EFFECT OF PUBLIC REVENUES ON ECONOMIC GROWTH IN NIGERIA (1980-2008)

BY

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BEING A THESIS SUBMITTED TO SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS OF SCIENCE DEGREE IN ECONOMICS.

DEPARTMENT OF ECONOMICS, FACULTY OF SOCIAL SCIENCES, AHMADU BELLO UNIVERSITY, ZARIA .

AUGUST, 2011.

DECLARATION

I declare that this thesis work titled "EFFECT OF PUBLIC REVENUES ON ECONOMIC GROWTH IN NIGERIN (1980-2008)"Was carried out by me in the Department of Economics Ahmadu Bello University Zaria Under the supervision of Dr Mike Duru and Dr Peter Njiforti.

The information in this thesis has been properly referenced and acknowledge in the test. No part of this Thesis has been presented for any degree or diploma programme in the same area at any university to the best of my knowledge

OMACHI AUGUSTINE OTUBALA _____ _____

Signature Date

CERTIFICATION

This Thesis titled ”EFFECT OF PUBLIC REVENUES ON ECONOMIC GROWTH IN NIGRERIA (1980- 2008) by me OMACHI AUGUSTINE OTUBALA meets the regulation governing the award of Masters of science (M.Sc) degree in Economics of Ahmadu Bello University, and is hereby approved for its contribution to knowledge and literary presentation.

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DEDICATION

This research work is first dedicated to GOD Almighty who gave me health, Protection and Strength throughout my study period and;

To the memory of Pa Omachi who cherishes me so much and thought me to look up to people others look down at because we are not so different at all

To the memory of my mum Comfort Ofana who gave me the love of life.

To Friendships

To all under privileged children who were not opportune to go to school

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ABSTRACT

It is undisputed that government generates revenues from taxes, oil extraction and exportation to finance public goods such as economic infrastructure, social services and for the operation of government itself. For this reason lack of revenue will be a major obstacle to economic growth. in Nigeria, it appears that a step increase in public revenue due to the surge in natural resources wealth and the contribution of non oil revenue rarely improved the much needed public goods and the general wellbeing of the citizen. Indeed, quite the opposite happen. On the bases of this, the effects of pubic revenues on economic growth were investigated in Nigeria from 1980 -2008. We employed two method of analysis. The descriptive method and the econometric method. Finding from the descriptive analysis shows that the growth rate of oil revenue is volatile as compared to the growth rate of both non oil revenue and federal government revenue; however oil revenue still dominates public revenue. While finding from the econometric model shows clearly that public revenue and economic growth have a long run relationship which suggests that the model to use is the vector error correction model which measures the speed of adjustment of the long run to converge to their short run equilibrium. The result of the vector Error Correction model shows that the RGDP parameter is correctly signed with a 42% speed of adjustment in the short run to reach equilibrium level in the long run. The result of the Granger causality test reveal that public revenues does not granger cause RGDP neither does Economic growth Granger cause public revenues. Based on the finding we highlight some major issues that policy makers should consider for effective usage of public revenues toward growth enhancement.

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CHAPTER ONE

1.1 BACK GROUND OF THE STUDY

Public revenues are inflow of financial resources or monies into the government sector from other economic units/sectors. It includes all non repayable receipts and grants and is divided into current and capital receipts. While current receipts comprise tax and non tax receipts within a given period, capital receipts are receipts from non financial assets used in production process for more than one year. Grants on the other hand, are non compulsory, non-repayable unrequited receipts from other government and international institutions.

Bathia (2006) further described Public revenues as consisting of revenue receipts and capital receipts. Revenue receipts include routine and earned. While capital receipts cover those items which are basically of non repetitive and non routine variety and changes government financial assets and liabilities

The effect of Public revenues on economic growth covers all economic activities resulting from imposition of tax system to oil extraction and exportation. The effect can be positive, negative or neutral depending on the important role of public revenue as economic resources.

The studies that were conducted to see the nexus between public revenue effects on economic growth performance are divided in to two. The first focuses on the effect of tax system (tax policy, tax revenue and tax rate) on economic growth performances. Prominent studies that support the existence of significant positive relationship between tax system and economic growth include Karran (1985), Easterly *et al* (1994). In contrast, Landua (1983),

Levine and Renelt (1992), Suraga (2005), Koch *et al* (2005), Lee and Gordon (2005) noted that tax policy, tax revenue distort economic growth. The distortion will reduce the growth potential. In order words they are negative relationship between tax systems and economic growth.

The second discussion focuses on the effect of natural resources revenue on economic growth performance. Literature suggests that there is a resources course, natural resources abundant countries tend to grow slower than resources scares countries. The reason is that the economy that derives its income majorly from natural resources cannot sustain growth by substituting physical capital accumulation for deteriorating natural capital. Severe environmental degradation can affect a country's long term macroeconomic performance as noted by Gupta *et al* (2002), Gelb (1988). Similarly, Herbst (2000), Sala-i-martin and Subramania (2003) also states that it is exactly the high level of government revenues due to natural resources wealth that systematically induces bad economic policies and low level of productive public spending with adverse consequences for economic growth. In contrast, Thomas *et al* (2000) also noted that in the long run growth strategies that pay attention to environmental quality and the efficiency of natural resources usage, contribute to investment, economic growth and human welfare.

In Nigeria, public revenues consist of oil revenue, non oil revenue and federal government independent revenue in their aggregates. These revenues have been used by the federal government and their functional equivalents throughout history to carry out many functions of government. Such functions include economic infrastructures, social services,

debt services, providing the Army, the police, the court system, and for the operation of government itself – all these play a crucial role in the process of economic activities.

Since 1980 to 2008, public revenues have continued to show mixed trends from slight decrease from 1980 to 1986 (the period of pre SAP era) to sharp increases from 1986 to date without a corresponding increase in economic growth performance. Yet, interesting, in Nigeria, it appears that a step increase in public revenues due to the surge in natural resources wealth and the contribution of non oil revenue have rarely improved the much needed public goods in Nigeria. Indeed, quite often the opposite happened. The country performance on economic growth has become worrisome as the country registered low per capital income, deteriorating economic infrastructure, high debt profile, epileptic power supply, high unemployment rate, among other things after receiving enormous revenue from oil and non oil related revenue as well.

The foregoing, undoubtedly, among other things, calls for the need to examine the effects of public revenues on economic growth in Nigeria.

1.2 STATEMENT OF THE PROBLEM

The Nigeria economy has been described as one of the most developed economies in Africa Adedipe (2004). The petroleum industry provides about 95% of foreign exchange earnings and about 80% of budget revenues and the contribution of non oil revenue, federal government independent revenue and foreign capital inflows in the form of grants, and financial aids from developed countries and multinational institution. Yet the country economic growth and overall economic performance has been disappointing during the last

few decades. This led Elbadewi and Nwega (2000) Ekpo (2001) to describe the Nigeria growth performance as slow, below expectation 'Tragic" and of crisis proportion. Yakub (2006) noted that about 70% of the populations of the people today lives in poverty, high unemployment rate, collapse of basic economic infrastructures.

The abysmal performance of the Nigerian economy lead to the adoption of four year demand management economic policy regime in form of

- Economic stabilization Act of 1982,
- The Austerity measures programme of 1984
- The Budget Tightening measures of 1985
- The National Economic Emergency Measures of 1985

In 1986 the Structural Adjustment programmed was also introduced due to the fundamental nature of sectoral and financial disequilibrium. The government found that Austerity measures without structural adjustment programme constituted an inadequate response to the economic crisis. This was what made the government with appropriate pressure from IMF and World Bank to adopt the structural Adjustment programme as a way of ensuring the long term survival by bringing about its fundamental restructuring. Although, many evidences have shown that SAP has partially succeeded on macroeconomics aspect, it has turned the economy around and the rate of economic growth is positive than what was obtained before SAP introduction. In terms of fundamental changing the structure of Nigeria economy and its major objectives, SAP has been a failure. Iyoha and Oriakhi (2000).

After the adoption of the four year demand management economic policy, Nigerian

performance on growth has not shown appreciable improvement and is currently experiencing persistence falling in the living standard of the citizen and decay of economic and social infrastructures.

At this point it becomes necessary to ponder on why a rich country like Nigeria can not foster economic growth given its high government revenues due to natural resources wealth and other sources of revenues.

The following research question becomes important.

1) What is the trend and structure of public revenue in Nigeria
2) Does public revenue leads to economic growth?
3) What is the effect of pubic revenues on economic growth in Nigeria?

1.3 OBJECTIVES OF THE STUDY

The broad objective of this study is to analyse the effect of public revenues on economic growth. The specific objectives are;

1) To examine the trend and structure of public revenues in Nigeria
2) To investigate if public revenues leads to economic growth in Nigeria
3) To analyze the effect of public revenues on economic growth in Nigeria
4) To proffer policy recommendation based on the findings

1.4 HYPOTHESIS TESTING

The hypothesis tested in the study is

H_o: r = 0 Public Revenues does not impact on economic growth in Nigeria

H_1: r ≠ 0 Public Revenues impact on economic growth in Nigeria

1.5 JUSTIFICATION OF THE STUDY

The issues of public revenues and economic growth are crucial to every economy in the world. There are both macroeconomics variables and objectives of government. Public Revenues is the means of expenditure, without which expenditure cannot be made and growth is the primary goal of every economy. So to neglect or undermine these macroeconomic variables will amount to total neglect of the whole system. The study is also important because the effect of public revenue on economic growth has been unsatisfactory in terms of output growth and overall economic performance which measures the living standard of the people. It is expected to affect growth positively.

The study is also important because public revenues affect the individual and the government in enhancing sound macroeconomic performance, in sustaining and accelerating economic growth. It will also provide an econometric basis upon which to examine the effect of public revenues on economic growth in Nigeria and objective views of the relevance of public revenues in promoting economic growth in Nigeria.

Finally, the finding from the study will guide the government to focus on how appropriate public revenues will be used in creating sound macro economic performance so as to achieve desirable Economic growth.

1.6 SCOPE AND LIMITATION OF THE STUDY

The choice of the scope of this study covers the period from 1980 to 2008. This period was informed by the fact that 1980s demonstrated period of high increases in federal government revenues due to oil boom. The period also covers the pre-SAP era, SAP era and Post SAP era. It is in this vein that the study intends to analyze the various revenue sources of federal government and how it has impacted on Economic growth

The limitations, however, lie in the inconsistencies in the data generated from different agencies, problem in the data integrity such as market prices and factor cost.

1.7 ORGANISATION OF THE STUDY

The study is organized into five chapters. Chapter one consists of the background to the study, statement of problems, objectives of the study, the hypothesis testing, justification of the study, the scope and limitation of the study. Chapter two covers definition of terms that are related to the study, Review of related literatures both theoretical and empirical studies. Chapter three focus on Research methodology which includes sources of data, model specification /estimation and various diagnostic tests. Chapter four includes data presentation and analysis of result based on statistical techniques that was use. Finally chapter five includes summary, conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 INTRODUCTION

There are fairly large literature (theoretical and empirical) on the effects of public revenues on economic growth in Nigeria and the world over.

The theoretical and empirical literature regarding the effects of public revenues on economic growth is mixed. This is because the various type of public revenues have different theoretical literature background.

2.1 CONCEPTUAL FRAMEWORK

2.1.1 Economic Growth

The concept of economic growth and its determining factor belong to the main topics in economics discipline. The interests result from the principles of human being, the necessity of satisfaction of unlimited needs. Its sources form and effect was high on the agenda of economist.

In 1377 Arabian economic thinker Ibn Khaldum provided one of the earliest description of economic growth in his famous mugadima (known as prolegomena in western world) the idea of economic growth then was that increasing either population or tax rate could generate more surplus money for the crown or the country. Adam Smith (1776) saw economic growth (output) to depend on the amount of input (land, labour and capital) and the output is determined by population growth, increase in investment and land and total

labour productivity growth, David Ricardo approach to growth was that growth was gained through advantageous trade but to trade with other nation on equal term was disadvantageous. Solow (1956) in his growth model emphasize that capital accumulation and exogenous rate of change in population and technological progress as the sources of growth. Similarly, Romer (1986) based his idea that long run growth is determined by economic incentives.

In view of the above, the concept of economic growth refers to growth of potential output. That is production at full employment which is caused by growth in aggregate demand or observed output.

It is theoretically defined as the increased in the value of good and service produced by an economy. It is conventionally measured as the percent rate of increases in real GDP

2.1.2 Meaning of Public Revenues

Public revenues can be explained both in Broad and Narrow sense. The Broad sense of it includes all income and receipts irrespective of their sources and nature which the government obtains during any given period of time, while in the Narrow sense it includes all those sources of income which is described as revenue resources. In the broad sense of it, it will also include loans which the government raises under the term pubic revenue or more properly public income. The distinction however is that in the narrow sense in which the term "public revenues" is used in public finance includes only those income which are not subject to repay back while in the broad sense of the term includes all the receipts of the government irrespective of the facts whether they are subject to future payback.

2.1.3 **Sources of Public Revenue.**

Generally speaking, by public revenues is meant the income raised by government through taxes from the public, and natural resources revenue (oil revenue). Taxes and natural resource revenue are not the only sources of public revenue, they are also various other sources of public revenues like fee, fines, prices gift, profits from government enterprises, deficit financing (borrowing and money creations) foreign aid (grants, loans) and others.

2.1.4 General Classification of Public Revenues

Differing classification of Public Revenues have been almost as numerous as the writers who have made them. Public Revenues are composed of heterogeneous element. Accordingly, the elements are classified according to the different characteristics depending on the type of revenue.

We present here two classification of public revenue by professor. Dalton (1949) and Taylor. (1959)

I) Dalton Classification

Dalton classified public revenues on two main classes; Taxes and Prices,

Tax is a compulsory payment while prices are contractual payment

He further subdivided taxes and prices into:

Taxes as; ordinary so called, tributes and indemnities, compulsory loan arising out of war or otherwise, pecuniary penalty for offences imposed by court of law

prices; receipts of public properties, receipts from enterprises, fee or payment made for

services performed, and receipts from pubic loan.

II) Taylors Classification

Taylor's classification is more comprehensive and logical. His classification is as a result of the noticeable fault in Dalton classification; He classified public revenue on the basic of economic classification and based his classification on two main concepts; capital account and revenue account

Capital account includes; market loan, income from payment and other aspects such as income from public undertaking and others, While Revenue account include revenue from taxes.

Taylor's classification enables us to make interpretation and is regarded as suitable from developed countries and multinational for accountability and control

2.2 CLSSIFICATION OF PUBLIC REVENUES IN NIGERIA

Generally, the main Public revenues in Nigeria are categorized into oil revenue, non oil revenue and federal government independent revenue.

These sources of revenue in Nigeria are discussed below according to their various types.

2.2.1 Oil Revenue;

Oil revenue is the most important source of revenue to the federation account. It is made up of

a) Crude oil and Gas sale

b) Oil Taxes .This include, Royalties, Petroleum profit taxes, Rent and others,

2.2.2 Non Oil Revenue; this is the second category of revenue to the federation account. This category refers to revenue that are not derived from or associated with oil. They include; companies income tax, (CIT), Custom and Excise Duties, (CED) Valued Added tax (VAT), Levies and Others.

a) ***Tax Revenue***

A tax is a compulsory levy pay able by an economic unit to the government without any corresponding entitlement to receive a definite and direct quid pro quo from government. More embracing, tax is a financial change or other levy imposed on an individual or a legal entity by a state or a functional equivalent of a state. Taxes are also imposed by many sub national government entities. Taxes consist of direct or indirect and many be paid in money or as a labour equivalent. A tax may also be defined as a pecuniary burden lay upon individuals or property to support, a payment exalted by legislative authority.

Taxation has four main purpose or effects; revenue, redistribution, pricing and representative.

The main purpose of taxation is to revenue raise revenue to spend on road, schools, hospital, and no more indirect government function like good legislature or justice system. This is the most widely known function

The second is redistribution. This means transferring wealth from the richer section of the society to the poorer section. This function is widely accepted in most democracies, although the extent to which this should happen is always controversial.

The third purpose of taxation which is pricing. Taxes are leveled to address externalities. Tobacco for instance is taxed for example to discourage smoking and many people advocate policies such as implementing a carbon tax.

The fourth and almost the last is the consequential effect of taxation in its historical setting has been on representative. This implies that Rulers tax citizen, and citizen demand accountability from their rulers as the other part of this bargain.

i) ***Types of taxes:***

They are basically two broad types of taxes.

Direct ***and indirect taxes***

Taxes are sometimes referred to as direct or indirect tax. The meaning of these terms can vary in different contexts which can sometimes lead to confusion. In economies, direct taxes refer to those taxes that are collected from the people or organizations on which they are ostensibly imposed on e.g. income taxes are collected from the person who earns the income. In contrast, indirect taxes are collected from someone other than the person ostensibly responsible for the paying the tax.

In law, the term many have different meaning in the constitutional law, for instance direct taxes refers to poll taxes and property taxes which are based on simple existence or ownership. Indirect taxes are imposed on right privilege and activities (in the USA). Thus a tax on the sales of property would be considered indirect taxes, whereas the tax on simple owing the property is said to be direct tax.

2.2.3 Federal Government independent revenue

This is the third category of federal government revenue. This is revenue which belongs exclusively to the federal government and which is not derived from sharing from federation account revenue or vat pool. This include; operating surpluses or revenues of federal agencies and corporations such as the Nigeria port authority. Dividends from investment in company other sundry revenue, such as internally generated revenue of ministries departments and agencies of federal government.

2.2.4 Overview of Public Revenues in Nigeria.

There are three main sources of government revenue in Nigeria. Two sources that accrue to federation account are oil and non-oil revenue sources. The third source of revenue to federal government is the independent sources which accrue to federal government directly without passing through the federation account. The federal government also maintained an account called the VAT POOL outside the federation account. Government also sources for fund when expenditure outstrips its current revenue. This call for another options of revenue such options include deficit financing which include money creation, domestic and external borrowing. These sources of revenue together with government domestic revenue are collectively called public revenue. Further details of public revenue receipts of government of Nigeria are treated below.

a) Oil Sector Revenue

The first and the most important sources to federation account is “oil revenue” revenue from oil sector consist of crude oil sales, petroleum profit tax, rent, royalties, and earning from sales of NNPC.

The oil sector revenue started in 1970's when oil boom was first recorded. Total oil revenue in 1970 was ₦166.4 million, including other petroleum related revenue. Between 1973 and 1980, total oil revenue has increased to N12, 352.8 million and then started to decline up till 1984 to ₦8, 267.20 million. This decline was due to abolition of fixed exchange rates regime, from 1986 to date oil revenue increased from ₦8, 107.3 million in 1980 to N19, 0270.0 million in 1987 and stood at ₦82, 666.40 million in 1991; however, during these period 1987 to 1991 oil revenue has shown consistent increased indicating the presence of huge oil revenue. By 1991 to 2000, oil revenue again rose from ₦82, 666.00 to ₦1, 591.675.80 million. Between 2001 to 2008 oil led revenue has further increased from ₦1, 707,562.80 to ₦6, 530,630.80 in 2008. Between 2008-2009, oil revenue has dropped; the reason of this was attributed to fall in the price of crude oil in the international oil market occasioned by the global economic crisis, youth restiveness in the Niger Delta region, drastic reduction in OPEC quota. See Appendix A

These increases and fluctuation in oil revenue recorded over the sample periods are due to boom bust revenue cycles arising from crude oil prices in the world oil market either favourable or unfavourable shocks.

Again, the oil sector receipt actually constitutes a net residual as a result of high level of subsidies that is involved in the sales and distribution of crude petroleum products. The subsidies have three elements. There is a primary subsidy which is the difference between the price at which the federal government sell crude oil for domestic consumption and the price that would have been obtained if the oil was sold in the international oil market. The 2nd level subsidy is the excess of the total cost of crude oil, refining, excise duty, distribution

and marketing. The third level subsidy is the extract cost borne by the NNPC in ensuring that petroleum product are evenly distributed between zonal areas of the economy arising from short falls between supply and demand for oil product in many part of the country.

The federal government had in the past tried to gradually phase out subsidy element which has attracted much controversies within the country. The issues of subsidy have remained an unsolved issue up till now between labour, organized trade union and the civil society.

Most recently, the federal government has taken a step in the marketing of petroleum product directly alongside the independent marketers. Thereby bring the firm control of the distribution marketing and making availability of the product to meet the demand and supply of petroleum products. .

b) **Non Oil Revenue**

Non oil revenue is the second category of revenue to federation account. This refers to revenue that is not derived from or associated with oil. These include, company's income tax, custom and excise duties, valued added tax, levies and others. In 1980 nonoil revenue sum up to ₦2, 880.20 million. Between 1980- 1985, revenue from non oil sources increase from ₦2, 880.20 million to ₦4, 126.70 million. This period was characterized by upward and downward trend in non oil revenue. In 1991 it was ₦18, 325.2 million although; the level did not improve sufficiently to upset the oil sector revenue as a major source of government revenue. These upward increases in nonoil revenue have shown appreciable increased from ₦18, 325.2 million in 1991 to ₦903, 462.30 after one decade. Further, between 2002 to date nonoil revenue has shown tremendous increase from 903,462.30 to

₦1, 335,960.00 in 2001. This shows that if government devote much interest to revenue generation from the nonoil sector government revenue

e will appreciate through the nonoil revenue sector, record has also shown that from the period of introduction of the value added tax VAT (1984) nonoil revenue has continued to show increases. See Appendix A

C) Federal Government Independent Revenue

This is the third category of federal government revenue. This is revenue which belongs exclusively to the federal government and which is not derived from sharing from federation account revenue or vat pool. This include; operating surpluses or revenues of federal agencies and corporations such as the Nigeria port authority. Dividends from investment in company other sundry revenue, such as internally generated revenue of ministries departments and agencies of federal government.

2.2.5 Overview of Economic Growth in Nigeria

Interest in the discussion of economic growth and development date back to the making of economics Omotor (2000). There is no doubt about this because growth confers many benefits. A few of the most important ones are, economic growth raises the general living standard of the population as measured by per-capital national income distribution easier, Economic growth enhances the time frame of accomplishing the basic necessities of man, e.g. shelter, food, clothing and education, rapid growth rate are often cited by countries of the might of their economic and political systems or even prestige as noted by Lipsey (1982).Because of the peculiar nature of economic growth. It has become very imperative for most government to encourage.

Nigeria is currently faced with doubting challenges in her quest for robust economic growth and how to accelerate growth as contained in NEEDS (2005). MDGS (2007)

In Nigeria, the history of economic growth has not been smooth all along as recorded history show that rapid economic growth was witnessed during the period of pre-independent and post independent. The record of growth indicates a rapid economic growth due mainly to the dynamic role of agricultural sector which was then the main stay of Nigerian economy except that of the growth interrupted during the civil war (1967 – 1969). The period immediately after the civic war 1970 – 1980, the situation of growth rate changes drastically during this time due to the emergence and dominance of crude oil petroleum arising from world oil boom which propelled economic growth in Nigeria as noted by Iyoha and Oriakhi (2002). It is easily ascertained that between 1970 – 1977, the average growth rate per capital income was fantastic 12% and the average annual growth of per capital worker was 5.9%.

This sub period represent the fastest growing eight year period in Nigeria economy growth history. See table presented by Iyoha and Oriakhi (2002) Explaining African growth performance. The case study of Nigerian.} The unprecedented growth rate than was driven by favourable external shocks. Within this period yet another unprecedented unfavourable external shock this time brought an end to the growth spurt and sent the economy in to recession in the early 1980.

However, with the collapse of oil prices in the world oil market from early 1980 to 1985 a period of the study sample indicates the beginning of declined in major macro

economic variables including the growth rate which eventually set the economy into economic crisis as noted by Diki (1991).

The growth rate recorded between 1980 – 1990 decrease from5.5% in 1981 to -2.5%, in1982 and - 0.6% in 1987, rise to 7.4% in 1988, increased sharply to 13% in 1990 which was due to the Arab- Isrealist war which created a high demand for crude oil petroleum from Nigeria and other oil producing countries. While 1991 – 2000, the growth rate collapse drastically to 0.8% in 1991 maintain a sluggish rate between 2.3% in 1992 1.3% in 1993 and remained constantly fluctuating between 2.2%, 2.4%, 2.8%, 2.9% in 1998, by 1999 it dropped to as low as 2.4% this was due to the political transition. by 2000 the growth rate show appreciable increase as compared to the previous years up to 5.4% between 2004 to date the growth rate has remain within 6.1%, 6.2% 4.0 in 2007 by 2008 the growth has declined drastically to -19.1%.See table 2.1 below

The growth rate within the sample period has not been impressive so as to improve the living standard of the people considering its population size.

The growth rate recorded within the sample period from 1980 – 2008 signifies an important event in the growth profile of Nigerian economy. These events include persistent military rule changes in major macroeconomic policy of government (SAP), political transition programme and host of the real sector neglect.

Recently, (2007-2008) a drastic drop in GDP growth was observed this reduction is attributed to the fall in the price of crude oil in the international oil markets, economic melt down and youth restiveness in the Niger delta region.

Table 2.1 RGDP growth rate

YEAR	RGDP	GDPGR
1980	31,546.80	
1981	205,222.10	550.53
1982	199,685.30	-2.70
1983	185,598.10	-7.05
1984	183,563.00	-1.10
1985	201,036.30	9.52
1986	205,971.40	2.45
1987	204,806.50	-0.57
1988	219,875.60	7.36
1989	236,729.60	7.67
1990	267,550.00	13.02
1991	265,379.10	-0.81
1992	271,365.50	2.26
1993	274,833.30	1.28
1994	275,450.60	0.22
1995	281,407.40	2.16
1996	293,945.40	4.46
1997	302,022.50	2.75
1998	310,890.10	2.94
1999	312,183.50	0.42
2000	329,178.70	5.44
2001	356,884.30	8.42
2002	433,203.50	21.38
2003	477,533.00	10.23
2004	527,576.00	10.48
2005	561,931.40	6.51
2006	595,821.60	6.03
2007	834,251.10	40.02
2008	674,889.00	-19.10

2.3 THEORETICAL FRAMEWORK

This section discussed relevant theoretical literature developed by public finance, development economist in the study of public revenues and economic growth of nations.

These theories will serve as a background for proper understanding of the various sources of public revenues and its effects on economic growth.

For the purpose of this study we discussed few of the different theories as there relate to the study.

2.3.1 Theory of Public Revenue

The theory deals with alternative sources of state income. It discusses and analyzes comparative advantages and disadvantages of various forms of revenue and the principle which should govern the choice between them.

2.3.2 Theories of Taxation

We discussed for each set of the theories based on the basis on which the tax proposals are generally developed.

a) The social political theory of taxation.

This theory was advocated by Adolf Wagner (1800). Wagner like most Germans of those days did not believe in individual approach to a problem. He wanted that each economic problem should be looked at in its social and political context and appropriate solution found thereof, Wagner noted in this theory that a society consisted of individual members of the society that form, an entity of its own which needed preservation and care-

off. Accordingly, a tax system should not be designed to serve individual member of the society but should be used in serving the public as a whole. Wagner was advocating a modern welfare approach in evolving and adopting tax policy. He was especially in favour of using taxation for reducing income inequalities. He maintained that private property, inheritance with the result of state policies are not of any God given right. The state therefore had the right to control the ownership of property and inheritance in the interest of the society as a whole.

However, in modern days taxation has gone beyond mere reducing income inequalities as advocated by Wagner. Now it is believed and widely accepted that tax policy should be effectively used for several purposes as against mere reducing inequalities. Such purposes include; fighting cyclical fluctuations, unemployment, and production of undesirable goods and services, monopolistic and restrictive trade practice, hoarding and for the discouragement of the consumption of certain commodities.

b) The Benefit Received Theory

This theory has a long dated origin and its root lies in the contract theory of the state. Its main theme was that the subject of a country have a contract with the state for the protection of their lives and property and so its part. The state provides various goods and services. This theory also proceeds on the assumption that there is basically an exchange of contractual relationship between tax payer 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. In this situation, there is no place for issues like equitable distribution of income and wealth. Instead, the benefits are taken to represent the

basis for distributing the tax burden in a specific manner. The theory overlooked the possible use of tax policy for bringing about economic growth or economic stabilization.

c) Optimal Theory of Taxation

Most government need revenue which exceeds that which can be provided by non distortionary taxes or through taxes which give a double dividend.

Optimal taxation is a branch of economic that considers how taxes can be structured to give the best outcome in cost. Ramsey (1982) posit that optimal taxation deals with minimizing deadweight lost because deadweight cost are related to the elasticity of supply and demand for good. It follows that putting the highest tax rate on goods for which there is most in elastic supply and demand will result in least overall dead weight cost. However, Atkinson and Stiglitz (1980) developed the optimal theory of direct taxation for the poorest in the society.

2.3.3 Theories of Growth

The part of economic theory that seeks to explain (and hopes to predict) the rate at which a country's economy will grow over time. Economic growth is usually measured as the annual percentage rate of growth in one or another of the country's major national income accounting aggregates, such as Gross National Product or gross domestic product.

The following are some of the theories of economic growth that have been used by development economist over the years.

a) ***The Classical Growth Theory.***

This theory marked the modern concept of economic growth which began with the critique of the mercantilism especially by Physiocrats and the Scottish enlightenment thinkers, such as Adam Smith, David Hume. The theory of the physiocrats was that productive capacity itself was allowed for growth and that improving and creating capital was wealth of nation. They stressed on the important of agriculture and saw urban industry as "sterile". Smith extended the notion that manufacturing was central to the entire country. Ricardo saw trade as beneficial because of the arbitrage opportunities. Ricardo central point of argument was the theory of comparative advantage component of trade as essential. Thomas Malthus in his essay on the principles of population also argued that any growth in the economy would translate in to growth in population. This he states that although aggregate income will increase, income per capital was bound to stay roughly constant

In view of the above, mainstream theory of economic growth states that with the industrial revolution and advancement in medicine life expectancy, infant mortality decreases and the pay off receiving education will be higher. Thus parent will begin to place more value on their children. This led to break down of Malthusian game. With income increasing faster than population growth

b) ***The Neoclassical Growth Theory***

This was the first attempt to model long run growth analytically by Robert Solow and Trevor Swan in the 1950s. This theory is otherwise called Solow- swan growth model.

This theory involves series of equation and which shows the relationship between Labour time and capital output and investment. This model assumes that countries use their resources efficiently and they are diminishing return on capital and labour increase

The neoclassical make three important predictions;

i) Increasing capital relative to labour creates economic growth since people can be productive given capital
ii) Poor countries with less capital per person will grow faster because each investment in capital will produced a higher return that rich countries with ample capital.
iii) Because of diminishing return to capital economics will eventually reach a point where no new increase in capital will create growth. This point is what is called a "steady growth"

The model also noted that countries can over come their steady state and continue growing by inventing new technology. Technology will improve the steady state level of capital increase and the invest and growth the neoclassical growth model is a production function with positive and diminishing marginal product as well as constant return to scale and reflect output (Y) to a pair of essential input capital and labour (l/k).

This is presented thus; $K = \varepsilon Y$……..... 1

Since output is produced with capital and labour and technological possibilities. The production function is presented as Y= f (k……..2

This shows constant return to scale, if equation 2 is substituted in to equation 1 it yields

$K = \varepsilon f\ (k\ l)$…….....3

Solow –Swan concludes that when production takes place under the neoclassical condition of variables proportion and constants return no simple opposition between natural and warranted rate of growth is possible. There may not be any knife edge. The system can adjust to any given rate of growth of the labour and eventually approach a steady state.

$\Delta k/\Delta k = \Delta l/k = \Delta Y/Y$

c) ***Harrod- Domar Growth Model***

Harrod and Domar (1939, 1946) developed economic growth model independently with different view points. Their model was concerned primarily to address an advanced capitalist economy and an attempt to analyze the requirement of a steady growth in such an economy, but came to the same conclusion for an economy to attain a steady state growth rate at full employment.

Harrod model (1939) Shows in his model how steady state may occur in an economy and that when the steady growth rate is interrupted the economy will fall to the disequilibrium states. Cummulative force tends to perpetuate this divergence thereby leading either secular deflator or secular inflator.

He based his model on three distinct rate of growth;

i) The actual growth rate which is represented as G and which is determined by saving capital output ratio .$G = s/k$…….1

ii) The warranted rate of growth which is represented as GN which represent full capacity growth rate in income (Y) of an economy.

iii) The natural growth rate which is represented as GW and is regarded as the welfare option.

Domar model (1946): Domar model growth rate using aggregate supply through investment so as to maintain full employment equilibrium level of income and arrived at the fundamental equation.

$\Delta I/I = \alpha\delta^{xx}$……1

the equation show that to maintain full employment the growth rate of net autonomous investment ($\Delta I/I$) must be equal to I (i.e. mps) times the productivity of capital

Harrod and Domar in their analysis assign key role to investment in the process of economic growth but emphasis on dual character of investment as it creates income or demand and it augments the productivity capital of the economy by increasing capital stocks.

Hence, so long as net investment is taking place, real income and output will continue to expand. Otherwise any divergence between the two will lead to excess or idle capacity, thus forcing entrepreneurs to curtail their investment expenditure.

d) The New Growth Theory

The new growth theory was advanced again in the late 1980s and early 1990s by Paul Romer, Robert E. Lucas and Robert J. Barro.

They were unsatisfied with the work of Solow and his explanation for a steady state rate of growth. They work to indigenize "technology 'in the 1980s. They also developed the

Endogenous growth theory that includes a mathematical explanation of technological advancement' the model also incorporate new concept of human capital, the skill and knowledge that makes workers Productive. Unlike physical capital, human capital has increasing rate of return. There fore there are constant to capital and economics never reach steady state. Growth does not slow as capital accumulate, but the rate or growth depends on the types of capital the county invest in.

2.4 EMPIRICAL LITERATURE

Following the boom-burst revenue cycle in recent years, concern has been developed about the growth and structure of public revenue in Nigeria in particular and the world over.

Recent studies have shown a sticking diversity experience with growth episode and public revenue. This become clear in the study carried out by researchers in public finance and development, economics where it is seen that some sources of public revenue can have a significant positive effect on the growth potential of countries and while some have a divergence views on the source and effect of public revenue on economic growth.

The empirical studies of the effects of public revenue on economic growth can be subdivided into the various sources of revenue. The studies that focus on the effect of taxation on economic growth, those that focus on natural resources revenue on economic growth, finally, those that treated general revenue on growth.

The studies that were carried in this direction are; Solow (1959) was the first to examine how taxation affects growth, using the neoclassical growth model. The result show that steady state growth is not affect by tax policy. in other words , tax policy , however distortionary has no impact on long term economic growth rates, even if it does reduces the level of economic out put in the long run. Unlike the new endogenous growth theory pioneered by Romer (1999), produced growth model in which government spending and tax policy can have long term or permanent growth effect

Egwaikhide (1988) Analyzed the structural shift of government revenue in Nigeria from 1960 -1982 linked direct government revenue to the level of economic development using growth in GDP as a proxy for economic growth. He used two sets of regression equation by breaking sample period into two, 1961-1971, and 1972-1982. First regression analysis indicated that a positive relationship exist between the variables. The second regression result indicates that the coefficient increase form 0.0083 to 0.15 and the percentage of variables also rose from 81 percent to 83 percent. He concluded that result of the regression analysis indicates that external fund has been the single most important sources of government revenue which means that instability in this section has significant extents in internal means economics variable through its extents on national and state budget. The study also found that economic development has a structure impact on direct government revenue. Contrary to Egwaikhlide (1988), Omoruyi (1983) carried out a similar study for about the same time from 1960 – 1979 and breaking the sample period into two and adopting the same measures. He found out that the result differs from Egwaikhide (1988) where the coefficient of elasticity obtained by Omoruyi (1983) for the first sample period 1960 – 1969 was 1.09 while that of Egwaikhide was 0.08 for the period of 1961 –

1971. The result premised on assumption of absence of any other significant change in the marginal values of direct tax in the period 1960-1971. Again the elasticity of coefficient obtained by Omoruyi 1970 – 1974 stood at 1.64 while that of Egwaikhide was 0.15. At this point one can conclude that the inference cannot be actually drawn between the two conflicting results because of certain statistical parameter use to facilitate observations.

Gbayesola and Uga (1999) studied the average responsiveness and inter temporal stability of government revenue in Nigeria from 1970 – 1995 using regression analysis and other test statistic (parameter) like chow test (t-test) for structural change, to determine the inter temporal stability. They found out that total federally collected revenue was more responsive to change in income in early years. It was also found that the magnitude of parameter estimate measuring responsiveness to change in tax revenue to change in tax rate and tax reform diminished significantly as the economy move a way from 1980.

Ajakaiye (1999) analyze the impact of Vat revenue in Nigeria using the CGE methodology. 3 simulation model and found that if VAT able organization treat VAT in the expected non cascading manner and VAT revenue are re injected into the economy via increase in sectoral government consumption, the general price level will increase by 5%, Total Revenue consumption exposition will fall by over 12%. Total consumption expenditure inclusive of government component will fall by 6.7%, Gross output/GDP will fall by 3% and 5% but the basic of wages of total income will increase lightly. Private saving will increase by over 14% in order to secure the saving investment balance, Government foreign saving will fall by about 4% and 11% respectively. He found that this

scenario where VAT will have the most adverse effect in price consumption, output, employment and income best approximate the Nigeria system.

Uwatt (1999) examined the performance of major revenue and their productivity based on Buoyancy measures from 1970 – 1996. Using OLS estimation Techniques and found out that the productivity of Revenue in Nigeria over the sample Period was generally low, the overall productivity varies between 1.14 and 1.33. While the corresponding figures of tax revenue are between 0.63 and 1.14. This low productivity has also been found partly to reflect ineffectiveness on tax administration which has a far reaching implication for income mobilization.

He suggested options according to Zee (1998) that are opened to government

1) The determination of optimal tax rate for a given level of expenditure

2) The determination of optimal level of expenditure and tax rate.

He concluded that the productivity of the various categories of revenue could however be enhanced with approximate tax reforms, improvement in tax administration machinery as well as improvement in the revenue act and the general level of economic activity.

Kusi (1998) evaluates the revenue productivity of Ghana overall tax system and of individual taxes on the basis of tax buoyancy and tax elasticity and also looked at tax reform between 1983 – 1993 and revenue performance as well as way of mobilizing additional revenue, found out that tax reforms was significance on productivity on both individual and overall tax system and that all individual tax system except for cocoa export tax and excise

duty show buoyancy and Elasticity's of more than unity during the reform period which led to the overall tax system to have buoyancy and elasticity more than unity each. He concluded that despite all effort, government revenue to GDP still remain low compared with average to other developing countries of successive devaluation of the exchange rate which was also supported by large inflow of foreign loans, the abolition of price and import control system.

Pinto (1987) analyzed the link between oil prices, deficits, inflation real exchange rate appreciation in Nigeria during and after oil boom 1970-1985. Pinto (1987) stressed that what matters during the boom was the spending effect and each impact on resource allocation on the non oil economy. He observed that barely a decade after the first oil shocks, Nigeria was faced with several economic problems including a decline in its agricultural sector, decline in non oil traded goods and external debts accumulation.

Iwayemi (2001) provided a macro economic perspective on while crude oil endowment is neither a necessary nor a sufficient condition for sustained economic growth and development. He used the Dutch-disease effect link to the appreciation of real exchange rate associated with the competitiveness of the domestic industry in the international market. This of course creates adverse effect on domestic economy. He also found that when government received oil revenue it encourages consumption and reduces private savings and investment.

Ariyo (1997) study the productivity of tax system in Nigeria between 1970- 1990 and found that the existing tax rate relief are usually influenced by group pressure and therefore many tax reform are not anchor on any identifiable macro-economic or widely

base public policy objective. He posits that the policy proposal in the annual budget is based on the performance of each revenue sources in the proceeding period. Administrative lag is another major factor in revenue sourcing. This applies particularly to custom and excise duties. Ariyo opine adopting a logarithmic auto regressive model, he observed that across the board, the F value is significant at 95% confidence level and R^2 shows that the explanatory variables adequately explained the pattern of each revenue sources to total government revenue. The result also indicate low elasticity index for many of the tax sources relative to respective tax bases. He therefore concludes that:

a. Opportunities for improvement exist especially in import duty collection.

b. Need for better monetary and transparency of operations within the petroleum oil industry.

Purfield and Shift (2005) examined managing revenue volatility in a small inland economy: The case of Kiribati found that volatility in revenue in Kiribati reflects a narrow tax base an unidentified economy. Purfield and Schift (2005) found that by International standard Kiribati's tax base is highly dependent on non tax and grant revenue. Fishing license, Fees and donor grant comprises the buck of receipts. They account for 2/3 of the total volatility in revenue, with shocks to GDP growth and accounting for the reminder. They recommended the following:

a) Consolidation to restore sustainable policies
b) Stabilization of the impact of revenue volatility on the budget.
c) Strengthening the institutional incentives for fiscal discipline to avoid higher spending and deficit in terms of plenty.

Barrett and Greene (2008) studied the State Tax System: Staying stable in Ohio and found that volatile revenue strain and unpredictable taxes bring misery to everyone from state budget to businesses. It makes it hard to maintain programme and invest for future growth and that is concern for tax payer and the business community as well. Instability in the revenue base obviously lead to difficult budgeting at certain time. Barrett and Greene (2008) recommended that a diversified tax base generally is more stable that non diversified base.

Anastassiou and Dritsaki (2005) Examined the relationship between tax revenue and rate of Economic growth in Greece from 1956 -2002 using annual time series data and applying the multivariate VAR model and testing for granger causality among the variables. The result shows that there exist a causal relationship between tax revenue and economic growth in Greece.

Mehrara *et al* (2007) Examines empirically the relationship between oil revenue and economic growth and estimate the existence of threshold effect on output growth in 13 oil exporting countries including Nigeria from 1965-2005 applying panel regression the empirical result strongly suggest the existence of a threshold beyond which oil revenue growth exerts a negative effects on output. The result indicate that threshold affect the growth rate of oil revenue above which oil revenue significantly slow growth is around 18-19 percent for oil exporting countries. In contrast a linear estimation with out any allowance for threshold effects would misleadingly have us believe that an increase in the oil revenue increases the growth rate.

Nsebot (2004) studied the effects of revenue fluctuation on Economic growth in

Nigeria from 1970-1999 using multiple regression model of OLS and found that total federally collected revenue has a significant positive impacts on economic growth and the standard deviation of total federally collected yields a positive influence in economic growth as against the a priori expectation. The result further indicates that tax base could be change to raise more revenue without altering the rate since the coefficient of tax to revenue is elastic. He concludes that policy to widen the base be put in place.

Rewane (2007) studied the impact of oil revenue on Nigeria's credit worthiness, Debt profile and sustainability from 1973 – 2004. He found that the biggest challenges facing oil producing country is how to use its oil wealth strategically to promote sustainable development. Almost fifty years after oil was discovered at Oloibiri in South Eastern Nigeria, lead the country to bitter romance with creditor organization. He observed that in 1978 following the collapse of oil price, which exerted considerable pressure on government finances, Nigeria was unable to shift gears in the face of changing economic fortunes and adopted a policy of deficit financing. It became necessary to borrow for balance of payment support and project financing leading to "Jumbo Loan" contracted from the international capital market (ICM) in 1978 increasing the total external debt stock to US $2.2 billion.

Oguyele (2008) examined natural recourse abundance in Nigeria, from dependence to development using Error correction methodology and examines the long run impact of huge oil wealth accruing to Nigeria on its economic indicators such as per capita gross domestic product, house-hood consumption, infrastructural development (electricity),Agriculture and manufacturing output growth rate. the result suggest a significance positive long run impacts of per capita oil revenue on per capita house-hood

consumption and electricity generation, while a negative relationship is established of gross domestic product, agriculture and manufacturing. Even for those variables with negative relationship at subsequent lag. He concluded that if oil revenue is properly managed and invested, could be used to induce oil led development in Nigeria provided the current inhibitions of corruption, lack of transparency, accountability and fairness are tackled vigorously.

Yakita (2003) examined the growth of wages and interest income taxation in an endogenous growth model which is characterized by diminishing point in time in linear capital producing technology and over lapping generation of two period linear individual. They show that the greater the long-term learning time of individual the more individual inherit human capital from the previous generation. They also demonstrated that flat rate wage tax stimulate economic growth while interest income taxation does not necessary foster such growth. Intergenerational redistribution induces individual to change both physical and human capital accumulation affecting the growth rate through changes in factor price.

Mandoza *et al* (1997) investigated the growth effect of policy in the class of endogenous growth model driven by human capital accumulation the paper provides both theoretical and empirical evidence in favour of the view of Herbergerias super neutrality conjecture which states that although they predict that changes in tax rate affects investment and growth in the long run. In practice tax policy is an ineffective instrument to influence growth. Herberger predicted cross country panel regression estimate using a new method of measuring effective tax rate produces significant investment effect from taxes that are

consistent with negligible growth effect. The results are robust with the introduction of growth determinants

Lee *et al* (2005).In a cross country regression analysis from 1970-1997 analyze tax structure and economic growth using two method of analysis the result of the first analysis shows that past theoretical work predict that higher tax rate should decrease economic growth rate while the effect of personal tax rate are less clear. In the paper, they explore how tax policies affect a country growth rate. They found out that statutory cooperate tax rate are significantly negatively correlated with cross sectoral differences in average economic growth rate, controlling of various other determinants of economic growth and other standard tax variables. In the fixed effect regression they also found that increase in cooperate tax rate lead to lower future growth rate within countries. They concluded that the coefficient estimate suggest that a cut in the cooperate tax rate by 10 % point will raise annual rate by 1 to 2 %.

Rasu and Melo (2003) examine the non linear or asymmetric relationship between oil revenue and output growth in oil exporting countries. They applied a dynamic panel framework and two different measures of oil shocks. The main results of the paper confirm the stylized fact in heavily oil dependent countries lacking institutional mechanism delinking fiscal expenditure from current revenue. Oil revenue shocks tend to affect the output in asymmetric and non linear way.

The finding suggest that output growth is adversely affected by the negative oil shocks while oil booms or the positive oil shocks play a limited role in stimulating economic growth.

The finding also has particular policy implication for decision making in the areas of macroeconomic policy. The use of stabilization and saving funds are diversification of the real sector seems crucial to minimizing of the harmful effects of oil boom-burst ratio has significant negative effect on growth which might be due to high capital flight.

The result finally shows that labour force, human capital has significant positive effect on growth which further suggests the need for labour force expansion and education policy to raise stake of human capital the country.

Sachs and Warmer (1997) examines the relationship between natural resource abundance and economic growth from 1970-1990 in eight slow growing oil exporting countries Bahrain, Iraq, Libya, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirate. They use empirical cross country growth equation method. the result of their analysis show that economics with a high ratio of natural resources export to GDP in 1970 (base year) tended to grow slowly during the subsequent 20 years period. They also found that a negative relationship holds true even after controlling for many variables found to be important for economic growth. They recommended that there are simpler and more basic policies that can be followed to raise national growth rates, especially open trade.

Wildman (2001) investigated the relationship between taxation mix and the rate of economic growth in Greece from 1965-1990 using cross sectional data for 23 OECD countries by looking particularly if there is any evidence that taxation variables have a causal role in the process of economic growth. He found that tax structure affects economic growth, specifically the tax revenue raised by taxing personal income which has a negative correlation with economic growth

Caylan and Berument (2007) also suggest a positive relationship between growth and oil revenue. but using the structural break point methodology proved that this relation tend to be positive just below a threshold for the growth rate of oil revenue equals 18 percent and after this point the effects tend to be positive indeed. The threshold level is taken to be the point at which oil exporting countries should begin to worry about oil revenue growth. Although modest boom can be blessing but an excessive boom (where oil revenue increases above the threshold level) turn to be a curse to the oil exporting countries.

2.4.1 Gap in the Literature

The study attempt to fill this gap after extensive review of literature on government domestic public revenues sources(public revenues) which include revenues from oil, non oil revenue and revenues from other sources including federal government independent revenue, where the structure and trends of public revenues was examine and the effect of public revenues on economic growth was also analyzed. To make the work unique we use multivariate co integration Vector Error-Correction model (VECM), Granger Causality Test, impulse response function to analysis and variance decomposition using annual time series data from 1980 – 2008.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter provides the methodologies employed to analyse the effect of public revenues on economic growth in Nigeria proxy by RGDP from 1980-2008

We employ two procedures; one is the descriptive trends analysis (monitoring the trend) by using the various possible analytical techniques to examine the trends and structure of our data over time. We assumed that the changes in the variables are error free and if they are error free then they can be presented in tables and graphs.

The second procedure which is in contrast to the descriptive trend analysis is the econometric techniques that is employed to analyse the effect of public revenues on economic growth in Nigeria

The important basic macroeconomic variables of interest derived from other studies includes, Real Gross Domestic Product (RGDP), Aggregate domestic public revenue decomposed into oil revenue (OIR), Non oil revenue (NOR) and federal government independent revenue (FGIR). All these variables are measured in million Naira.

Although, there are other sources of revenues and macroeconomic variables which affect economic growth which may equally be considered beside oil revenue, non oil revenue, federal government independent revenues, such variables include Gross fixed capital formation (investment) as one of the control variables, Official development assistance in the form of grants and soft loans, public expenditure, population, human

capital, Money creation, policy index, quality of countries institutions and quality of economic policy, But we only concentrated on domestic sources of public revenues and real Gross domestic product.

3.2 SOURCES OF DATA

The data series used in the study for analysis includes; Real Gross Domestic product. (RGDP) that is GDP at factor prices deflated by the consumer prices index (at constant factor cost) Aggregate Oil revenue (OIR), Non oil revenue (NOR) and Federal independent revenue (FGIR)

All the data are compiled from

a. CBN statistical bulletin, Jubilee Edition (2008) and volume 18 Edition 2007, Annual Report and Statement of Account (various issues)
b. The data set used for analysis is the time series data

3.3 ESTIMATION TECHNIQUES

3.3.1 Introduction

This section explains the estimation techniques/ procedure that are employed to analyse the effect of public revenues on economic growth.

Before we estimate the system that governs the relationship between public revenues and economic growth, we check for the order of integration of these variables. The unit root test, the cointegration test and the granger causality test.

In this study we adopted the vector error correction model (VECM) similar to other researchers such as Anastassiou and Dritsaki (2005), Ogunyele (2008) after ascertaining the stationarity properties of the series where the unit root test, Johansen co integration test and the Granger causality test of the variables where carried out.

The estimation was carried out with the use of Econometric package known as E-views 4.0 in order to facilitate time series analysis.

3.4 MODEL SPECIFICATION

In other to analyse the effect of public revenues on economic growth, the econometric techniques employed is the VAR/VEC mode. one of the two econometric techniques could be used for the analysis, one is the standard vector Autoregression model (VAR) with all variables specified in levels, the other is the vector Error correction model (VEC) that explicitly model variables integrated of order 1 (0) and a cointegrating relationship that are present in the data.

We started by formulating the general VAR model of the effect of public revenues on economic growth in Nigeria.

Its advantage is that it allows for the interpretation of all variables as endogenous variables. The model is a theory free method to estimate economic relationship.

The general form of the VAR model in this context is specified as.

$$Y_t = m + A_1 Y_{t-1} + \ldots\ldots\ldots + A_P Y_{t-p} + \quad et \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 1$$

Where

Yt is a 4x1 vector of jointly determined endogenous variables containing RGDP,OIR,NOR and FGIR

A_1…..A_p is a kxk matrices of coefficient that relate lagged values of all the endogenous variables to current values of those variables, m is the vector of constant, and εt is a white noise disturbance

The model can be presented in a functional format as

RGDP= f (OIR, NOR, FGIR) ……2

The model can also be represented in log linear econometric format. The reason for specifying the model in the logarithm transformation is that logarithm transformation are often used in time series analysis as a means of removing growth overtime in the variance of data

Taking the log of the equation 2 and differencing yields

$\log RGDP_t = \alpha_0 + \alpha_1 \log OIR_t + \alpha_2 \log NOR_t + \alpha_3 \log FGIR_t + \varepsilon_t$……3

Where

RGDP=Real Gross Domestic Products

OIR=Oil revenue

NOR=Non oil Revenue

FGIR= Federal Government Independent Revenue

αo….=is a constant term , ‘t’ is a time trend, ‘ε’ is the random error term

3.5 TEST OF STATIONARITY

Since time series data have been generated by a stochastic process such data can either be stationary or non stationary. Before we use it for analysis its properties will be investigated. This is to show whether the variables are stationary or not. By definition, a stationary process is one whose joint and conditional distribution are invariant with respect to displacement in time Pindyck and Rubinfeld (1988, pp493). Stationarity is important because if time series data are non stationarity, the classical t- and F- test are inappropriate. The problem of spurious regression will arise when non stationary data are used, Granger and Newbold (1974).

The various test of stationarity include, graphical analysis, the correlogram test and the unit root test.

3.5.1 Unit Root Test

The unit root test involves testing the order of integration of the individual series under consideration. According to Iyoha and Ekanem (2004), Testing for unit root is a key concept in the study of time series model and con integration. By definition a stochastic process Yt, is known as a unit root if its difference $Yt-Yt_{-1}$ is stationary 1 (1). This implies that testing for unit root is equivalent to testing whether a stochastic process is stationary or not. To test for unit root, several procedure for the test of integration have been developed

The two most popular ones are the Augmented Dickey Fuller (ADF) unit root test due to Dickey and Fulller (1988) and Philips and Perrons (PP) unit root test due to philiips and perron (1988).

In this study the ADF approach for test of unit root was adopted because it control for higher order serial correlation by adding lagged difference terms on the right side of the regression and is also widely used. The null hypothesis of this test is that there is at least one unit root (that is the time series data are non stationary). In performing the ADF test we addressed two important issues. First, we determined whether to include deterministic terms into the regression; we have the choice of including a constant, a constant and a linear time trend or neither of them in the regression. The second issue is to choose the lag length, which is to specify the number of a lagged difference terms to be added to the test regression. The usual advice is to include the number of lags sufficient to remove serial correlation in the residual.

The general form of the ADF for unit root test is given as

$\Delta yt = \alpha + \gamma y_{t-1} + \delta \Delta y_{t-1} + \delta 2\ \Delta y_{t-2} + \ldots.. + \delta p\text{-}1 \Delta y_{t-p} + \varepsilon_t$ ……4

Where; Yt is a time series, α is a constant, t is a linear time trend, Δ is a first difference operator, εt is a white noise disturbance term

Since the result are known to be sensitive to lag length, then the optimum lag length choice will be based on two alternatives criteria; the Schwarz information criterion (SIC) and the Akaike information criterion (AIC) . The SIC imposes a higher penalty for additional coefficient .The AIC imposes fewer penalties on the additional coefficients.

The Augmented Dickey Fuller specification of unit root test is often carried out under the null hypothesis $\gamma = 0$ against the alternative hypothesis of $\gamma < 0$.

The null hypothesis is tested against the alternative hypothesis

Ho: $\gamma = 0$, H_1: $\gamma < 0$

The observation is first tested at levels to know whether the ADF values is greater than mackinnon critical values at chosing level of significant, then we will reject the null hypothesis of non stationarity and conclude that the data is stationary

3.5.2 CO Integration Test

A substantial part of economic theory generally deals with long run equilibrium relationship generated by market forces and behavourial rules. Correspondingly, most econometric studies entailing time series can be interpreted as attempts to evaluate such relationship in a dynamic framework.

The aim of the cointegration analysis is to establish long run equilibrium relationship between economic variables.

According to Granger (1988), a co integration test can be thought of as a pre test for avoiding spurious regression given a group of non stationary series. Variables are said to be co integrated if they have the same wave length or if they are integrated of the same order over the sample period. Co integration also implies that the long run movements in the variables are related to one another in a long run equilibrium relationship.

Several methods for the test of cointegration have been developed but the most important issue is choosing a method. The different method are; Engel and granger two step, Johansen's maximum likelihood (MLD), Dickey Fuller (DF) or the Augmented Dickey Fuller unit root, test on the residual estimated from the cointegrating regression, the cointegrating regression Durbin Waston procedure , the Johansen and Juselius test.

For the co integration test we employ the maximum likelihood established by Johansen and Juselius (1990) and johansen, 1991) to examine the existence of a long term relationship between Real GDP and the various public revenue used in the study at the 5% and 1 % level of significance respectively.

Johansen and juselius co integration methodology takes its starting point in the vector auto regression (VAR) of order p given by.

$Yt = A_1 Y_{t-1} + \ldots\ldots + ApY_{t-p} + \beta x + vt \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots 5$

Where

Yt is a k vector of non stationary 1 (1) variables

Xt is a d vector of deterministic variable

β is the cointegrating vector

vt is a vector of white noise disturbance term.

To determine the number of cointegrating vector, Johansen and Juselius (1988, 1989) and johansen 1990 suggested two statistics test; the first one is the trace test (λ trace). It test the null hypothesis that the number of distinct cointegrating vector is less than or equal to q against a general alternatives q=r. The second statistical test is the max eigenvalue test (λ max). The test concerns the test of the null hypothesis that there is r number of cointegrating vector against the alternative that r+1 cointegrating vector

3.5.3 Vector Error Correction Model

The VECM is a restricted VAR that has a co integration restriction built into the specification so that it is designed for use with non stationary series that are known to be co integrated

The VEC specifications restrict the long run bahaviour of the endogenous variables to converge to their long run relationship while allowing wide range short run dynamics.

The co integrating term is known as Error Correction term. Since the deviation from long run equilibrium is correlated gradually through a series of partial short run adjustment. We reformulate the VAR into VECM in which error correction term is included. Using the four variables of interest, that is total real gross domestic product (RGDP) oil revenue, (OIR), non oil revenue (NOR), and federal government independent revnue (FGIR)

The reformulated VAR into VECM is given as.

$$\Delta Yt = \alpha\beta^{t}Y_{t-1} + \sum_{i=1}^{p=1}\Gamma\Delta y_{t-1} + \Pi + \varepsilon_{1t} \ldots\ldots\ldots\ldots\ldots\ldots 6$$

Where Y_t is a vector of endogenous variables (RGDP, OIL NOR FGIR)

α's is the parameter which measure the speed at which the variables in the system adjust to their long run values

β^t vector are estimate of the long run cointegrating relationship between the variables in the model

Π is the parameter associated with exogenous variables

εt is the stochastic error term, Γ is a drift parameter

3.3.4 Granger-Causality Test

The Granger causality test are conducted to determine whether the current and lagged values of one variables affect another (whether public revenues cause economic growth or reverse causality from economic growth to public revenues may also exist.) Because it is common problem in economics in determining whether change in one variable is a cause of changes in another.

The Granger causality test assumes that the information for the prediction of the variables Xt and Yt is contained only in the time series data of these variables.

The Granger causality framework introduced by Granger (1969) and Sim (1980) was used for this purpose.

The test involves estimating the following regressions

$Xt = \sum_{i=1}^{k} \alpha i\ y_{t-1} + \sum_{j=1}^{k} \beta jXt\text{-}j + ut$……7

$Yt = \sum_{j=1}^{m} \gamma iy_{t-1} + \sum_{j=1}^{m} \delta jX_{t-j} + u2t$…… 8

Equation 7 postulates that current X is related to past values of X itself as well as Y and equation 8 postulates a similar behavior of Y

Generally, if Y granger cause X, then changes in Y should precedes changes in X. There for in a regression of X on other variables (including its own past values), if we include past or lagged values of Y and it significantly improves the prediction of X, then we can say that Y granger causes X. A similar definition if X granger causes Y. An important feature of granger causality test is that they presume the use of stationary data.

In this study, Y is used to donate Aggregate Real Gross Domestic Product. X= Aggregate public revenues decomposed into oil revenue, non oil revenue and federal government independent revenue

Ho: X_t does not Granger cause Y_t

Hi: X_t Granger causes Y_t

The decision rule requires that the F- statistic is often used to test if the coefficient is

statistically different from zero if there are we can reject the null hypothesis that "Xt does not cause Yt"

3.5.5 Impulse Response Function

We employed the impulse response function analysis using the moving average representation of VAR equation to examine the dynamic relationship of the variables under investigation.

The impulse response function traces the net effect of one standard deviation shocks to one of the innovations on current and future values of the endogenous variables.

3.5.6 Variance Decomposition

The variance decomposition method was employed to assess the relative contribution and importance of each of the variables in the system. The variance decomposition decomposes variation in an endogenous variable into the component shocks to the endogenous variable in the VAR; it also measures the proposition of forecast error in the current and future values of the innovation to each endogenous variable in the VAR. the percent of the forecast variance due to each innovation with row add to 100%

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS OF RESULTS

4.0 INTRODUCTION

This chapter reports the result of the methodologies employed in the previous chapter. This is aimed at achieving the objectives and testing the hypothesis stated in chapter one.

Following the two approaches employed, that is, the statistical techniques and the econometric approach. We employed the statistical approach to capture objectives one of the study where the descriptive trend analysis was used to examine the trend and structure of public revenue in Nigeria. The second approach is the econometric approach which is employed to capture objective two and three of the study

The results are therefore discussed in two parts. Part one discusses the trend and structure of public revenues decomposed into oil revenue, non oil revenue and federal government independent revenue, while part two discusses the Econometric techniques

4.1 STRUCTURE AND TRENDS OF PUBLIC REVENUES IN NIGERIA.

4.1.1 STRUCTURE OF PUBLIC REVENUES IN NIGERIA

Before we examine the structure of public revenues in Nigeria, it is important we present the domestic revenue flows chart of the government of Nigeria to enable us understand the sources of public revenues and their various components.

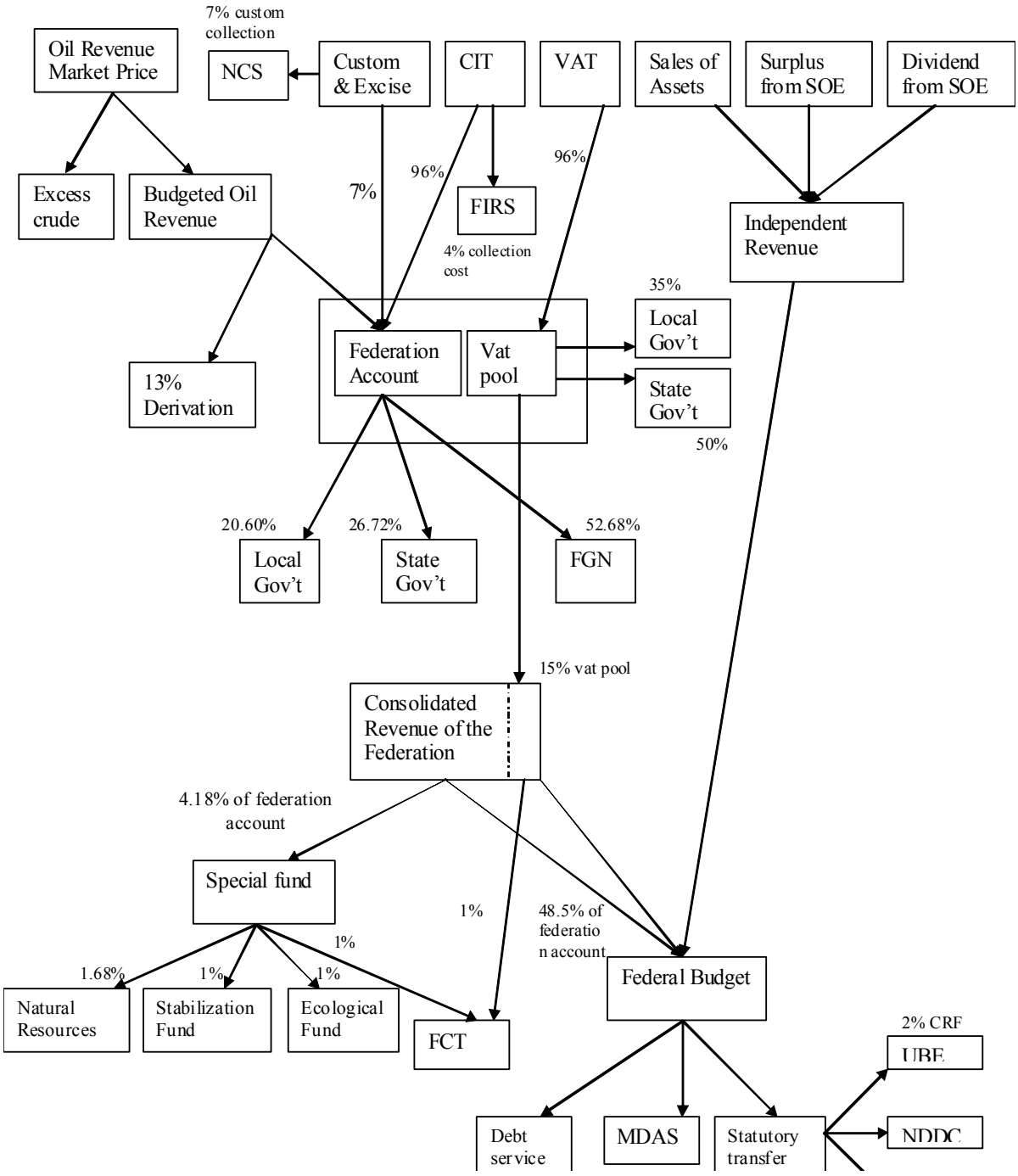


Figure 4.1.1: Domestic revenue flow chart.

Source: Budget office Federal Ministry of Finance.

The composition of public revenues by major sources namely; Oil revenues and its main components ; petroleum profit tax and Royalties(PPT&R), OTHERS (1), which includes revenues from export sales, domestic sales , tax on petroleum product, rents etc. Non oil revenues and its components; company income tax (CIT), Custom and Excise Duties (C.ED) and Value Added Tax (VAT). Federal Government Independent Revenue and it composition; Education Tax, custom levies, Autonomous foreign exchange market, the components of federal government independent revenues are treated as OTHERS (2). Their absolute values, growth rate., as percent of total federally collected revenue and as percent of GDP are presented in Appendices, table 4.1.1 and 4.1.2

An examination of table revealed that total federally collected revenue has grown significantly over the sample period despite the declined recorded within 1980 to 1985 and 1986.the table further revealed that the structure of oil revenue components has contributed over 81.14 % to total federally collected revenue in 1980 with PPT&R contributing 56.22% and OTHERS (1) contributing 24.87% to total federally collected revenue. In term of growth rate, oil revenue components PPT&R has consistently shown negative growth rate between 1980 to 1984 and recorded a positive growth rate in 1985. While for non oil revenue components, the components has equally contributed to total federally collected revenue but the contribution has been very insignificant when compared to oil revenue components. The contributions of non oil revenue components to total federal in 1980 are; CIT contributed 3.80%, C.ED contributed 11.90%. In terms of growth rate, CIT growth was negative -30.43% and C.ED was positive with growth rate of 28.24% in the same year. However, non oil revenues components between 1981 1nd 1984 has shown fluctuating growth rate for CIT, C&ED the growth rate has been mixed it was negative in 1983 with a figure of -

15.06% and -18.55 % in 1983. The growth rate exhibited by the various public revenues components from 1980 to 1984 can be trace to important events in Nigeria economic history such as the sharp decline in oil prices in the world oil market, macroeconomic policies (Economic stabilization act of 1982 and the Austerity measures programme of 1984).

Table 4.1.1: STRUCTURE OF PUBLIC REVENUES IN ABSOLUTE TERMS

	OIL REVENUE		**NON OIL REVENUE**			**FGIR**
YEAR	PPT&R	OTHERS1	CIT	C&E .D	VAT	OTHERS2
1980	8564.3	3789	579.2	1813.5	Na	Na
1981	6325.8	2238.6	403	2325.8	Na	Na
1982	4846.4	2968.5	550	2336	Na	Na
1983	3746.9	3506.1	561.5	1984.1	Na	Na
1984	476.4	3507.8	787.2	1616	Na	Na
1985	6711	4212.7	1004.3	2183.5	Na	Na
1986	4811	3296.3	1102.5	1728.2	Na	1224.1
1987	12504	6523	1235.2	3540.8	Na	1170
1988	6814.4	13017.3	1550.8	5672	Na	1.7
1989	10598.1	28532.4	1914.3	5815.5	Na	6072.1
1990	26909	44978.1	2997.3	8640.9	Na	12835.1
1991	36615.9	44050.5	3827.9	11456.9	Na	Na
1992	51476.7	112601.4	5417.2	16054.8	Na	Na
1993	59207.6	102894.8	9554.1	15486.4	Na	Na
1994	42802.7	117389.7	12274.8	18284.6	7260.8	Na
1995	42857.9	281689.7	21878.3	37364	20434.4	3500
1996	76667	332116	22000	55000	31000	3407
1997	68100	348237	26000	63000	34000	4300
1998	68000	256400	33300	57700	36900	11400
1999	164300	560100	46200	87900	47100	9100
2000	525100	1063600	51100	101500	58500	21700
2001	639200	1068300	68700	170600	91800	40400
2002	392200	o883600	89100	181400	108600	34100
2003	683500	1390800	114800	195500	136400	Na
2004	1,183,500	2171300	113000	217200	159500	Na
2005	1,904,900	2857500	140300	232800	178100	Na
2006	2,038,300	3249200	244900	177700	221600	Na
2007	1,500,600	9262400	275300	241400	289600	Na
2008	----	--------	-------	-----	--------	------

Source: CBN statistical Bulletin Jubilee Edition 2008 and Annual Report and Statement of Account various issues

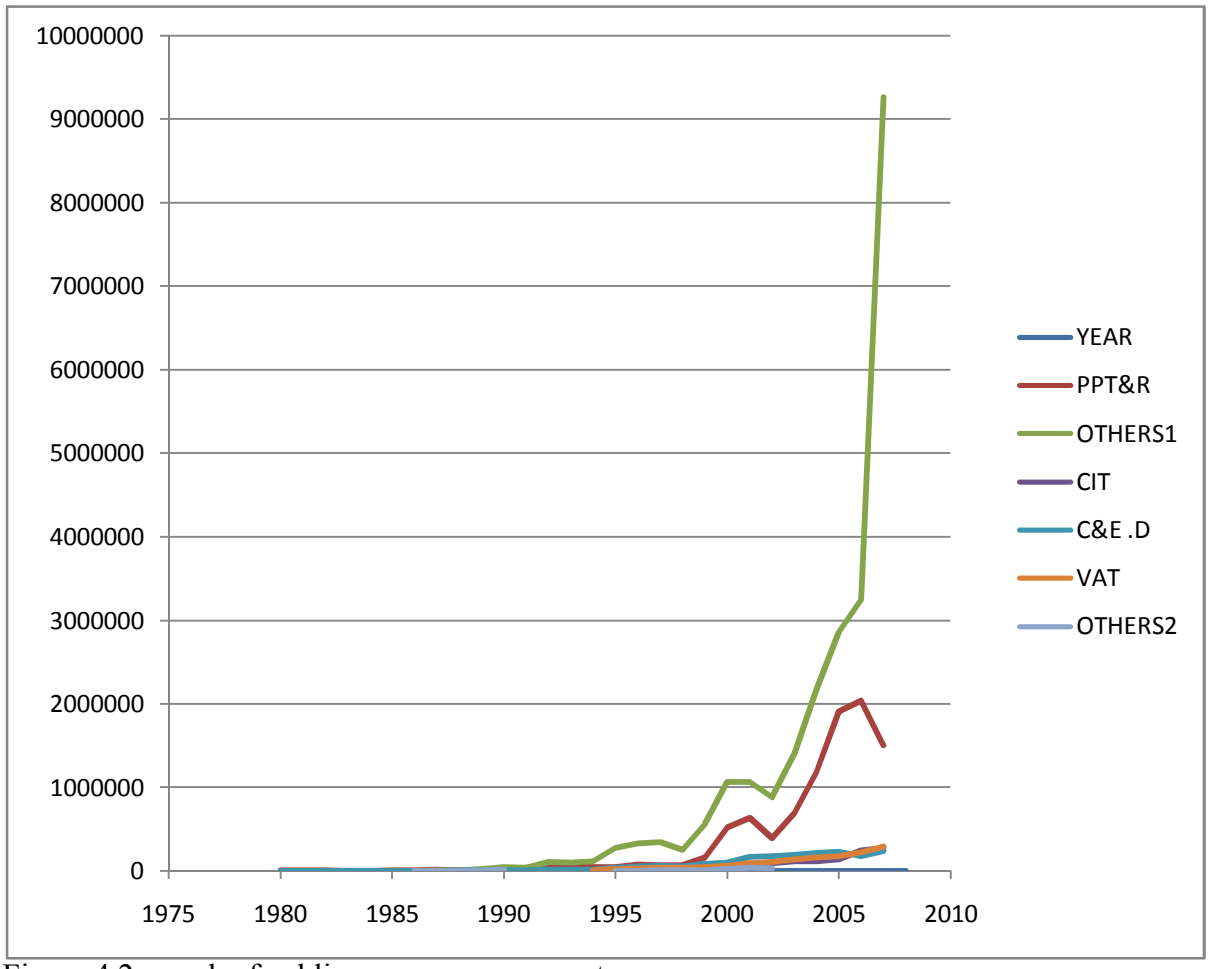


Figure 4.2: graph of public revenue components

In general, public revenue components from 1985 to date has continued to exhibit mixed growth rate from increased to decreased and their contribution to total federally collected revenue has exhibited such trends. There was peak for PPT&R in 1985 following the high demand for petroleum products again the oil revenue components OTHER1 also reach it peak in 2000 following the favourable oil revenue shocks.

Non oil revenues components also reach it peak in 2005 following the contributions of VAT and other non oil revenue components such as custom and Excise duties.

4.1.2 **The Trend of Public Revenue in Nigeria 1980-2008.**

The time series of reconstructed public revenues in Nigeria from 1980- 2008 is given in table 4.1.2. It can be seen from the table that most of the period the oil revenue rose faster than non oil revenue and federal government independent revenue. This can be traced to important events in the Nigeria economic history. There was a sharp declined in public revenue between 1980- 1986 (pre SAP Era) following the end of the oil boom which lasted between 1971-1979.

There was peak in 1980, trough in 1981 and peak again in 1985 for oil revenue. Similar trend exists for non oil revenue except in 1983 that high peak was experienced while federal government independent revenue exhibited gradual rise.

The table further revealed that the trend in the various public revenue rise and fall as oil revenue rise and fall, this implies that Oil revenue influences the rise and fall in the other sources of revenue in Nigeria within this sub period

The trend of public revenues from 1986 (SAP and post SAP era) also revealed that the absolute values of the various sources of public revenues from the1986-2008 indicate that the various public revenues resumed upward trend from 1986 signifying an important events in Nigeria's economic history with the introduction of the structural adjustment programme (SAP) in 1986. There was a rise in oil revenue in 1987 from ₦8, 107.30 in1986 to ₦19.024.00m in 1987 and non oil revenue rising from ₦4, 488.50m in 1986 to ₦6, 353.60m in 1987.Thereafter, oil revenues and non oil revenue rose again sharply from ₦19, 830.70m in 1988 to ₦71, 887.10m in 1990, while non oil revenues also rose from ₦7,769 in 1988 to ₦26,215.3 in 1990. For federal government independent, it continued to rise

gradually and slightly from ₦487.50 in 1980 to ₦1, 724.00m in 1990. From 1991 to 1995 revenue from oil revenue increase from ₦82, 666.10 to ₦324,547.60 in 1995, non oil revenue also increased from ₦18,352.20 in 1991 to ₦135,439.70 while federal government independent revenue increased sharply from ₦3,040.40 to ₦20,436.40 within the same sub period. The upward trend in the various public revenues up till 2008 from 1996 reveal that oil revenue reached its peak in 2005 then declined in 2006 and rose again in 2007 taking the lead. Oil revenue rose faster than combined non oil revenue and federal government revenues from 1996 to 2008.

However, it worthy to note that theses increase in the various public revenues are characterized by fluctuations or instability due largely to socio, political and economic events and other factors that may hinder the free flow of revenues.

In terms of growth rate, table 4.1.2 further revealed that oil revenue shows declining growth rate from 1981- 1983 and from 1984 to 1985 the growth rate shows and upward trend.

Similarly non oil revenue shows fluctuating growth rate between 1980 and1984. For federal government independent revenue, the growth rate record also shows similar trend of fluctuation between 1980 to 1985.

The growth rate recorded from 1986 to 2008 for all public revenues indicate that oil revenue shows a negative growth immediately after the introduction of SAP in 1986 from 32.1 percent in 1985 to -25.7 percent in 1986. But in 1987 oil revenue shows a drastic increased. Similar trend of rise and fall in non oil revenue and federal government revenue are observed.

In comparison, oil revenue has shown drastic rise and fall as compared to non oil revenue and federal government but the fact remains that oil revenue is still the dominant sources of public revenue to Nigeria.

4.1 .2 TIME SERIES DATA FOR, OIR, NOR AND FGIR. (GROWTH RATE)

YEAR	GDPGR	OIRG	NORGR	FGIRGR
1980				
1981	550.53	-30.67	64.08	309.70
1982	-2.70	-8.75	-23.42	-63.31
1983	-7.05	-7.19	799.68	-3.09
1984	-1.10	14.01	-90.83	-18.19
1985	9.52	32.10	38.28	61.62
1986	2.45	**-25.78**	**8.76**	**-53.80**
1987	-0.57	134.69	41.55	-6.017
1988	7.36	4.23	22.21	25.24
1989	7.67	97.31	89.82	83.74
1990	13.02	83.71	77.85	83.79
1991	-0.81	14.99	-30.09	76.35
1992	2.26	98.48	43.928	61.26
1993	1.28	-1.20	16.27	14.75
1994	0.22	-1.18	36.03	-30.89
1995	2.16	102.60	224.65	425.60
1996	4.46	25.95	-15.22	-83.32
1997	2.75	1.96	44.58	144.78
1998	2.94	-22.19	-16.08	1670
1999	0.42	123.37	61.35	61.35
2000	5.44	119.72	39.91	39.91
2001	8.42	7.28	187.28	187.28
2002	21.38	-27.92	-44.54	-44.54
2003	10.23	68.52	-0.034	-0.03
2004	10.48	70.84	12.95	12.95
2005	6.51	34.39	38.78	38.78
2006	6.03	11.03	-13.70	-13.70
2007	40.02	-15.60	77.23	77.23
2008	-19.10	46.33	11.25	11.25

source: CBN Statistical Bulletin jubilee Edition 2008 and Annual report and statement of Account various issues

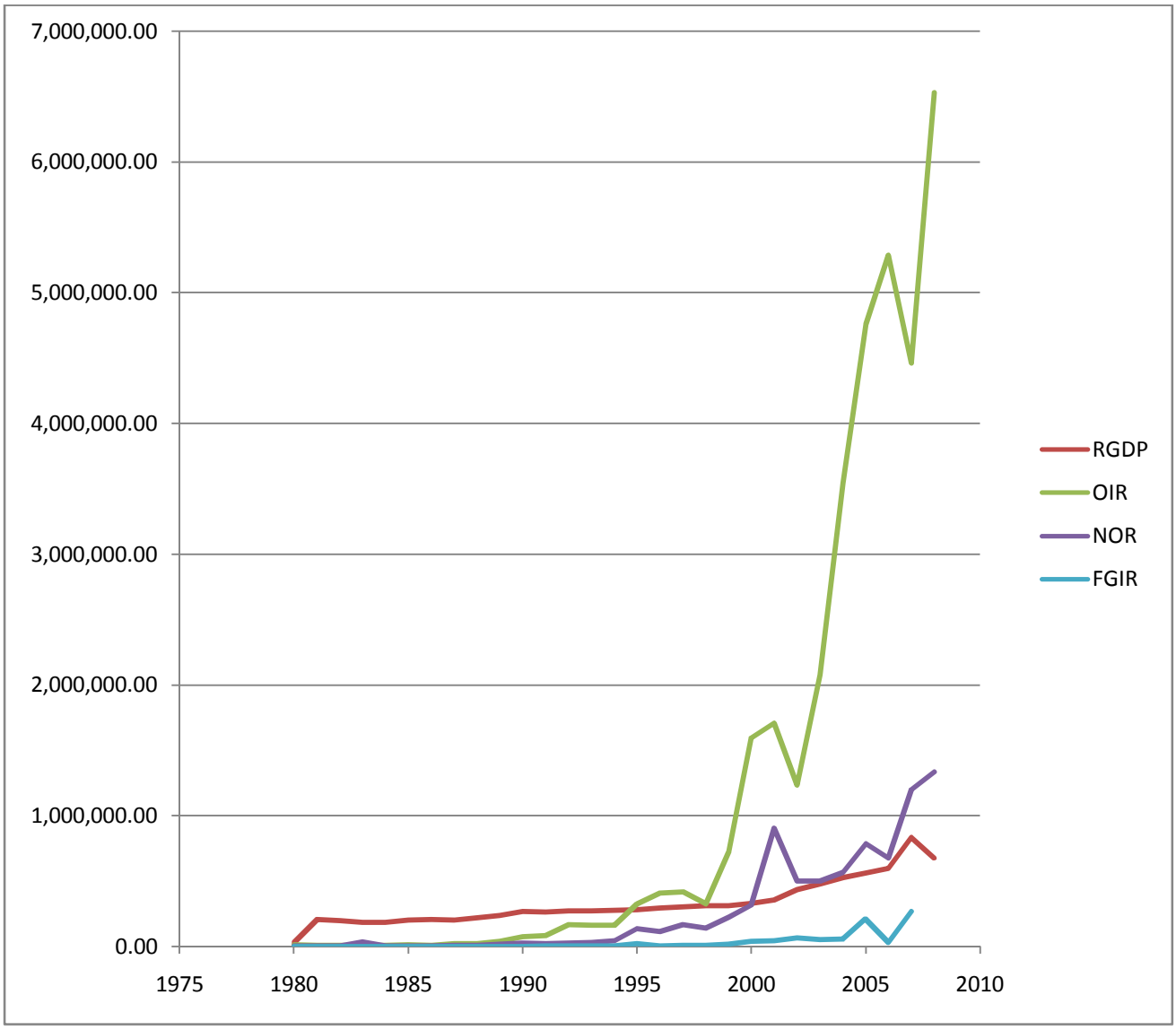


Figure 4.3 Graph of Absolute public Revenues and RGDP

4.2 PUBLIC REVENUES AND ECONOMIC GROWTH

This section reports the result and analyse the relationship among the variables. Time series econometric techniques are used to test the effect of public revenues on economic growth proxy by real Gross Domestic Product (RGDP) in Nigeria between 1980- 2008.

A unit root test was carried out to check the stationarity properties of the series in which case the ADF unit root test was used for this purpose, the Johanen's maximum likelihood (ML) method is applied for cointegration test. The granger causality test is also utilized to determine whether public revenue causes economic growth or economic growth or economic cause public revenues. The impulse response analysis and the variance decomposition are also conducted to find the importance of each variable in explaining the independent variable.

In order to determine the optimal lag length incorporated in to the model and testing the stability of the model, we employed the Akaike information and Schwarz information criterion from the VAR specification. This is done using the lag structure. We also tested for the stability of the model by using the root of characteristic polynomial and inverse root of AR characteristic polynomial.

4.2.1 Result of Unit root test

The unit root test of the variables was carried out to determine the stationatity properties of the four variables under consideration. The null hypothesis is that the variables under investigation have a unit root (non stationary) against the alternative hypothesis that it does not.

We employ the Augmented Dickey Fuller (ADF) unit root test to analyze the integrated properties of series (variables). Our choice of lag length was lag (1) which was used uniformly for all the variables. The test was conducted for both trend and untrend relationship with intercept included in all the regression. The result of the unit root test is presented in table 4.2.1 below.

Table 4.2.1 ADF Stationarity Result of unit root test

	INTERCEPT			INTERCEPT AND TREND		
Variables	Level	First Diff	2nd Diff	Level	First Diff	2nd Diff
LRGDP	0.577054	-5.547228*	-7.846772*	-1.984098	-6.18994*	-7.411428*
LOIR	-0.079218	-4.641669**	-6.210618	-3.529540	-4.510658*	-6.185696*
LNOR	-0.31480	-4818742**	-7283780*	-2.695716	- 4.713905**	-7.204092*
LFGIR	- 1.593623	-3.308611*	-5582966	-1.746577	-3.218007*	-5.465091*
1%	-3.6959	-3.7076	-3.7204	-4.3382	- 4.3552	-4.3738
5%	-2.9750	-2.9798	-2.9850	-3.5867	-3.5943	-3.6027
10%	-2.6265	-2.6290	-2.6318	-3.2279	-3.2321	-3.2367

Note: * ** *** indicate significance at 1%, 5%, 10%

1. Mackinnon (1996) critical values were used.
2. Lag length (l). based on the selection of the Akaike information criterion
3. All variables (values) are taken at their absolute values.
4. We conducted the test based on total values of the variables.
5. L= logarithm

From the table above, it is observed that all the variables when tested at level were non stationary 1 (1) which then implies the need for differencing. After differencing, the variables at first and second difference, all the variables became stationary 1 (0).

Our finding indicates that the null hypothesis couldn't be rejected but after differencing the data, the absolute values of the ADF statistics are all significant and above 1% 5% and 10% respectively

4.2.2 Cointegration Test

Test for co integration seek to discover the existence of a long run relationship among a set of variables. Having established that the variables are integrated of the same order, we then proceed to testing for the existence of co integration. We applied the method of Johansen's and Juselius 1990 to test for the presence of co integration in the four variables system

The test was conducted on assumption 4 because it sound more reasonable that imbalance in the integrated variables may grow or fall with respect to time. Our test allow linear deterministic trend in the data and intercept in each co integrating equation. The co integrating test used two lag length based on minimum (AIC) and (SIC.

The result of the Johansen cointegration test based on the Johansen and Juselius cointegration techniques is presented in table 4.2.2.

These results reveals that the trace statistic indicates two cointegrating relationship among the variables and the max eigenvalue indicate one cointegrating relationships among the variables at both 5% and1%. Since the eigenvalue statistic test indicates the existence of

one cointegrating vector among the variables in the system, this may indicate that the four variables in the system under examination are stationary and cointegrated. Therefore we conclude that there is a cointegrating vector between the variables where both test result reject the null hypothesis of no cointegration with onecointegrating vector

Our result in this case are not surprising and do not indicate isolated finding. Since they accord very well with stylized fact and in particular support the evidence by Ogunyele (2008), who found long run co integrating relationship between natural resources and economic growth using Nigeria annual data. Similarly, Anastassiou and Dritsaki (2005) using Greece data found long run co integrating relationship between real GDP and Tax revenue. Our result clearly is not unique and support earlier evidence on the topic applying the same methodology

The result suggests that the appropriate model to use is the VECM specification

Table 4.2.2 Johansen Test Result for long Run co integration

Null Hypothesis	Alternative Hypothesis	Max-Eigen statistic	5 % critical value	1 % critical value	Trace statistic	5% critical value	1% critical value
r=0	**r=1**	40.97603	31.46	36.65	85.03200	62.99	70.05
r<=1	**r=2=**	19.20847	25.54	30.34	44.05597	42.44	48.45
r<2	**r=3**	17.21419	18.96	23.65	24.84750	25.32	30.45
r<3	**r=4**	7.633303	12.25	16.26	7.633303	12.25	16.26

Trace test indicates 2 cointegrating equation (s) at the 5% level and1%

Max-eigenvalue test indicates 1 cointegrating equation (s) at both 5% and 1% levels
Authors estimation using E-views 4.0

4.2.3 **Vector Error Correction Estimates**

The vector Error correction analysis seeks to examine the short run effect of public revenue on economic growth proxy by RGDP in Nigeria. We followed the two steps Engel and granger model which suggests that any set of cointegrated time series has an error correction representation which reflects the short run adjustment mechanism. The motive of the analysis is to discover whether the short run dynamic are influenced by the estimated long run equilibrium condition that is the cointegrating vector. A crucial parameter in the estimation of the short run dynamic model is the coefficient of the error correction term which measures the speeds of adjustment in short run to restore long run equilibrium level running from public revenues to economic growth (RGDP).

The estimation of equation 6 Using lag specification of 1 1 and incorporating the error correction term (-ecm) yields the result presented in table 4.2.3. And the stability test

The result shows that the parameter of the ecm-term in the model is correctly signed such that it dynamically stable to restore equilibrium.

This confirms that RGDP in Nigeria has automatic adjustment mechanism and that economic growth responds to deviation from equilibrium in a moderate speed. A value of -0.42 for the coefficient of error term suggest that economic growth will converge towards it long run equilibrium

This further confirms that there is no problem in the long run equilibrium relation between the dependent and the independent variables .The value of -0.42 percent shows a

moderate rate of convergence to the equilibrium every year. That is the disequilibrium in RGDP is corrected every year or eliminated every year by 42%

The result further reveals that lag value of all the public revenues seem not to mater for output in the short run. Non oil revenue may have a statistically significant positive effect on economic growth.

The result of non oil revenue of which tax revenue and other sources of revenues are included differs with result we found in related study where it was positive both in the long run and the short run may be as a result of the aggregation of non oil revenues, While oil revenue possess a positive sign in both short and long run. This result is mixed and is in conformity with mehrara (2007) who found mixed result on the effect of oil revenue on economic growth based on oil revenue shocks.

The stability test conducted through the VAR is presented in figure 4.2.3 below. The figure indicates that no root lies outside the unit root circle therefore the estimated VECM is in a stable mode.

Table 4.2.3 Result of Estimated VECM

	D (L (RRGDP))	D (L (OIR))	D (L (NOR))	D (L (FGIR))
ECm	-0.042613	0.024876	-1.08314	-0.759665
	{0.80465}	{0.11413}	{-3.52063}	{-0.85992}
D (L (RGDP (-1)))	-0.020404	-0.140707	-0.324581	0.077216
	{-0.33672}	{-0.56415}	{-0.92202}	{0.07639}
D (L (OIR (-1)))	0.039411	-0.030086	-0.630296	0.312293
	{0.53389}	{-0.09902	{-1.46975}	{0.25361}
D (L (NOR (-1)))	0.003955	-0.067632	0.010026	0.135241
	{0.10836}	{-0.45016}	{0.04728}	{0.22211}
D (L (FGIR (-1)))	-0.009412	-0.35467	0.021706	-0.310599
	{-0.68239}	{-0.62476}	{0.27089	{-1.3999}
C	0.036878	0.283761	0.384148	-0.186491
	{1.43257}	{2.67816}	{2.56874}	{-0.43429}
R^2	0.170313	0.082064	0.571580	0.188337
R^{-2}	-0.027232	-0.136442	0.469575	-0.004916

{ } indicates t statistics in parentheses

Source: Authors Estimation using E. views 4.0

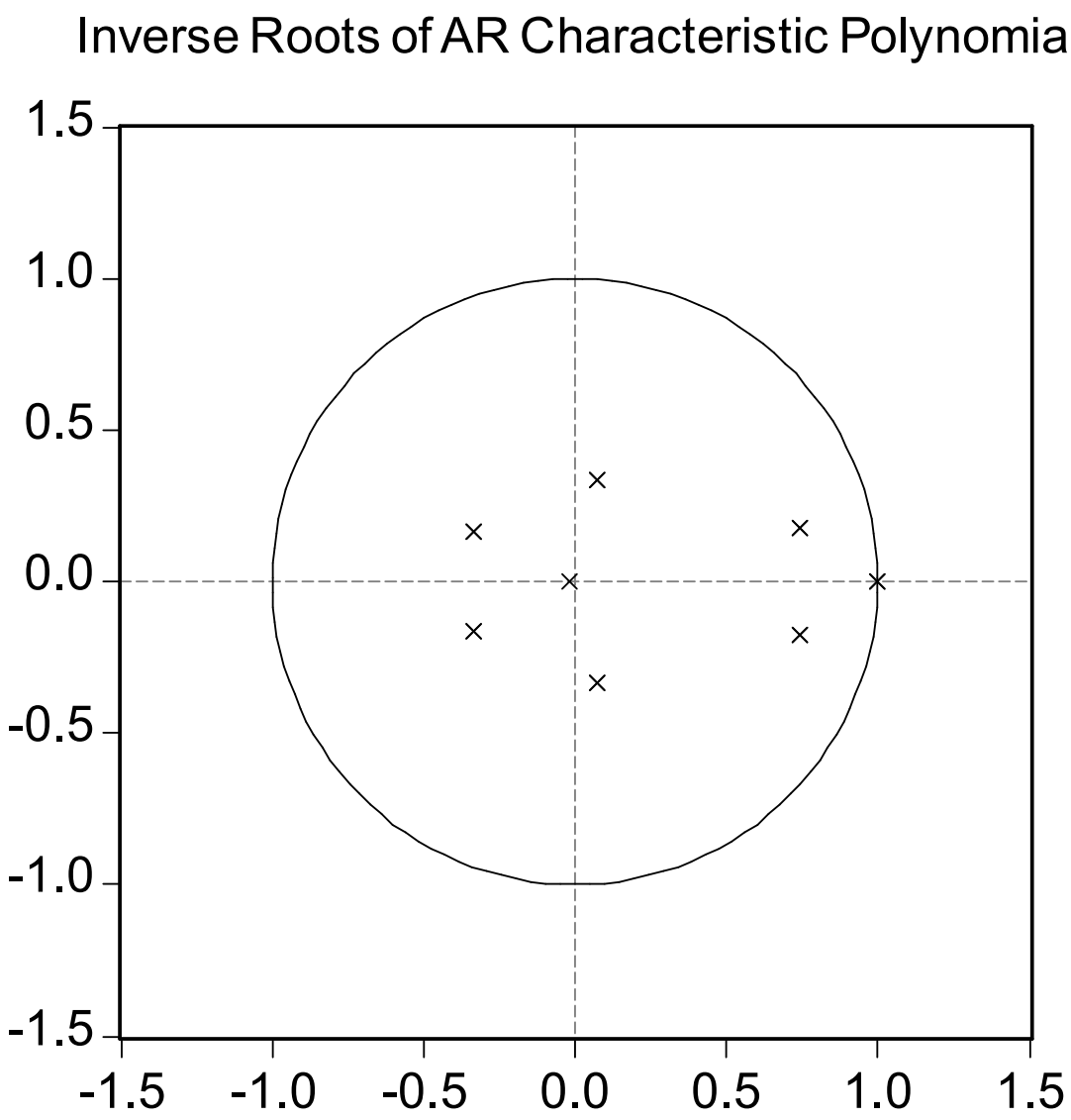


Figure 4.4: Estimation of AR Stability test from Eviews 4.0

4.2.4 Granger Causality Result Test

We employ the pair wise Granger causality test of the variables to examine our hypothesis. The test is used to study the short and the medium linkages between public revenues and economic growth proxy by RGDP. A causality test analyze whether the lags of the explanatory variables are significantly different from zero. Each equation contain lagged values of the right hand side variable plus lagged values of other variables under consideration. We use lag length of 2 for the test.

It is worthy to note that rejection of null hypothesis implies that a temporal change in public revenues lead to permanent change in RGDP on the other hand, failing to reject the null hypothesis of no causality will mean that RGDP is not directly explained by public revenues.

The result of the granger causality conducted at lag two shows that a temporal change in public revenues in Nigeria does not lead to changes in RGDP. The implication of these results is that the null hypothesis could not be rejected in all cases. Though insignificant, We do not find a consistent result either positive or negative.

The result supports the resource course which is defined explicitly as the contraction in the non hydrocarbon traded sector .Evidence of Dutch disease has been identified in almost all countries where petroleum export play a major role in their economy.

TABLE 4.2.4 Pairwise Granger causality Test at lag 2

Null Hypothesis	Obs	F-stat	Probability value
LOIR does not granger cause LRGDP	27	2.36885	0.11703
LRGDP does not granger cause LOIR	27	0.71634	0.49959
LNOR does not granger cause LRGDP	27	1.95426	0.16549
LRGDP does not granger cause LNOR	27	0.94356	0.40444
LFGIR does not granger cause LRGDP	27	0.45741	0.26500
LRGDP does not granger cause LFGIR	27	0.8239	0.92120

Source: Authors Estimation using E-views 4.0

4.2.5 Impulse Response Function Analysis.

We now examine the impulse response function of the system using choleskey one standard deviation innovation to trace out the effect over the 10 years period on current and the future values of the endogenous variables in the system, because of the dynamics structure which each equation consists of its own lagged values and lagged values of all other endogenous. An innovation in one variable is transmitted to all other variables.

The lag length chosen in this study is based on the minimum Akaike criteria; the lag length used is two lags. Also the ordering of the variables considered is RGDP, OIR, NOR and FGIR. The impulse response function analysis are conducted and reported in figure 4.2.6.

The result shows that each variable respond to its own one standard deviation shock and to shocks in other variables.

Response of RGDP to one standard deviation innovation of RGDP. The graph show that the initial effect is positive and statistically significant and lies above the equilibrium line; the response of RGDP to own shocks exhibit a rise through out the period and are statistically significant

RGDP response to shocks in oil revenue. As we can see from the graph, the response of RGDP to one standard deviation shock in OIR is positive and statistically significant and lies above the equilibrium level.

RGDP response to shocks in Non oil Revenue. The graph shows that the effects are permanently negative and lies below the equilibrium level though effect could be statistically significant for some period.

RGDP response to one standard deviation shocks in FGIR. The graph shows the that effect is negative and remains permanently negative and could be statistically significant through out the period .

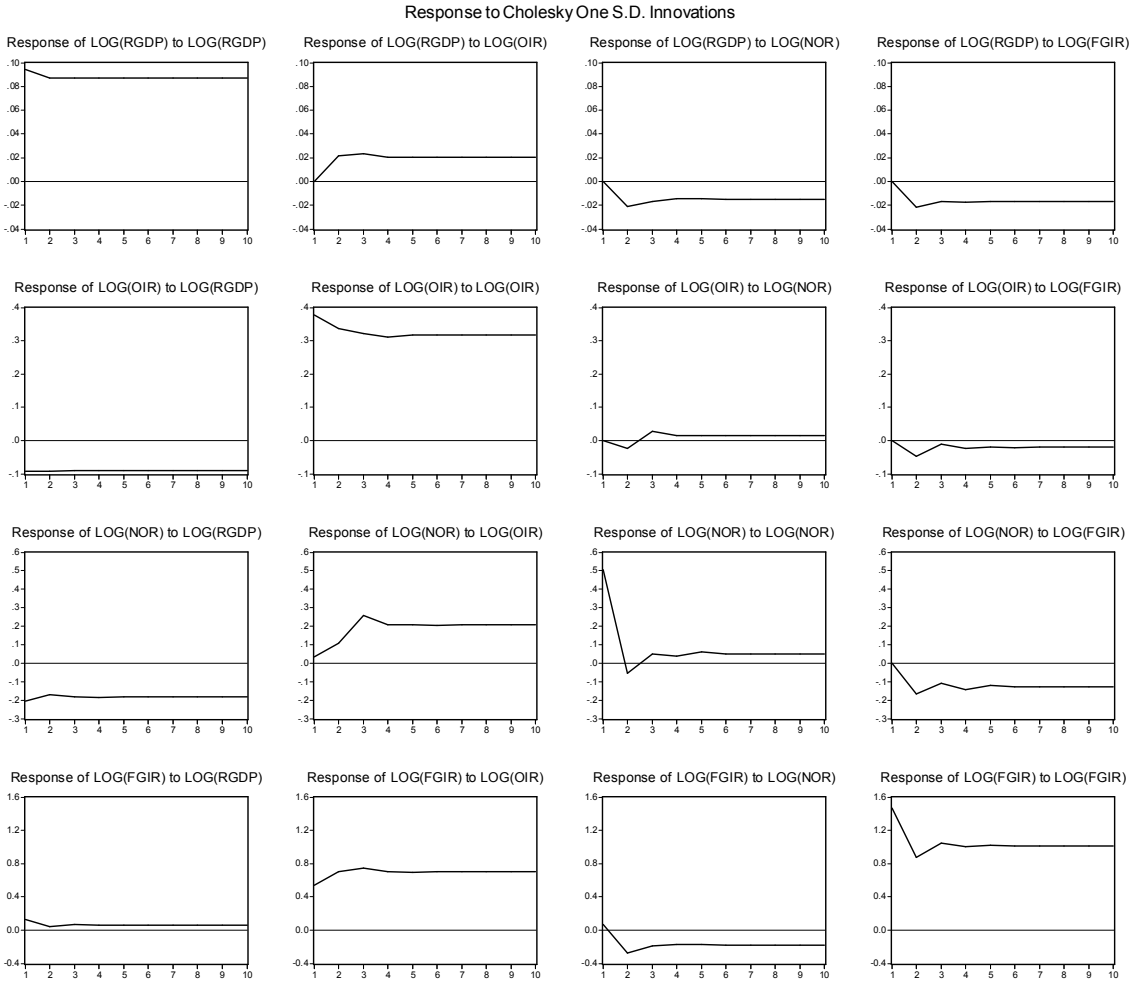
In summary, the overall responses of RDGP to the various public revenue shows that RGDP positively to one standard deviation shock in OIR. The response is permanently positive and statistically significant.

The initial effects could generate a stronger effect on RGDP in the short and long run. That is public revenues have direct impact on economic growth in the short run as well as in the long run.

The response of RGDP to shocks in non oil revenue is negative though statistically and weakly significant in absolute term .this implies that non oil revenue in the short run as well

as long run does not have positive effect on real gross domestic product but could have a positive effect in the long run, or it may be as a result of the aggregation of non oil revenue. Ordinarily non oil revenue should help in enhancing economic growth in Nigeria this result how ever support the result of non oil revenue not granger causing real gross domestic product.

The response of RGDP to one standard deviation shocks in FGIR show that the initial shocks has a permanent negative effect on RGDP and is statistically significant as can be seen on the figure. These mean that federal government independent revenue does not have effect on real gross domestic product. This result support the result of the granger causality that FGIR does not granger cause RGDP



Source: Author's using E-views 4.0

Figure 4.5: Impulse Response function figure of the variables

4.2.6 Result of Variance Decomposition

The essence of the variance decomposition is that it gives information about the relative importance of the random innovation. It also shows the source of error in forecasting dependent variables. It depend critically on the ordering of the variables

Table 4.2.5 presents the variance decomposition of the four endogenous variables generated through the Sim's recursive Cholesky decomposition method

VARIANCE DECOMPOSITION OF RGDP

Tables 4.2.5. Present the result of the variance decomposition for public revenue and economic growth (RGDP)

The forecast error variance of RGDP due to oil revenue is relatively very low. For instance in the year 2, 5and the 10^{th} year the forecast error variance due to oil revenue increases from 2.6% in the 2^{nd} year to 4.2% in the 5^{th} year and 4.5% in the 10^{th} year. For the same period the forecast error variance of RGDP due to non oil revenue is also very low as compare to oil revenue. For neither instance, in the 2^{nd} year the forecast error variance due to NOR increases from 2.4% to 2.6% in the 5^{th} year and decrease to 2.5% in the 10^{th} year.

Similarly, the forecast error variance of RGDP due to FGIR increases from 2.6% in the 2^{nd} year to 3.1% in the 5^{th} year then increase to 3.2% in the 10^{th} year.

In summary, the forecast error variance of Economic growth (RGDP) due to public revenue suggests that the influence of public revenue on economic growth in Nigeria is insignificant with relatively very weak values

Variance Decomposition of OIR

The variance decomposition of OIR shows that the most important variables that seem to explain oil revenue OIR is RGDP. The innovation in RGDP explains at most 5.9 percent of the forecast error variance in OIR in the first year. Other years show that innovation in RGDP shows and increasing percent of the forecast error variance in OIR up to 7.6 percent in year tenth. This has shown that RGDP are most important variable in explaining OIR. Thus NOR and FGIR appears not to explain any appreciable effect of the forecast error variance in OIR.

Variance Decomposition of NOR

The variance decomposition of NOR shows that the most important variables that seem to explain the NOR is OIR, RGDP and FGIR. The innovation in OIR explain at most 26.9 percent in year six and increase to 32.9 percent in year ten of the forecast error variance, while RGDP explain at most 25.2 percent of the forecast error variance in NOR

FGIR also appear to explain some fraction of the forecast error variance neither in NOR at about 10 .4 percent in the fifth year and 13.5 percent in year ten. These variables show that OIR, RGDP and FGIR has very weak economic effect in explaining NOR

Variance Decomposition of FGIR

This table shows the variables that explain FGIR; we can see from the table that OIR explain about 24.3 percent of the forecast error variance in year three and 29.2 percent at year ten. Thus NOR explain very weak fraction of the forecast error variance in FGIR at

most 2.1percent in the second year up to the tenth year, While RGDP does not seem to explain any effect in FGIR through out the years.

Table 4.2.5: Variance decomposition of the variables.

Variance Decomposition of RGDP

Period	S.E.	L (RGDP)	L (OIR)	L (NOR)	L (FGIR)
1	0.094229	100.0000	0.000000	0.000000	0.000000
2	0.133402	92.28399	2.626664	2.463474	2.625871
3	0.162904	90.64987	3.836497	2.705489	2.808141
4	0.187263	90.25490	4.117687	2.636271	2.991139
5	0.208792	90.09314	4.239870	2.608909	3.058078
6	0.228349	89.93431	4.345872	2.605166	3.114651
7	0.246368	89.81316	4.427176	2.604224	3.155443
8	0.263150	89.72528	4.487354	2.601460	3.185902
9	0.278922	89.65777	4.533385	2.599253	3.209589
10	0.293850	89.60346	4.570428	2.597566	3.228545

Variance decomposition of oil

Period	S.E.	L (RGDP)	L (OIR)	L (NOR)	L (FGIR)
1	0.387841	5.581495	94.41850	0.000000	0.000000
2	0.524964	6.189199	92.78501	0.205239	0.820556
3	0.623079	6.519494	92.51540	0.348124	0.616982
4	0.703104	6.792101	92.29492	0.321338	0.591638
5	0.777038	6.916404	92.23929	0.301321	0.542986
6	0.844689	7.008987	92.18610	0.282720	0.522198
7	0.907244	7.075805	92.14974	0.271944	0.502515
8	0.965688	7.128394	92.11948	0.263562	0.488567
9	1.020803	7.169485	92.09645	0.256874	0.477193
10	1.073097	7.202784	92.07770	0.251404	0.468113

Variance Decomposition of NOR

Period	S.E.	L (RGDP)	L (OIR)	L (NOR)	L (FGIR)
1	0.547415	13.86333	0.421249	85.71542	0.000000
2	0.608999	19.09144	3.457416	70.00786	7.443287
3	0.696714	21.44568	16.52586	53.97109	8.057368
4	0.765645	23.61492	21.19209	44.94238	10.25060
5	0.824760	25.25165	24.53179	39.24854	10.96802
6	0.880376	26.49421	26.93648	34.77339	11.79592
7	0.932906	27.44046	28.94048	31.26692	12.35215
8	0.982753	28.20091	30.52718	28.44297	12.82893
9	1.030104	28.82680	31.82876	26.13488	13.20955

10	1.075379	29.34971	32.91341	24.20632	13.53056

Variance Decomposition of FGIR

Period	S.E.	L (RGDP)	L (OIR)	L (NOR)	L (FGIR)
1	1.571863	0.683258	11.77040	0.202798	87.34355
2	1.951580	0.494177	20.60787	2.186829	76.71113
3	2.343645	0.419353	24.31670	2.178453	73.08549
4	2.649225	0.373653	26.06766	2.132994	71.42569
5	2.928483	0.348674	27.02143	2.100266	70.52963
6	3.182451	0.330288	27.75063	2.090924	69.82816
7	3.418083	0.316888	28.28802	2.084897	69.31019
8	3.638367	0.306570	28.69877	2.078594	68.91606
9	3.846034	0.298454	29.02125	2.073720	68.60657
10	4.043059	0.291879	29.28270	2.069784	68.35563

Cholesky Ordering: (RGDP) (OIR) (NOR) (FGIR)

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

The study offers two techniques of analysis. The first is the descriptive analyses which examine the trend and structure of public revenue in Nigeria.

The descriptive analyses where table, graph, ratio and percentage are were used to examine the Structure and trend of public revenue in Nigeria from 1980 to 2008.

The analytical techniques reveals that the growth in oil revenue is still high and volatile as compared to the growth in non oil revenue and federal government independent revenue which maintain a steady and gradual fluctuation.

The second techniques offers an econometric model to contribute to better understanding of the relationship between public revenue and economic Growth in a poverty driven and rent seeking country like Nigeria.

The variables of interest used in the study are real gross domestic product, (RGDP) proxy for economic growth. Public revenue decomposed into oil revenue (OIR) Non oil revenue (NOR) and federal government independent and (FGIR)

The empirical work was based on co-integration which was applied to check for long run relationship among the variable included in the study. The co-integration test indicate that the trace statistic indicate two co-integrating vector and the max-eigen value indicating one co-integrating vector at five percent and one percent respectively. The result indicate

that the best model to be use for analysis is the vector error correction model since it is the most appropriate to apply in the presence of long run relationship. The vector error correction model measures the speed of adjustment which is the short run adjustment mechanism.

The result of the vector error correction model shows that RGDP parameter is correctly signed such that it is dynamically stable to restore to equilibrium with 42% speed of adjustment in the short run to reach equilibrium level in the long run.

The granger causality result show that public revenues does not granger cause Economic growth (RGDP). Neither does economic growth granger cause public revenues.

We finally use the impulse response function analysis to trace out the effect and the variance decomposition to show the proportion of forecast error variance in forecasting the dependent variable.

The impulse response function show the percentage response of each of the variables in the system to one standard deviation movement in one of the system variables

RGDP respond to own shock and to shock in other variables positively and statistically significant.

The respond of RGDP to shock in OIR is positive and statistically significantly and is above the zero line. While the responds of RGDP to shock in NOR and FGIR are negatively significant.

The result of the variance decomposition shows the proportion of the forecast error variance for each of the variable is attributable to its own innovation and to shock to other system variable.

5.2 CONCLUSION

Previous studies on the effect / impact of public revenues on economic growth either analyse the effect o tax revenue on economic growth or on macroeconomic variables , others analysed the effect of oil revenue on economic growth or on macroeconomic variables in a disaggregated form, while others analysed the trend and structure of public revenue in relationship to growth. They provide mixed result in supporting either the econometric techniques or the descriptive analysis.

However, econometrical approach available for analyzing economic variables range from single equation OLS to two stage least square, from instrumental variables to unconstrained VAR modeling to co integration.

Based on the empirical analysis and finding, it is obvious that public revenues does not have direct or complimentary relationship to economic growth (RGDP) in Nigeria. The implication is that a change in public oil revenues does not lead to changes in RGDP.

5.3 POLICY RECOMMENDATION

Public revenues have played a crucial role in the process of economic growth in the past. When public revenues in Nigeria were from non oil revenue, the economy had a

moderate growth. Similarly, when oil was discovered and its boom period in the 1970's and 1980's, the economy had also a moderate growth. In fact public revenues growth influences economic growth either from demand and supply side. A high public revenue facilitate the import of capital and intermediate goods needed by the domestic industries, increase the entry of new technologies and induces economic growth, in the case of increases in oil revenue, but increase in tax revenue exerts a negative impact on the working of the economy. It will discourage investment, saving and consumption and there by retard growth. The consequences of increase oil revenues will increase gross domestic growth. The fluctuations in public revenues in some time in Nigeria lead to lower economic activities.

In recent times, the effects of public revenue on economic growth in Nigeria have taking the part of resource course.

On the basis of our finding and conclusion thereof, and in the light of the need to encourage and promote economic growth giving our huge public revenue, then there is the need for the government to revise its macroeconomic policies to improve efficiency and productivity of recourses allocation in the economy.

Government need to revise its budgetary system toward effective and efficient use of its public revenue so as to have a robust economic growth.

Government should reexamine its non oil revenue by way of increasing tax rate and introducing new taxes in such a way that it does not distort the working of the economy.

Effort should be made by the government to encourage the non oil sector by way of investing in the real sector and the private sector as well.

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APPENDIX A

A TIME SERIES DATA (ABSOLUTE VALUES)

YEAR	RGDP	OIR	NOR	FGIR	TFCR
1980	31,546.80	12,353.30	2,880.20	487.50	15,233.50
1981	205,222.10	8,564.40	4,726.10	1,997.30	13,290.50
1982	199,685.30	7,814.90	3,618.80	732.80	11,433.70
1983	185,598.10	7,253.00	32,557.70	710.10	10,508.70
1984	183,563.00	8,269.20	2,984.10	580.90	11,353.30
1985	201,036.30	10,923.70	4,126.70	938.90	15,050.40
1986	205,971.40	8,107.30	4,488.50	433.70	12,595.80
1987	204,806.50	19,027.00	6,353.60	407.60	25,380.60
1988	219,875.60	19,831.70	7,765.00	510.50	27,596.70
1989	236,729.60	39,130.50	14,739.90	938.00	53,870.40
1990	267,550.00	71,887.10	26,215.30	1,724.00	98,102.40
1991	265,379.10	82,666.40	18,325.20	3,040.40	100,991.60
1992	271,365.50	164,078.10	26,375.10	4,903.10	190,453.20
1993	274,833.30	162,102.40	30,667.00	5,626.50	192,769.40
1994	275,450.60	160,192.40	41,718.40	3,888.20	201,910.80
1995	281,407.40	324,547.60	135,439.70	20,436.40	459,987.30
1996	293,945.40	408,783.00	114,814.00	3,407.00	523,597.00
1997	302,022.50	416,811.10	166,000.00	8,339.90	582,811.10
1998	310,890.10	324,311.20	139,297.60	139,297,600	463,808.80
1999	312,183.50	724,422.50	224,765.40	224,765,400	949,187.90
2000	329,178.70	1,591,675.80	314,483.90	314,483,900	1,906.20
2001	356,884.30	1,707,562.80	903,462.20	903,462,200	2,231.600
2002	433,203.50	1,230,851.20	500,986.30	500,986,300	1,731.80
2003	477,533.00	2,074,280.00	500,815.30	500,815,300	2,575.10
2004	527,576.00	3,543,800.00	565,700.00	565,700,000	3,920.50
2005	561,931.40	4,762,400.00	785,100.00	785,100,000	5,547.50
2006	595,821.60	5,287,566.90	677,535.00	677,535,000	5,965.10
2007	834,251.10	4,462,910.00	1,200,800.0	1,200,800,00	5,715,600.0
2008	674,889.00	6,530,630.10	1,335,960.0	1,335,960,00	7,866,590.1

B TIME SERIES DATA (GROWTH RATE).

YEAR	GDPGR	OIRG	NORGR	FGIRGR	TFCRGR
1980					
1981	550.53	-30.67	64.08	309.70	-12.7548
1982	-2.70	-8.75	-23.42	-63.31	-13.9709
1983	-7.05	-7.19	799.68	-3.09	-8.09012
1984	-1.10	14.01	-90.83	-18.19	8.03715
1985	9.52	32.10	38.28	61.62	32.5641
1986	2.45	-25.78	8.76	-53.80	-16.3092
1987	-0.57	134.69	41.55	-6.017	101.5005
1988	7.36	4.23	22.21	25.24	8.731472
1 989	7.67	97.31	89.82	83.74	95.20595
1990	13.02	83.71	77.85	83.79	82.10817
1991	-0.81	14.99	-30.09	76.35	2.945086
1992	2.26	98.48	43.92	61.26	88.58321
1993	1.28	-1.20	16.27	14.75	1.216152
1994	0.22	-1.18	36.03	-30.89	4.742143
1995	2.16	102.60	224.65	425.60	127.8171
1996	4.46	25.95	-15.22	-83.32	13.82858
1997	2.75	1.96	44.58	144.78	11.3091
1998	2.94	-22.19	-16.08	1670	-20.4187
1999	0.42	123.37	61.35	61.35	104.6507
2000	5.44	119.72	39.91	39.91	-99.7992
2001	8.42	7.28	187.28	187.28	17.07061
2002	21.38	-27.92	-44.54	-44.54	-22.3965
2003	10.23	68.52	-0.03	-0.034	48.695
2004	10.48	70.84	12.95	12.95	52.24651
2005	6.51	34.39	38.78	38.78	41.49981
2006	6.03	11.03	-13.70	-13.70	25.91438
2007	40.02	-15.60	77.23	77.23	-18.1744
2008	-19.10	46.33	11.25	11.25	

C PUBLIC REVENUES AS PERCENTAGE OF TOTAL FEDERALLY COLLECTED REVENUE

YEAR	OIR AS% OF TFCR	NORAS%ORTFCR	FGIRAS&OFTFCR
1980	81.09	18.91	3.200183805
1981	64.44	35.56	15.02802754
1982	68.35	31.65	6.409123906
1983	69.02	309.82	6.757258272
1984	72.84	26.28	5.116574036
1985	72.58	27.42	6.238372402
1986	64.37	35.63	3.443211229
1987	74.97	25.03	1.605951002
1988	71.86	28.14	1.84985886
1989	72.64	27.36	1.741215955
1990	73.28	26.72	1.757347425
1991	81.85	18.15	3.010547412
1992	86.15	13.85	2.574438235
1993	84.09	15.91	2.918772378
1994	79.34	20.66	1.925701845
1995	70.56	29.44	4.442818313
1996	78.07	21.93	0.650691276
1997	71.52	28.48	1.430978236
1998	69.92	30.03	30033.41032
1999	76.32	23.68	23679.75824
2000	83,499.94	16,497.95	16497948.8
2001	76,517.42	40,484.95	40484952.5
2002	71,073.52	28,928.65	28928646.49
2003	80,551.43	19,448.38	19448382.59
2004	90,391.53	14,429.28	14429281.98
2005	85,847.68	14,152.32	14152320.87
2006	75,697.80	9,699.72	9699717.971
2007	78,082.97	21,009.17	21009167.89
2008			!

D PUBLIC REVENUE AS PERCENTAGE OF GROSS DOMESTIC PRODUCT (GDP)

YEAR	OIRAS&GDP	NORAS%OFGDP	FGIRAS%OFGDP	TFCRAS%OFGDP
1980	39.15865	9.1299276	6.28	48.28857444
1981	4.173235	2.302919617	0.97	6.476154371
1982	3.913608	1.812251578	0.99	5.72585964
1983	3.907906	17.5420438	1.07	5.662073049
1984	4.504829	1.625654407	1.08	6.184961022
1985	5.433695	2.052713863	0.99	7.486409171
1986	3.936129	2.179186042	0.96	6.115315039
1987	9.290232	3.10224529	0.97	12.39247778
1988	9.019509	3.531542381	0.90	12.55105159
1989	16.52962	6.226471045	0.84	22.75608965
1990	26.86866	9.798280695	0.74	36.66694076
1991	31.15031	6.905291336	0.75	38.05559669
1992	60.46388	9.719400587	0.73	70.1832768
1993	58.98208	11.15840038	0.73	70.14048152
1994	58.15649	15.14551067	0.72	73.30200043
1995	115.3302	48.12940243	0.71	163.4595608
1996	139.0677	39.05963488	0.68	178.1272985
1997	138.0066	54.96279251	0.66	192.9694311
1998	104.317	44.80605848	0.64	149.1873817
1999	232.0502	71.99784742	0.64	304.0480679
2000	483.5294	95.53592016	0.61	0.579077565
2001	478.464	253.1526884	0.56	0.625300693
2002	284.1277	115.6468727	0.46	0.39976593
2003	434.3742	104.8755374	0.42	0.539250691
2004	671.7136	107.2262574	0.38	0.743115684
2005	847.5056	139.714563	0.36	0.987220148
2006	887.4413	113.7144071	0.34	1.172347562
2007	534.96	143.9374788	0.24	0.685117466
2008	967.6599	197.9525522	0.30	0

D PUBLIC REVENUE COMPONENTS (GROWTH RATE)

	OIL REVENUE		NON OILREVENUE			FGIR
YEAR	PPT&RGR	OTHRE1GR	CITGR	C&E.DGR	VATGR	OTHER2GR
1980						
1981	-26.1376	-40.9184	-30.4213	28.24924		
1982	-23.3868	32.6052	36.47643	0.438559		
1983	-22.6869	18.11016	2.090909	-15.0642		
1984	-87.2855	0.048487	40.1959	-18.5525		
1985	1308.69	20.09522	27.57876	35.11757		
1986	-28.3117	-21.7533	9.777955	-20.8518		
1987	159.9044	97.88854	12.03628	104.8837		-4.41957
1988	-45.5022	99.56002	25.55052	60.18979		-99.8547
1989	55.52506	119.1883	23.43952	2.529972		357082.4
1990	153.904	57.63868	56.5742	48.58396		111.3783
1991	36.07306	-2.06234	27.71161	32.5892		-100
1992	40.58565	155.6189	41.51885	40.13215		
1993	15.01825	-8.62032	76.36602	-3.54037		
1994	-27.7074	14.08711	28.47678	18.06876		
1995	0.128964	139.9612	78.23753	104.3468	181.4346	
1996	78.88651	17.90136	0.556259	47.20051	51.70497	-2.65714
1997	-11.1743	4.854027	18.18182	14.54545	9.677419	26.21074
1998	-0.14684	-26.372	28.07692	-8.4127	8.529412	165.1163
1999	141.6176	118.4477	38.73874	52.33969	27.64228	-20.1754
2000	219.5983	89.89466	10.60606	15.47213	24.20382	138.4615
2001	21.72919	0.441895	34.44227	68.07882	56.92308	86.17512
2002	-38.6421	-17.2892	29.69432	6.330598	18.30065	-15.5941
2003	74.27333	57.40154	28.844	7.772878	25.59853	-100
2004	73.15289	56.11878	-1.56794	11.09974	16.93548	
2005	60.9548	31.60319	24.15929	7.18232	11.66144	
2006	7.002992	13.70779	74.55453	-23.6684	24.42448	
2007	-26.3798	185.0671	12.41323	35.84693	30.68592	
2008	-100	-100	-100	-100	-100	

E PUBLIC REVENUES COMPONENTE AS PERCENTAGE OF TOTAL FEDERALLY COLLECTED REVENUES.

YEAR	PPT&R AS % of TFCR	OTHERS1AS% OFTFCR	CIT AS %O FTFCR		C&E.DAS% OFTRCR	VATAS% OFTFCR	OTHERS2AS %OFTFCR
1980	56.22	24.87	3.80		11.90		
1981	47.59	16.84	3.03		17.49		
1982	42.38	25.96	4.81		20.43		
1983	35.65	33.36	5.34		18.88		
1984	42.33	31.17	6.99		14.36		
1985	44.59	27.99	6.67		14.50		
1986	38.19	26.16	8.75		13.72		9.71
1987	49.26	25.70	4.86		13.95		4.60
1988	24.69	47.16	5.61		20.55		0.006
1989	19.67	52.96	3.55		10.79		11.27
1990	27.42	45.84	3.05		8.80		13.08
1991	36.25	43.61	3.79		11.34		-------
1992	27.02	59.12	2.84		8.42		--------
1993	30.71	53.37	4.95		8.03		---------
1994	21.19	58.13	6.07		9.05	3.50	--------
1995	9.317	61.23	4.75		8.12	4.44	0.76
1996	14.64	63.42	4.20		10.50	5.92	0.65
1997	11.51	58.90	4.39		10.65	5.55	0.72
1998	14.66	55.30	7.18		12.44	7.95	2.45
1999	17.30	59.00	4.86		9.26	4.96	0.95
2000	27.54	55.79	2.68		5.32	3.06	1.13
2001	28.64	47.87	3.07		7.64	4.11	1.81
2002	22.64	51.02	5.14		10.47	6.27	1.96
2003	26.54	54.00	4.45		7.59	5.29	--------
2004	29.88	54.81	2.85		5.48	4.02	----------
2005	34.03	51.04	2.50		4.15	3.18	------
2006	33.62	536.0	40.40		29.31	36.56	-------
2007	26.25	162.0	4.81		4.22	5.06	---------
2008	------	--------	--------		------	-------	----