative effect on the economy of the country. As a result of this, we will reject our null hypothesis which states that custom and excise duties have no significant influence on gross domestic product. The result here does not agree with the study conducted by Adegbie (2011) which states that a strong relationship exists between custom and excise duties and the economic growth of Nigeria. However it agrees with the study Buba (2007).

The Value Added Tax within a long run period of 1981 to 2010 shows a t statistic value of 0.34804 with standard error of 0.37487 and p value of 0.130470. This implies that for every one percent increase in Value Added Tax, gross domestic product will increase by 0.130470 percent; this signifies that there is a positive significant relationship between values added tax and gross domestic product. This will make us to reject the null hypothesis which stated that value added tax have no significant impact on gross domestic product as shown in Adegbie (2011).

The summary of the overall results of tax revenue is shown in table 4.3.3. It shows that tax revenue has made a significant impact on the economic growth of Nigeria in the period under study. The coefficient of determination reveals a value of 0.729. This implies that tax revenue has explained up to 73% of the variation in economic growth of Nigeria and the remaining 27% is covered by other factors that are beyond the scope of this study. This signifies the fitness of

the model, thus, the model is fit and the explanatory variables are well selected and utilized. This is confirmed by the value of adjusted R square which even after the adjustment is still strong and positive at 53%. The f statistics of 3.66 is a proof for the fitness of the model, and it is significant at 1%.

4.4 Other Robustness Test Results

The table below presents a summary of further tests to buttress the reliability of the model:

Nature of Test	Chi squre	Probability of Chi square	Comment
VEC Heteroskedasticity Test	336.8224	0.3860	Not Significant at 5%. Shows absence 0f Heteroskedasticity.

Source: Extracted from Eviews 6.0 Results

Heteroskedasticity test was carried out to test whether constant variance exists. This was done using VEC Heteroskedasticity Test. This tests the null hypothesis that constant variance exists. From the result, at 5% level, the chi-square is 336.8224 while probability is 0.3860 indicating that the p-value is not significant. Since the result shows that there is no presence of heteroskedasticity, the study fails to reject the null hypothesis. We hence uphold that our residuals are indeed homoskedastic

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Summary

The research work focuses on the examination of Tax revenue and economic growth in Nigeria. The first chapter began with providing a background on the Nigerian tax system and the changes that it has gone through as well as providing details of tax revenue in an economy.

It was stated that tax revenue plays a crucial role in the economy by promoting economic activity and making funds available in the government purse that can be used to adequately execute massive projects to the benefit of the society. Despite the massive income realized via tax revenue in the economy, it was opined by Olashore 1999 that the economy still needs radical reform as the impact of tax revenue is not properly felt, hence, the economy is still in a state of slumber.

The main problem that necessitated this research work was deduced from past studies with the aim of finding out the current state of things and also to see the position as it upholds in Nigeria.

The objective of the research work is to critically identify the impact of tax revenue on Nigerian economic growth from 1981-2010 and to ascertain the relationship that exists between revenue generated from taxes and the Nigerian economy.

The main significance of this study lies in the fact that the study serves as an update on the work done on developed and developing economies; Nigerian economy is the main focus of this study. Therefore this study adds to the body of knowledge by investigating the deficiency in the findings of previous researchers on the impact of tax revenue on Nigerian economic growth.

In chapter two, diverse literatures were reviewed and a lot of things were uncovered. Tax revenue was said to be a veritable source of government revenue, it is as certain as death. However, it is still debatable in the literature the optimal tax revenue to be imposed to enhance development without unjustly inflicting welfare cost. Also, level of spending in any economy is affected by the level of tax revenue. To progress further, the literature review looked into tax revenue administration across the globe, role of tax revenue in economic development, how the Nigerian tax system function and the major challenges it is faced with.

The researcher also made frantic efforts to discuss some of the various taxes that form the independent variables of this research work. The researcher concluded the review of literatures by adopting the expediency theory which lays emphasis on the fact that tax revenue should be able to link its activities to outcomes evident in a state (Country or Nation). This implies that tax revenue is very important to the growth and development of any country as tax proceeds helps in rural and urban development in the form of road constructions, hospitals, schools and other social amenities.

In chapter three, efforts were made to describe different tools or techniques that were employed in analyzing the result of the functional test carried out on the hypothesis. The study adopted an econometric method of analysis and data were sourced largely from secondary means comprising of the CBN annual statistical bulletin. In this chapter, details of the source of data, data estimation criteria, method of data analysis were discussed.

In chapter 4 which is the analysis and interpretation of data, the chapter presents data used to empirically investigate the impact of tax revenue on the Nigerian economy. Time series data was used to capture the trends of tax revenue in Nigeria, and its contribution to GDP

ranging from the year 1981-2010. The data were analyzed with E-views 6.0 using Vector Error Correction Model (VECM).

Results showed that there is a positive relationship between the contribution of taxes and GDP and that tax revenue has a great impact on the GDP of Nigeria. The Null hypotheses which states that taxation does not have any significant impact on the growth of the Nigerian economy is hereby rejected. It can therefore be said that there is a strong positive relationship between the contribution of revenue from taxes and GDP as shown in the result presented where an R^2 73% and adjusted R^2 of 53% was reported. This signifies that tax revenue has a very high impact on the economic growth of Nigeria as a source of revenue available to government for the purpose of Growth and development. The finding agrees with the findings of Hall (1993), Brian (2007) and Adegbie and Fakile (2011) and contradicts the evidence documented by Bonu and Pedro (2009). This implies that taxes contribute largely to Nigeria's GDP as a developing nation unlike in Botswana where tax revenue over the nation's GDP is not impressive.

The test carried out on the various tax revenues to determine their individual impact on GDP shows that petroleum profit tax, company income tax and value added tax has a positive impact on Nigeria's economic growth while custom excise and duties impacts negatively on Nigeria's economic growth. We therefore reject hypothesis $H0_2$, $H0_3$ and $H0_5$ and accept $H0_4$ which were earlier stated in null form.

The statistical tool use to test for the presence or absence of serial correlation is the Durbin Watson Statistics which revealed the nonexistence of autocorrelation. Having obtained an insignificant probability at 5%, we failed to reject the null hypothesis. We hence conclude that our model's residuals are not serially correlated.

Normally by default, most statistical software run regression tests on the assumption of homoskedasticity, e-views 6.0 inclusive. To avoid qualifying a result whose residuals might have violated one of the classical assumptions such as constant variance, we therefore tested for heteroskedasticity- that is whether constant variance exists. This was done using VEC residual heteroskedasticity. This tests the null hypothesis that constant variance exists. Since our probability is not significant here, we again fail to reject the null hypothesis. We hence uphold that our residuals are indeed homoskedastic.

All in all, the study finding can be rationalized by the explanation given by expediency theory, where the theory explains that taxes generated in a nation should be able to meet its economic and social objectives. In Nigeria, the main aim of tax revenue is to raise revenue that can be used or that can contribute to the growth and development process. The Main issue facing the Nigerian tax system is the effectiveness and efficiency in the administration of these taxes. Changes in Government Policies are done with the hope of promoting and protecting the interest of the reigning government and authorities are often forced to reshape tax structure to accommodate these policies. Tax revenue provides a powerful set of policy tools to the authorities and should be effectively used for remedying economic and social ills of the society such as income inequalities, regional disparities, unemployment, and cyclical fluctuations and so on.

For a Mono-economy like Nigeria with heavy dependence on oil revenue, one can say that taxes generated from oil revenue if captured with other taxes as captured in this study will have a significant impact to the on the national income. The findings of Adereti (2011) and Olaoye (2009) on VAT also supports the fact that because of its indirect form, it is impossible to

evade or avoid the payment of VAT a practice most tax payers are fond of doing in Nigeria. This will indeed contribute to the positive impact taxes have on the economy of Nigeria.

5.2 Conclusion

The findings of this study contribute towards a better understanding of tax revenue and economic growth in Nigeria. GDP and four other variables that represent petroleum profit tax, company income tax, custom and excise duties, and value added tax were developed to test which factors best describes economic growth in Nigeria.

The result shows that petroleum profit tax, company income tax, custom and excise duties, and value added tax are significant variables in explaining the economic growth in Nigeria. Out of all the four independents variables, it is only custom and excise duties that shows a negative relationship with economic growth which implies that they are both moving in inverse direction. The remaining three independent variables show a positive relationship with economic growth. The implication of our findings is pointing majorly at policy makers, especially the Federal Board of Inland Revenue as most of our variables shows a positively significant relationship with economic growth, meaning that there should be no area in tax collection that should be taken lightly as they have all proven to be a major variable in connection to the growth of the economy. Aso, for researchers, the study will re-introduce them to a different direction of ways in which tax revenue can contribute to the economic growth in Nigeria and add to the existing literatures on this subject matter and also ensure that the regulatory body implement policies that will reduce the loop holes in tax laws which tax payers capitalize on to evade tax.

One of the main purposes of tax revenue is to raise revenue that the government can use to provide adequate amenities and infrastructure for its citizens as well as enhance growth and

development but the case seems to be different in Nigeria as the physical evidences does not show that funds generated from tax revenue are used for this purpose.

Our analysis has thrown some light on the impact of tax revenue on Nigeria's economy. It is glaring that the Nigerian total tax revenue generated has a significant impact on the economy in general.

5.3 Recommendations

The following recommendations emerged from the findings and conclusions of the study:

1. The introduction of the Tax Identification Number (TIN) which is a registration and storage of tax payers' data in Nigeria is a welcomed idea but for it to be successful it should be structured in such a way that will make all potential tax payers liable. Citizens and companies should be able to operate bank accounts only if they have TIN numbers. Government parastatals, multinationals, conglomerates and companies in the country should not engage any vendor who does not have a TIN number. This will go a long way in reducing Tax evasion.

2. The tribunal recommended by the Tax Act 1993 should be established to reduce cases of tax evasion and remittance of tax collections especially custom and excise duties which reported a negative impact on GDP. Only professionals and trustworthy hands should be responsible for tas administration.

3. All taxes should be remitted via an e-payment system or via direct payment to the various tax authorities' accounts. This will enhance and support the cashless economy system introduced recently.

4. Tax Clearance Certificates and other tax documents used in government transactions should be referred back to the relevant revenue authority for authentication.

5. The government should ensure that taxes are accounted for to the public via print and electronic media. The intent of government with such tax should be communicated to the general public. In so doing, a separate body should be set up to inspect and ensure that the funds generated by government through tax at each level of government is properly used and any level of government that fails to utilize such taxes as communicated to the public should be charged to court.

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Appendix

APPENDIX I: TRANSFORMED DATA

LGDP	LPPT	LCIT	LCED	LVAT
10.71376	9.801129	8.605305	9.36661	0
10.72964	9.685473	8.740363	9.368473	0
10.76315	9.573684	8.749736	9.297542	0
10.80839	9.677789	8.895975	9.208441	0
10.86654	9.826787	9.001734	9.339253	0
10.87453	9.682235	9.042576	9.237544	0
11.04888	10.09705	9.091667	9.549126	0
11.17009	9.833466	9.190612	9.753736	0
11.35879	10.02522	9.281942	9.764624	0
11.44956	10.4299	9.476687	9.936564	0
11.51729	10.58677	9.582972	10.05907	0
11.74464	10.71161	9.733759	10.20561	0
11.85445	10.77238	9.980185	10.18991	0
11.97569	10.63147	10.08902	10.26233	9.860996
12.30289	10.63203	10.34001	10.57245	10.31725
12.44701	10.67669	10.34242	10.74036	10.49136
12.46339	10.80956	10.41497	10.79934	10.53148
12.4497	10.39094	10.52244	10.76118	10.5563
12.52012	10.85794	10.66464	10.94399	10.67302
12.6737	11.5244	10.70842	11.00647	10.76716
12.69104	11.6097	10.83696	11.23198	10.96284
12.85298	11.35102	10.94988	11.25864	11.03583
12.94164	11.64147	11.05994	11.29115	11.13481
13.0672	11.94379	11.05308	11.33686	11.20276
13.16836	12.13104	11.14706	11.36698	11.25066
13.27207	12.13114	11.38899	11.24969	11.34557
13.321	12.20428	11.43981	11.38274	11.4618
13.39209	12.22579	11.2864	11.33701	11.32675
13.40183	12.25682	11.32933	11.33705	11.95497
13.46979	12.25086	11.36504	11.32923	11.60877

STATIONARY TEST

Null Hypothesis: D(GDP) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.719135	0.0000
Test critical values: 1% level	-3.699871	
5% level	-2.976263	
10% level	-2.627420	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDP,2)
Method: Least Squares
Date: 07/07/14   Time: 17:10
Sample (adjusted): 1984 2010
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-2.230609	0.288971	-7.719135	0.0000
D(GDP(-1),2)	0.508499	0.170338	2.985232	0.0064
C	0.175207	0.104944	1.669535	0.1080

R-squared	0.807052	Mean dependent var	0.036540
Adjusted R-squared	0.790973	S.D. dependent var	1.176101
S.E. of regression	0.537707	Akaike info criterion	1.701435
Sum squared resid	6.939101	Schwarz criterion	1.845417
Log likelihood	-19.96937	Hannan-Quinn criter.	1.744248
F-statistic	50.19288	Durbin-Watson stat	1.975399
Prob(F-statistic)	0.000000		

Null Hypothesis: D(PPT) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.349843	0.0002
Test critical values: 1% level	-3.699871	

5% level	-2.976263
10% level	-2.627420

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(PPT,2)
Method: Least Squares
Date: 07/07/14   Time: 17:12
Sample (adjusted): 1984 2010
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PPT(-1))	-1.475760	0.275851	-5.349843	0.0000
D(PPT(-1),2)	0.338634	0.186230	1.818359	0.0815
C	0.142624	0.050854	2.804557	0.0098

R-squared	0.613325	Mean dependent var	0.003920
Adjusted R-squared	0.581102	S.D. dependent var	0.353055
S.E. of regression	0.228506	Akaike info criterion	-0.010074
Sum squared resid	1.253154	Schwarz criterion	0.133908
Log likelihood	3.135994	Hannan-Quinn criter.	0.032740
F-statistic	19.03383	Durbin-Watson stat	2.061588
Prob(F-statistic)	0.000011		

Null Hypothesis: D(CIT) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.758119	0.0007
Test critical values: 1% level	-3.689194	
5% level	-2.971853	
10% level	-2.625121	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CIT,2)
Method: Least Squares
Date: 07/07/14   Time: 17:12
Sample (adjusted): 1983 2010

Included observations: 28 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CIT(-1))	-0.936146	0.196747	-4.758119	0.0001
C	0.087526	0.025117	3.484682	0.0018

R-squared	0.465457	Mean dependent var		-0.003548
Adjusted R-squared	0.444898	S.D. dependent var		0.115509
S.E. of regression	0.086060	Akaike info criterion		-1.998790
Sum squared resid	0.192565	Schwarz criterion		-1.903633
Log likelihood	29.98306	Hannan-Quinn criter.		-1.969700
F-statistic	22.63970	Durbin-Watson stat		1.899259
Prob(F-statistic)	0.000064			

Null Hypothesis: D(CED) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic based on SIC, MAXLAG=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.086221	0.0003
Test critical values:	1% level	-3.689194	
	5% level	-2.971853	
	10% level	-2.625121	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(CED,2)
Method: Least Squares
Date: 07/07/14   Time: 17:13
Sample (adjusted): 1983 2010
Included observations: 28 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(CED(-1))	-0.999407	0.196493	-5.086221	0.0000
C	0.069985	0.026436	2.647318	0.0136

R-squared	0.498743	Mean dependent var		-0.000346
Adjusted R-squared	0.479464	S.D. dependent var		0.165251
S.E. of regression	0.119226	Akaike info criterion		-1.346845
Sum squared resid	0.369585	Schwarz criterion		-1.251688
Log likelihood	20.85583	Hannan-Quinn criter.		-1.317755

| F-statistic | 25.86964 | Durbin-Watson stat | 1.981967 |
| Prob(F-statistic) | 0.000027 | | |

Null Hypothesis: D(VAT) has a unit root
Exogenous: Constant
Lag Length: 2 (Automatic based on SIC, MAXLAG=7)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.203041	0.0000
Test critical values:	1% level	-3.711457	
	5% level	-2.981038	
	10% level	-2.629906	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VAT,2)
Method: Least Squares
Date: 07/07/14   Time: 17:14
Sample (adjusted): 1985 2010
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(VAT(-1))	-3.195419	0.515137	-6.203041	0.0000
D(VAT(-1),2)	1.242422	0.358760	3.463102	0.0022
D(VAT(-2),2)	0.380204	0.184830	2.057043	0.0517
C	1.041896	0.993373	1.048846	0.3056

R-squared	0.857247	Mean dependent var	0.391742
Adjusted R-squared	0.837781	S.D. dependent var	12.40167
S.E. of regression	4.994950	Akaike info criterion	6.195370
Sum squared resid	548.8896	Schwarz criterion	6.388923
Log likelihood	-76.53981	Hannan-Quinn criter.	6.251106
F-statistic	44.03750	Durbin-Watson stat	2.184420
Prob(F-statistic)	0.000000		

COINTEGRATION RESULT

Date: 07/02/14   Time: 21:56
Sample (adjusted): 1984 2010
Included observations: 27 after adjustments
Trend assumption: Linear deterministic trend
Series: LGDP LPPT LCIT LCED LVAT
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 *	0.748834	90.14281	69.81889	0.0005
At most 1 *	0.652351	52.83850	47.85613	0.0158
At most 2	0.474712	24.31136	29.79707	0.1876
At most 3	0.151427	6.928519	15.49471	0.5860
At most 4	0.088271	2.495146	3.841466	0.1142

Trace test indicates 2 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 *	0.748834	37.30430	33.87687	0.0187
At most 1 *	0.652351	28.52715	27.58434	0.0378
At most 2	0.474712	17.38284	21.13162	0.1547
At most 3	0.151427	4.433372	14.26460	0.8110
At most 4	0.088271	2.495146	3.841466	0.1142

Max-eigenvalue test indicates 2 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):

LGDP	LPPT	LCIT	LCED	LVAT
1.013860	5.265590	-11.89358	4.723069	0.315332
2.283801	-3.080066	-3.646626	6.780576	-0.365637
10.30131	0.458561	-12.00196	-1.725080	0.470058
9.220839	-1.428939	-5.309220	-0.064191	-0.288439
11.14449	-0.957026	-4.013750	-5.997030	-0.292373

Unrestricted Adjustment Coefficients (alpha):

D(LGDP)	0.003850	0.009220	-0.028617	-0.009874	-0.004418
D(LPPT)	-0.113389	0.072242	-0.019768	-0.016220	-0.042762
D(LCIT)	0.036784	0.047216	0.008431	-0.005679	0.002204
D(LCED)	-0.042407	0.004924	-0.001975	-0.032656	0.005951
D(LVAT)	-0.203859	0.272130	-0.626749	0.249144	0.361663

1 Cointegrating Equation(s):	Log likelihood	73.54876

Normalized cointegrating coefficients (standard error in parentheses)

LGDP	LPPT	LCIT	LCED	LVAT
1.000000	5.193606	-11.73099	4.658502	0.311021
	(0.79803)	(1.65257)	(1.23919)	(0.10016)

Adjustment coefficients (standard error in parentheses)

D(LGDP)	0.003903
	(0.01184)
D(LPPT)	-0.114960
	(0.04277)
D(LCIT)	0.037294
	(0.01485)
D(LCED)	-0.042994
	(0.02039)
D(LVAT)	-0.206685
	(0.38250)

2 Cointegrating Equation(s):	Log likelihood	87.81233

Normalized cointegrating coefficients (standard error in parentheses)

LGDP	LPPT	LCIT	LCED	LVAT
1.000000	0.000000	-3.685865	3.317273	-0.062981
		(0.53267)	(0.60494)	(0.03336)
0.000000	1.000000	-1.549043	0.258246	0.072012
		(0.19052)	(0.21636)	(0.01193)

Adjustment coefficients (standard error in parentheses)

D(LGDP)	0.024961	-0.008127
	(0.02871)	(0.07009)
D(LPPT)	0.050027	-0.819569
	(0.09737)	(0.23771)
D(LCIT)	0.145127	0.048259

	(0.02536)	(0.06191)
D(LCED)	-0.031749	-0.238461
	(0.05019)	(0.12252)
D(LVAT)	0.414805	-1.911617
	(0.93035)	(2.27132)

3 Cointegrating Equation(s):		Log likelihood	96.50375	

Normalized cointegrating coefficients (standard error in parentheses)

LGDP	LPPT	LCIT	LCED	LVAT
1.000000	0.000000	0.000000	-1.658782	0.087040
			(0.15293)	(0.02186)
0.000000	1.000000	0.000000	-1.833020	0.135060
			(0.17067)	(0.02440)
0.000000	0.000000	1.000000	-1.350037	0.040702
			(0.09382)	(0.01341)

Adjustment coefficients (standard error in parentheses)

D(LGDP)	-0.269829	-0.021249	0.264044
	(0.10116)	(0.05838)	(0.16496)
D(LPPT)	-0.153613	-0.828634	1.322416
	(0.41039)	(0.23685)	(0.66925)
D(LCIT)	0.231977	0.052125	-0.710861
	(0.10570)	(0.06100)	(0.17236)
D(LCED)	-0.052091	-0.239367	0.510110
	(0.21285)	(0.12284)	(0.34710)
D(LVAT)	-6.041528	-2.199020	8.954479
	(3.65646)	(2.11021)	(5.96274)

4 Cointegrating Equation(s):		Log likelihood	98.72044	

Normalized cointegrating coefficients (standard error in parentheses)

LGDP	LPPT	LCIT	LCED	LVAT
1.000000	0.000000	0.000000	0.000000	-0.120735
				(0.03193)
0.000000	1.000000	0.000000	0.000000	-0.094538
				(0.03722)
0.000000	0.000000	1.000000	0.000000	-0.128400
				(0.02702)
0.000000	0.000000	0.000000	1.000000	-0.125257
				(0.02055)

Adjustment coefficients (standard error in parentheses)

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D(LGDP)	-0.360873	-0.007140	0.316466	0.130702
	(0.13044)	(0.05832)	(0.16788)	(0.07837)
D(LPPT)	-0.303172	-0.805457	1.408530	-0.010556
	(0.54155)	(0.24215)	(0.69703)	(0.32540)
D(LCIT)	0.179613	0.060240	-0.680711	0.479708
	(0.13895)	(0.06213)	(0.17884)	(0.08349)
D(LCED)	-0.353203	-0.192704	0.683486	-0.161400
	(0.26279)	(0.11751)	(0.33824)	(0.15790)
D(LVAT)	-3.744214	-2.555031	7.631720	1.947553
	(4.78268)	(2.13857)	(6.15577)	(2.87375)

VECTOR ERROR CORRECTION RESULTS

Vector Error Correction Estimates
Date: 07/07/14   Time: 20:52
Sample (adjusted): 1984 2010
Included observations: 27 after adjustments
Standard errors in ( ) & t-statistics in [ ]

Cointegrating Eq:	CointEq1
LGDP(-1)	1.000000
LPPT(-1)	-2.867336
	(3.06116)
	[-0.93668]
LCIT(-1)	47.91204
	(7.58080)
	[6.32018]
LCED(-1)	-49.83847
	(7.43001)
	[-6.70773]
LVAT(-1)	-2.335194
	(0.68647)
	[-3.40175]
C	69.44927

Error Correction:	D(LGDP)	D(LPPT)	D(LCIT)	D(LCED)	D(LVAT)
CointEq1	-0.110149	-0.010351	-0.004481	0.010028	0.336570
	(0.18488)	(0.01009)	(0.00350)	(0.00548)	(0.14336)
	[-0.59578]	[-1.02583]	[-1.27871]	[1.82835]	[2.34781]
D(LGDP(-1))	-0.979530	-0.011146	-0.000727	-0.002212	-0.532568
	(0.20501)	(0.01119)	(0.00389)	(0.00608)	(0.15896)
	[-4.77798]	[-0.99622]	[-0.18710]	[-0.36368]	[-3.35029]
D(LGDP(-2))	-0.559650	-0.020399	-0.002405	-0.004169	-0.448471
	(0.21353)	(0.01165)	(0.00405)	(0.00633)	(0.16557)
	[-2.62096]	[-1.75046]	[-0.59428]	[-0.65813]	[-2.70869]
D(LPPT(-1))	2.313364	-0.052257	-0.007764	0.067334	7.365747
	(4.07486)	(0.22239)	(0.07724)	(0.12088)	(3.15959)
	[0.56772]	[-0.23498]	[-0.10052]	[0.55702]	[2.33123]
D(LPPT(-2))	-1.517596	-0.367487	0.057193	0.052709	4.752959
	(3.95665)	(0.21594)	(0.07500)	(0.11737)	(3.06794)
	[-0.38356]	[-1.70182]	[0.76261]	[0.44907]	[1.54924]
D(LCIT(-1))	16.39553	0.247185	0.394906	0.231723	-10.63334
	(11.7893)	(0.64341)	(0.22346)	(0.34973)	(9.14127)
	[1.39071]	[0.38418]	[1.76725]	[0.66258]	[-1.16322]
D(LCIT(-2))	6.745154	1.201681	0.010817	0.009587	-23.96833
	(14.8908)	(0.81268)	(0.28225)	(0.44174)	(11.5462)
	[0.45297]	[1.47866]	[0.03833]	[0.02170]	[-2.07587]
D(LCED(-1))		-0.777578	-0.208741	0.191524	1.879775
	(9.17704)	(0.50085)	(0.17394)	(0.27224)	(7.11577)
	[-1.25606]	[-1.55253]	[-1.20005]	[0.70352]	[0.26417]
D(LCED(-2))	14.33156	-0.095191	0.055812	0.274497	13.81979
	(9.97306)	(0.54429)	(0.18903)	(0.29585)	(7.73298)
	[1.43703]	[-0.17489]	[0.29525]	[0.92782]	[1.78712]
D(LVAT(-1))	0.130470	-0.021048	-0.003979	0.014474	-0.834018
	(0.37487)	(0.02046)	(0.00711)	(0.01112)	(0.29067)
	[0.34804]	[-1.02880]	[-0.56000]	[1.30152]	[-2.86929]
D(LVAT(-2))	0.260050	-0.002327	-0.002706	0.002653	-0.440159
	(0.22883)	(0.01249)	(0.00434)	(0.00679)	(0.17743)
	[1.13645]	[-0.18631]	[-0.62393]	[0.39079]	[-2.48076]

C	-2.553476	0.062722	0.065955	-0.000485	1.463820
	(1.87987)	(0.10260)	(0.03563)	(0.05577)	(1.45763)
	[-1.35832]	[0.61135]	[1.85101]	[-0.00870]	[1.00425]

R-squared	0.728935	0.438929	0.474769	0.314426	0.936911
Adj. R-squared	0.530153	0.027478	0.089600	-0.188328	0.890646
Sum sq. resids	271.8719	0.809780	0.097674	0.239251	163.4565
S.E. equation	4.257323	0.232347	0.080695	0.126294	3.301075
F-statistic	3.667020	1.066782	1.232624	0.625408	20.25100
Log likelihood	-69.48951	9.030860	37.58504	25.49070	-62.62092
Akaike AIC	6.036260	0.219936	-1.895188	-0.999311	5.527476
Schwarz SC	6.612188	0.795864	-1.319261	-0.423384	6.103403
Mean dependent	0.100246	0.099155	0.096863	0.075248	0.021220
S.D. dependent	6.210957	0.235607	0.084572	0.115855	9.982494

Determinant resid covariance (dof adj.)	0.000274
Determinant resid covariance	1.45E-05
Log likelihood	-41.14943
Akaike information criterion	7.862920
Schwarz criterion	10.98253

DESCRIPTIVE STATISTICS

	GDP	PPT	CIT	CED	VAT
Mean	12.11034	10.86575	10.14373	10.44946	6.216077
Median	12.37495	10.69415	10.34122	10.65641	10.40430
Maximum	13.46979	12.25682	11.43981	11.38274	11.95497
Minimum	10.71376	9.573684	8.605305	9.208441	0.000000
Std. Dev.	0.955688	0.924910	0.950323	0.800653	5.542528
Skewness	-0.124779	0.221020	-0.172053	-0.264281	-0.254145
Kurtosis	1.584908	1.689594	1.581956	1.527244	1.084246
Jarque-Bera	2.580957	2.390705	2.661571	3.060486	4.910589
Probability	0.275139	0.302597	0.264270	0.216483	0.085838
Sum	363.3102	325.9724	304.3119	313.4839	186.4823
Sum Sq. Dev.	26.48686	24.80831	26.19029	18.59032	890.8690
Observations	30	30	30	30	30

Response to Cholesky One S.D. Innovations

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