#### TITLE PAGE

## **INEQUALITY AND TAXATION IN NIGERIA(1980-2010)**

#### A PROJECT

 $\mathbf{BY}$ 

### AKPOTIVE RACEHAL OMONANA

EC/2009/690

DEPARTMENT OF ECONOMICS FACULTY OF MANAGEMENT AND SOCIAL SCIENCES.

IN PARTIAL FULFILMENT OF THE REQUIRMENTS FOR THE AWARD OF BACHELOR OF SCIENCES(B.Sc.) IN ECONOMICS.

AUGUST 2013.

#### **APPROVAL PAGE**

This project work has carefully been read, supervised and approved as having satisfied the project conditions for the award of bachelor of science (B.Sc) Degree in the Department of Economics, Faculty of Management and Social Sciences Caritas University Amorji-Nike, Enugu.

Mr. Ojike R.O	Mr. P.C Onwudinjo(Esq)
Supervisor	Head of Department
Date	Date
Eternal examiner	Prof.C.C Umeh
Date	Dean of Faculty
	Date
Akpotive Racheal	
Student	
Date	

### **DEDICATION**

This project is dedicated to the Almighty, to God who supplied strength and wisdom to start and finish this project in good health.

#### **ACKNOWLEDGEMENT**

I wish to greatly acknowledge the infinite help and wisdom given to me by Almighty which resulted into the completion of this project.

Although, it is not possible to name all persons who supported and contributed in diverse means, encouraging me to the best of their effort towards the success of this project, I am grateful to them.

I do however want to show appreciation to Mr. Ojike R.O.my project supervisor; who helped greatly in the supervision of this work.

Great appreciation goes to my parents, Mr. and Mrs. J.R Akpotive for their constant encouragement and financial support; and all my siblings, for their love and care.

#### **ABSTRACT**

This research work evaluates the Impact of Taxation on Inequality in Nigeria from (1980-2010). From our finding, we found out that taxation does not have a statistical significant effect on inequality in Nigeria. Taxation is one of the most important and easy source of revenue to any government as the government possesses inherent power to impose taxes and levies. Inequality can be reduces in Nigeria if the government will take a special look at the rural areas than in the urban areas and help to bridge the gap between the have and the have not (rich and the poor). Finally, a tax reduce inequality if it lightens the tax burden on the poor and ensures a greater burden on the better – off.

# TABLE OF CONTENTS

Abstract	
Table of Contents	
CHAPTER ONE: INTRODUCTION	
1.1	Background of the Study
1.2	Statement of the Problem
1.3	Objective of the Study
1.4	Statement of Research Hypothesis
1.5	Scope and Limitation of Study
1.6	Significance of the Study
CHATTER TWO: LITERATURE REVIEW	
2.1	Theoretical Literature
2.2	Empirical Literature
2.3	Limitation of Previous Studies
2.4	Current Taxation Reforms in Nigerian
2.5	Challenges of the Draft National Tax Policy

Title page

Dedication

Approval page

Acknowledgement

## 2.2.4 Principles of Taxation

## **CHAPTER THREE: METHODOLOGY**

- 3.1 Analytical Framework
- 3.2 Model Specification
- 3.3 Methods of Evaluations
- 3.3.1 Economic Theoretical Test
- 3.3.2 Statistical Criteria (First Order Test)
- 3.3.3. F-ratio Test:
- 3.3.4 R2 and Adjusted R<sup>2</sup> Test (Coefficient of Determination):
- 3.3.5 Standard Error Test:
- 3.3.6 t-Statistic Test:
- 3.4 Econometric Criteria
- 3.4.1 Autocorrelation Test
- 3.4.2 Multicollinearity Test
- 3.4.3 Heteroscedasticity Test
- 3.4.4 Normality Test
- 3.4.5 Reset Test
- 3.4.6 Stationarity Test

### **CHAPTER FOUR**

- 4.1 Presentation of Regression Results
- 4.2 Evaluation of Results
- 4.2.1 Evaluation Based on Economic Criteria "LOG (CED)"
- 4.2.2 Evaluation Based on statistical criteria (first-order Tests)
- 4.2.3 Evaluation Based on econometrics criteria

### **CHAPTER FIVE**

- 5.1 Research Finding
- 5.2 Policy Recommendation
- 5.3 Conclusion

### **BIBLOGRAPHY**

### **APPENDIX**

#### **CHAPTER ONE**

#### INTRODUCTION

## 1.1 Background of the Study

Taxation is a form of compulsory levy imposed by government on individuals, corporate bodies, goods and services in order to finance its expenditure and create condition for the economic well being of the society. Taxation is a compulsory levy imposed on a subject or upon his property by the government to provide security, social amenities and create condition for the economic well being of the people (Appah and Oyandonghan, 2011). Anyanwu (1997) stated that tax are imposed to regulate the production of certain goods and services, protection of infant industries, control business and curb inflation, reduce income inequalities etc.

According to Anyanfo (1996), the principle of taxation means the appropriate criteria to be applied in the development and evaluation of the tax structure. Such principles are essentially on application of some concepts derived from welfare economists, in order to achieve the broader objectives

of social justice. The tax system of a country should be based on sound principle. Ihingan (2004), and Osiegbu et al., (2010) listed the principles of taxation as equality, certainty, convenience etc. Anyanfo (1996) convenience principle of taxation states that the time and manner should be convenience to the tax payer. Nevertheless, principle of taxation provides the rationale for pay-as-you earn (PAYE) system of tax payable system of tax collection certainty principle of taxation states that a tax which each individual is bound to pay ought to be certain, and not arbitrary (Bhartia, 2009).

Jhingan (2004) equity principles of taxation states that every tax payers should pay the taxing proportion to his income. The rich should pay more and at a higher rate than the other person whose income is less. However, these sagacious and magnanimous intention of the government are dedevited by a number of draw backs ranging from unfairness of tax payments to tax payers, arbitrary importation of taxes, show tax law development, inaccurate presentation of income figure for assessment, indirect taxation, poverty, illiteracy, poor vehicle as a tool for tax collection etc indeed the above short coming engender inequality taxation in Nigeria (HalimAli2010).

The term inequality according to Longman dictionary of contemporary English (2000), Third edition, is an unfair situation, in which some groups in

society have less money influence or opportunity than others. In the same view inequality means "the unfair difference between groups of people in society when some have more wealth, status, or opportunities than others (Oxford Advanced Learners Dictionary 2001) sixth edition inequality with respect to taxation is the unfairness and disparity resulting from the way and manner Nigerians and inhabitants from the way also individuals pay taxes. It is not out of place to say that taxes causing inequality in Nigeria is as old as the Nigerian tax system. In so far there was a time variance between when the North, West and the eastern pan began tax payment while the Northern and Western regions began payment of taxes before 1904 through the already defined way of leadership of the Emires and Obas respectively.

The eastern regions which believed in family head syndrome had no such constituted leaders and resultantly lagged behind for about 23 years later before taxation was planted in the area. But the bottom line is that while some Nigerians paid tax to them, others never paid, this increasing inequality level in Nigeria. On the same vain the evil of inequality taxation was still unleashed on those Nigerians and resident tax payers between 1904 and 1957 when taxes were collected at various times from individuals and companies without distinctions. The basic of assessment allowable deduction and tax

rates were the same. The period under review was be deviled by show tax law development, arbitrary imposition of taxes and multiplicity of tax liability and protests by tax payers were examples. They were actually engendered by inequality taxation.

Widening income inequality in Nigeria has triggered a debate over the extent to which taxes are to used as a means of curbing inequality. Generally taxes can cause inequality as well as being used to reduce inequality. According to Black et al., 1999 Taxation are considered as the dominant way of reducing inequality. Taxes are imposed for a variety of purpose, they can be used to correct distortion in the market, they can raise revenue for the government, taxes can also be used for redistribution of income, thus in this work we will concentrate on taxes as a tool for income distribution in the country. In Nigeria federal income tax is administered by the federal inland revenue service (FIRS). In Nigeria inequality which exist in arrange of dimension like mortality rate, poverty rate, life expectancy and so on has been on the increase. In fact, inequality in Nigeria is multifaceted and has manifested inform of inadequate shelter, lack of access to other basic needs of life, such as good food, water, good health etc. Argbokhan (1999) found that income inequality worsened after structural adjustment programme

(SAP) of 1986. Also a high level of inequality exist between Nigeria's rural and urban areas. This is because most communities depend on Agriculture while urban engage mostly in paid jobs.

The Nigerian government in a way to reduce income inequality has introduced policies like (PAP) poverty alleviation programme, NEEDs – National economic empowerment and development programme etc also taxation policies like PAYE (pay as you earn) and all forms of progressive tax system like inheritance tax, property tax etc. All these policies and programmers have not yet achieved its main objective. Using the head count index the study found that an increasing number of Nigerians were living or absolute poverty over the study periods: 38% in 1985, 43% in 1992, 47% in 1996, 35% and 37% in urban areas, and 41%, 49% and 51% in rural areas. The depth and security of poverty generally increased over the study period, but the trend was not uniform over geopolitical zones. During the 1990s the depth of poverty increased in the middle belt, Northeast and northwest while it declined in other areas. The increase was more pronounced in rural areas than in the urban areas.

#### 1.2 Statement of the Problem

A tax reduces inequality if it lightens the tax burden on the poor and ensures a greater burden on the better-off. The relationship between a country's income distribution and taxation is not far from consensus that is to a large extent; the method of income distribution in a country can enhance or reduce inequality. In Nigeria, inequality which exists in a range of dimension like mortality rate, poverty, life expectancy and so on has been on the increase. In fact, inequality in Nigeria is multifaceted and has manifested inform of outbreak of diseases such as Aids, measles, small pox, chicken pox and so on. Inequality has also manifested inform of inadequate shelter (poor home) lack of access to other basics needs of life, such as food, water etc.

The Nigerian government in a view to solve or reduce this inequality had adopted a lot of policies like SAP-structural adjustment programme of 1986, poverty alleviation programme (PAP), Needs-National Economic Improvement and development Strategy etc. Also some taxation policies that the government adopted include PAYE (pay as you Earn) property and inheritance taxes as well as other progressive tax systems. All these programmes and policies has not yet achieve its desired objective which is to curb inequality, maybe due to implementation problem thus leading to high rate of inequality.

The aim of this research work is as follows:

- To determine the nature of relationship between taxation and Inequality
- To test whether there is a causal relationship between inequality and Taxation in Nigeria.
- To determine the extent in which taxes affects inequality.

### 1.3 Objective of the Study

Our interest in this research work is to know the impact taxation has on inequality. The specific objective includes;

- 1) To ascertain the nature of relationship between taxes and inequality.
- 2) To determine the extent in which taxes can be used in curbing inequality.
- 3) To find out whether there is any causal relationship between taxes and inequality.

## 1.4 Statement of Research Hypothesis

For the purpose of answering the questions raised at the end of our statement of problem the following working hypothesis were employed.

H<sub>0</sub>: There is no casual relationship between taxes and inequality

HI: There is casual relationship between taxes and inequality.

H<sub>0</sub>: Taxes cannot be used in solving inequality problem

Hi: Taxes are used in solving inequality problem.

### 1.5 Scope and Limitation of Study

The scope of study is from 1980 to 2010. Basically, this study focuses on only inequality in taxation as a factor to the failure and non-actualization of the tax system in Nigeria.

What is more, the study fails to look at other factors hindering the progress and success of Nigeria tax system. Also, the study is limited to Nigeria and it also includes time and financial constraints.

### 1.6 Significance of the Study

The crucial role played by taxation towards inequality in our society today is indispensable. This study is significant because it is interested on the role taxation has played in creating a big gap between the have and the have not's (inequality) in the society. This study advocates for taxation prudence on the side of government so as to bring about adequate tax policy in the country.

This study also encourages flexible tax policy such that based on the condition of the economy the poor does not pay more than the rich in terms of tax. The result of this study would also assist policy makers and other researchers and students working on related fields to do more in-depth work and it would be significant in policy forecasting.

#### CHATTER TWO

#### LITERATURE REVIEW

#### 2.1 Theoretical Literature

Nigerian economy has experienced rapid economic growth, whereas the rate of poverty or inequality been on the increase. Various economists have tried to explain the nature of relationship between inequality and taxation. While some obtained negative relationship between inequality and taxes, others argue that the relationship could either be positive or negative. However the traditional school of thought has it that inequality and taxes are negatively related. This means that an increase in inequality can be caused by increase in indirect taxes. In contrast decrease in inequality can also be caused by country's adoption of direct tax system. In summary it could be deduced that indirect taxes increases inequality while direct taxes are regressive in nature. Meaning that for a country to reduce inequality, it must engage more in administration of direct taxes. Since it is often possible at least in theory to reduce absolute poverty by increasing direct taxes.

According to Bhartia (2009), a taxation theory may be derived on the assumption that, there need not be any relationship between tax paid and

benefits received from state activities. In this group, there are five theories namely;

- 1) Faculty theory or ability to pay
- 2) Benefit received theory or Quid Pro Quo Theory
- 3) Cost of service Theory
- 4) Socio-political theory
- 5) The expediency theory

### **Faculty Theory or Ability to Pay**

According to Anyanfo (1996), this theory states that one should be taxed according to the ability to pay. This is the most popular and the plausible theory of justice in taxation. The difficult task is to determine a person's ability to pay tax. It is simply an attempt to maximize an explicit value judgment about the distributive effects of taxes. Bharitia (2009) argue that a citizen is to pay taxes just because he or she can and his relative share in the total tax burden is to be determined by his relative paying capacity there are two approaches for this theory.

- 1) Subjective approach
- 2) Objective approach

- 1) **Subjective Approach** In the subjective aspect, the inconvenience, the pinch or the sacrifice bear by tax-payer is considered. There are three distinct views in this regard.
- a) The principle of Equal sacrifice According to J.S. Mill equality of taxation, as a maxim of politics, means equality of sacrifice. According to this approach, the money burden of taxation is to be so distributed to impose equal real burden on the individual tax-payers. This would mean proportional taxation.
- b) The principle of proportional sacrifice According to the principle of proportional sacrifice, the real burden on the individual tax payer is to be not equal but proportional either to their income or the economic welfare they derive. This would mean progressive taxation.
- c) The principle of minimum sacrifice The minimum sacrifice principle considers the body of tax-payer in the aggregate and not individually. According to this principle, the total real burden on the community should be as small as possible.
- **2) Objective Approach** Under objective approach, a man's faculty to pay may be measured according to:

- a) Consumption: Consumption, as a criterion of ability to pay, is not a sound criterion, because consumption or utilization of the services of the state by the poor is considered to be out of all proposition to their means, and, as such it cannot be taken as a practical taxation.
- b) Property: Property also cannot be a fair basis of taxation, for properties of the same size and description may not yield the same amount of income, and some persons having no property to show may have large incomes, whereas men of large property may be getting small incomes. Thus, to tax according to property will not be taxation according to ability.
- c) Income: Income, however remains the single best test of a man's ability to pay but even in the case of income, the tax will be in proportion to faculty.

## BENEFIT RECEIVED THEORY OR QUID PRO QUO THEORY

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

Most of the public expenditure is incurred for common or indivisible benefits. It is impossible to calculate how much benefit access to particular individuals. There are a few cases only where the benefit to one individual is ascertainable, eg old-age pensions. The benefit theory violates the basis principle of tax. A tax is paid for the general purposes of the state and not in return for a specific service. Moreover, it is commonly believed that the poor benefit more from the state activities than the rich. If that is so, then the poor has to contribute more than the rich, this would be absurd. However the idea of benefit stands out prominently in the case of fees, licences, special assessment and local rating.

## **Cost of Service Theory**

This theory is similar to the benefits received theory it emphasizes the semi-commercial relationship between the state and the citizens to a greater extent. In this theory, the state is being asked to give up basic protective and welfare functions. It is to scrupulously recover the cost of the services and therefore this theory implies a balanced budget policy.

## **Socio-Political Theory**

Also, a taxation theory may be based on a link between tax liability and state activities this reasoning justifies the imposition of taxes for financing

state activities and also providing a basis for apportioning the tax burden between members of the society. This reasoning justifies the imposition of taxes for financing state activities and also providing a basis for apportioning the tax burden between members of the society. This reasoning yield the benefit received theory and cost of service theory.

Socio-political theory of taxation states that social and political objectives should be the major factors in selecting taxes. The theory advocated that a tax system should be used to cure the ills of society as a whole.

#### **EXPEDIENCY THEORY**

This theory asserts that every tax proposal must pass the test of practicality. It must be the only consideration weighing with the authorities in choosing a tax proposal. Economic and social objectives of the state as also the effects of a tax system should be treated irrelevant (Bharita, 2009).

Some of things that can lead to inequality includes;

Pigou (1912) and Dalton (1920) proposed the Pigou-Dalton transfer principle. This stated that inequality increases when there is transfer of income from a poorer to a richer person (Atikinson, 1970). Most measures of inequality in literature satisfy this principle. Also, Dalton (1920) proposed the

population principle of income inequality measurement, which stated that inequality measures are invariant to replications, will not alter the level of inequality. The anonymity principle (symmetry), proposed that inequality measures are independent of any characteristic of individuals other than their income (Litchfield, 1999).

Discrimination and exclusion are increasingly being recognized as key determinants of inequalities. Research has shown that so-called "horizontal" inequalities (inequalities between groups defined according to gender, ethnicity, region, and so on), which typically reflect underlying discrimination, often make up a significant proportion of overall inequality (World Bank 2005: 40-43).

## 2.2 Empirical Literature

A number of studies in Nigeria show that inequality had worsen. Using the head count index, the study found that an increasing number of Nigerians were living in absolute poverty over the study periods: 38% in 1985, 43% in 1992 and 47% in 1996. Poverty is higher in rural areas than in urban areas. The corresponding numbers are 38%, 35% and 37% in urban areas, and 41%, 49% and 57% in rural areas. The gender distribution of poverty is consistent with the evidence from earlier studies that suggests that poverty is more

pronounced among male-headed households. It is also observed that male-headed households. It is also observed that male-headed household slipped deeper into poverty between 1985 and 1996, while female-headed households fared slightly better. It should be mentioned, however, that female headed households were only about 13.5% of the sample studied.

The regional distribution of poverty is profiles at two levels: at the levels of the individual states of the federation and at the level of geopolitical zones. Poverty tends to be lower in the southern zones than in the northern zones. Poverty incidence actually improved in the southern zones during the 1990s, but deteriorated in the north, particularly in rural areas. Even so, the incidences of poverty are not uniform within the zones. In the south, poverty is higher in Akwa Ibom, Delta and Edo states and in the north in Bauchi, Jigawa and Yobe. This variation underscores the need to pay attention to regional differences when designing policy interventions to alleviate poverty. The depth and severity of poverty generally increased over the study period, but the trend was not uniform over geo-political zones. During the 1990s the depth of poverty increased over the study period, but the trend was not uniform over geo-political zones, During the 1990s the

depth of poverty increased in the middle Belt, northeast and northwest while it declined in other areas. The increase more pronounced in rural areas.

In decomposing the various contributions to poverty in Nigeria, the study found that male headed households contribute over 80% to the three measures of poverty and female-headed households contribute 51.6% (keeping in mind the small size of the female sample noted above). The contribution to poverty tends to be higher in the north than in the south; while the contribution to poverty tends to decline with intensity of poverty in the south it tends to rise in the north. Both aspects of suggest that the north constitutes the bulk of the poverty problem in the country. The study also showed that the effect of growth on poverty was more pronounced in urban areas. An inference that could be drawn is that contrary to the impression that growth may have contributed to an improved poverty situation in 1985-1992, the growth over the period actually seemed to have worsened poverty, over 1992-1985, however the relatively lower growth may have contributed marginally to poverty reduction.

There are some other conditions to consider however, the former period coincided with the introduction and immediate aftermath of structural adjustment, when nominal expenditure grow from a much lower base

following the devaluation of the naira. Only a very small position of the population (cocoa and rubber farmers) benefited from increased income brought about by the devaluation. In the latter period, on the other hand, a nationwide upward review of salaries in 1992 raised the income level of a large section of the labour force, which could explain the some what lower incidence of poverty in that period.

Severally empirical studies have been conducted on the impact of taxes on income inequality. Anyanwu (1997), in a study of the effect of taxes on Nigerians GDP. Economic growth (1981-1996) reveald that companies income tax positively and significantly effects GDP just as do custom and excise duties. Enger and Skinner (1996) in there study of taxation in US economy there study shows that taxes and economic growth has modest effects, on the order of 0.2 to 0.3% points' differences in growth rates in response to a major tax reform. They stated that such small effects have a large cumulative impact on living standards.

Coming down to Africa specifically Nigeria, the mismanagement of taxes has cost the inequality level to increase in recent years. Terriba and Philips)\ (1971) estimated the Gini-coefficient to be about 0.47, Aboyede (1975 indicates the index to be about 0.58. Omorogiuwa 1982 calculated a

Gini coefficient of 0.39 and World Bank 2001 estimates a Gini coefficient of 0.515. Oyekala in a micro-survey of some households in Ibadan revealed Gini-coefficient to be 0.3716 while Adejare estimated 0.57; World Bank shows that in 1996/1997. Gini index for Nigeria was 0.506, 0.477 and 0.477 and 0.409 for Cameroon and Ghana respectively. A 2011 report by organization for economic co-operation and development (OECD) notes that over the 2 decades prior to the onset of the global financial crises, real disposable household incomes increased in average of 1.7% a year in it 34 member countries. However the gap between rich and poor widened in most nations the report findings include Across OECD countries, the number of the richest 10% of the population is nine time that of the poorest 10%.

Additionally with the exception of only France, Spain and Japan, wages of 10% best paid workers have risen relatively to those of the 10% least paid workers.

Much of Africa welfare and redistributive system is classified as generalized "insecurity regime" based on families, clans and partrimoral relations together with increased intervention by international organization (Gough and Wood 2004). The fiscal policy taxation is becoming more and more important in reducing poverty and inequality in many developing

countries in Africa including Nigeria. However, data on redistribution in Africa/Nigeria is very difficult to obtain. By contrast with the developed countries, developing countries level never taken the taxation system seriously as an instrument for redistribution, regarding it merely as a way of raising revenue (Chu, Davoodi and Gupta 2000). Although income tax is generally progressive, the magnitude of indirect tax reduces or neutralizes this progressively. Even if the tax revenue increase, it is unlikely that government will spend more in reducing inequality or poverty, since the poor will have little or no influence on any budget decision. Nonetheless, it is important that government have a judicious progressive expenditure policy. Countries in the developing world should thus give priority to a progressive expenditure policy in order to reduce inequality.

#### 2.3 Limitation of Previous Studies

The possibility of the existence of the co-integration between tax revenue and inequality to the best of knowledge was not examined in the previous studies. More so owing to the inherent problem of the nature of relationship in the time series data, rather previous studies were conducted without checking whether taxes and inequality have short run or long-run

relationship. The combinations of the above findings prompted us to carry out this research so as to fill the existing vacuum.

### 2.4 Current Taxation Reforms in Nigerian

In 2002, a study group (The SG) was inaugurated to review the entire tax system in Nigeria. The terms of reference included.

- i. Review of all aspects of the Nigerian tax system and recommend improvements therein.
- ii. Review the entire tax administration and recommend improvements in the structure for the whole country.
- iii. Consider measures to bring international developments in tax administration to bear in Nigeria. In 2004, a working group (The WG) was inaugurated to review the report and recommendations of SG. The WG agreed with the SG's recommendations for a national tax policy recommend the creation of an autonomous National customs and Revenue Authority to assimilate all tax administration powers and duties with funding from retained tax revenues. The WG also reviewed each SG proposed modification to existing tax laws and provided comments

thereon. They include, strengthening of tax administration, proposed prioritized strategies for implementing the proposed reform and passage of new tax bills. Subsequent to the report of the WG in 2004, the government has presented the following tax legislation to the National Assembly;

- a) The federal Inland Revenue Service Act to establish the agency as an autonomous body and guarantee its funding from a percentage of retained tax collections.
- b) Amendments to the personal income tax Act, companies income Tax Act and the VAT ACT,
- c) For the most part, the amendment Bills reflect the recommendations of the SG and WG. 7.

It is expected that the new tax legislation will be passed into law by 2006, however, today, 4 out of the 8 of tax Bills, namely Bill for an Act to establish the FIRS as an autonomous service, Bill for an ACT to amend the companies Income Tax Act, Bill for an Act to amend the petroleum profit Tax and Bill23 going to face because of the experience of past taxation laws. These challenges are as follows;

- i) Administrative Challenge: Experience has shown that the institutional capacity to administer tax effectively is woefully lacking in this country. Procedures, reinforced by third party audits, appear to ensure that taxes are paid and received albeit with potentially serious and costly internal lags. However, Nigeria lacks capacity to assess the reason ableness of the returns submitted by tax payers including cost and staffing, skills, pay scales, and other finding and computer and information technology (IT) infrastructure. Meanwhile the current draft has not put in place an administrative strategy.
- ii) Lack of Equality: Tax in Nigeria especially personal income tax (PIT) always fails in Nigeria for lack of equitability. Even the present draft bills as passed by the National Assembly could not provide solution to this challenge. In spite of the fact that the self-employed exit number paid workers and that they earn as much as four times that of the formal sector employees whose salaries are deducted at source.
- economy of revenue allocation in Nigeria even with the current draft document does not prioritize tax efforts. It is instead, anchored on such for an Act to amend the National Automotive council Act have been passed by the

National Assembly and signed into laws by president Olusegun Obasanjo on April 16, 2007, while the remaining four Tax Bills are still at the fiscal debate stage of the parliament.

However, with the passage of the national Tax policy Bill in 2008, it is assumed that all tax related issues might have been taken care of by the Act.

### 2.5 Challenges of the Draft National Tax Policy

Although examination of the current national taxation policy reveal that it is comprehensive when compared with earlier attempts at designing a policy. However there are some perceived challenges that this draft is likely going to face because of the experience of past taxation laws. These challenges are as follows;

i) Administrative Challenge: Experience has shown that the institutional capacity to administer tax effectively is woefully lacking in this country. Procedures, reinforced by third party audits, appear to ensure that taxes are paid and received albeit with potentially serious and costly internal lags. However, Nigeria lacks capacity to assess the reason ableness of the returns submitted by tax payers including cost and staffing, skills, pay scales, and other finding and computer and information technology (IT) infrastructure. Meanwhile the current draft has not put in place an administrative strategy.

- ii) Lack of Equality: Tax in Nigeria especially personal income tax (PIT) always fails in Nigeria for lack of equitability. Even the present draft bills as passed by the National Assembly could not provide solution to this challenge. In spite of the fact that the self-employed exit number paid workers and that they earn as much as four times that of the formal sector employees whose salaries are deducted at source.
- economy of revenue allocation in Nigeria even with the current draft document does not prioritize tax efforts. It is instead, anchored on such factors as equality of states '(40 percent), population (30 percent), landrnass and terrain (10 percent). The approach, discourages a

Proactive revenue drive, particularly for internally generated revenue, makes all government tiers heavily reliant on unstable oil revenues which are affected by the volatility of international oil markets. Aside from the national syndrome of cake sharing, the instability and volatility of oil revenue should have created an opportunity for improved tax efforts within the provisions on taxation ratified in the 1999 constitution. Although some state government have initiated measures to enhances their tax generation attempts, the outcome has not reflected any level of serious effort.

Compliance Challenges: A recurring problem with PIT Nigeria is the iv) non-compliance of employers to register their employees and to remit such taxes to relevant authorities. To address this, in 2002 the government amended the 1993 PIT Act to make non-compliant workers or employers liable to penalties up to M25,000 as well as liable for the payment of all tax arrears. Employers failing to keep proper records would also face a penalty of N5,000. A fine this small tends to encourage tax evasion since the penalty for being caught is lower than the cost for non-compliance. The issues of unmerited funds from the PA YE system and withholding taxes particularly among government ministries and agencies as well as tax adherence by all three levels of government to the approved list for (tax) collection, as stipulated by the 1998 taxes and levies Act 21, have over the past five years attracted the attention of Joint Tax Board (JTB). This same issue of compliance was not properly addressed in the draft national tax policy. v) Challenge of Multiplicity of Taxes: There is the challenge of multiplicity of taxes which is a major problem with the draft document. Already Nigeria is known for having problems with compliance. How does the federal ministry of finance grapple with this problem because it is not contained in the strategy document. It must be noted that a good tax policy set out the

fundamental objectives of a country's tax system and prescribe some guidelines that would shape government policy actions.

### 2.2.4 Principles of Taxation

In order to achieve the broader objectives of social justice, the tax system of a country should be based on sound principles. Jhingan (2004), Bhartia (2009) and Osiegbu et al (2010) listed. The principles of taxation as;

- a) Equality principle of taxation
- b) Certainty principle of Taxation
- c) Convenience principle of taxation
- d) Economy principle of taxation
- e) Simplicity principle of taxation
- f) Productivity principle of taxation
- g) Flexibility principle of taxation h) diversity principle of taxation

Equality Principle - States that every tax payer should pay the tax in proportion to his income. The rich should pay more and at a higher rate than the other person whose income is less (Jhinagan 2004). Anyanfo (1996) states that it is only when a tax based on the tax payer's ability to pay can it

be considered equitable or just. Sometimes this principle is interpreted to imply proportional taxation.

Certainty principle - states that a tax which each individual is bound to pay ought to be certain and not arbitrary. The time of payment, the manner of payment, the quantity to be paid ought to all be clear and plain to the contributor and every other person (Bhartia, 2009).

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

Economy principle - states that every tax should be economical for the state to collect and tax payer to pay (Appah 2004; Jhingan 2004: Bharita, 2009). Anyanfo (1996) argues that this principle implies that taxes should not be imposed if their collection exceeds benefits.

Productivity Principle - states that a tax should be productive in the sense that it should bring large revenue which should be adequate for the government. This is the major reason why governments in all parts of the globe continuously employ tax reforms.

Simplicity principle - states that the tax should be plain. Simple and intelligible to common taxpayer. Anyanfo (1996) argue that there should be no hidden agenda in the tax law.

Flexibility principle - implies that there should be no rigidity in taxation. Diversity in tax should be flexible. System of taxation should be flexible responding to environmental changes.

Diversity principle - states that there should be different variety of taxes. Bharita (2009) argue that it is risky for state to depend upon too few source of public revenue.

#### **CHAPTER THREE**

#### METHODOLOGY

## 3.1 Analytical Framework

For us to ascertain if tax policy on income inequality in Nigeria, the ordinary least square (OLS) technique of estimates will be used in estimating the model. The desirability properties of OLS (efficiency consistency and unbiasedness) that is it's blue properties (best linear unbiased Estimator) and other assumption made us to employ the technique. The OLS method of estimation will be used to ascertain the influence of taxes on inequality.

## 3.2 Model Specification

In this research work, inequality will be modeled using Direct and Indirect taxes, life expectancy rate, inflation rate, and total government expenditure on education.

Mathematical form of the model

$$INQ = F(DT, IT, LFER, INF, TGEE) \dots (1)$$

The model states that inequality is a function of direct tax, indirect tax, life expectancy rate, inflation rate, total governments expenditure on education.

To make equation (1) amendable for empirical verification it will be transformed to econometric form.

$$INQ = B_0 + B_1 (DT) + B_2 (IT) + B_3 (LFER) + B_4 (INF) + B_5 (TGEE) + U_1$$
 (2)

Where

INQ = Inequality is proxy with income gap DT = Company income tax

IT = Custom and excise duties

LFER = Life expectancy rate

INF = Inflation rate

TGEE = Total government expenditure on education

 $B_0$  = Intercept term

 $B_I$  = Coefficient of the variables (I = 1-5)

Some variables will be measured in elasticity while some in units.

Equation 2 will also be transformed to log form

$$Log (INQ) = Bo + B, Log (DT) + B_2 Log (IT) + B_3 (LFER) + B_4 (INF) + B_5$$

$$Log (TGEE)$$

# **Causality Models**

To explain the causal relationship between the dependent and some independent variables, we will use causality model to explain the relationship between

inequality and taxation in line with the objectives, we will specify the linear equation as;

$$INQ=B_0+B_1DT+U_1$$

The DT equation

DT= 
$$\alpha_0$$
+  $\alpha_1$  INQ+U<sub>2</sub>

The granger test will involve estimating the following pair of regressions;

INQt 
$$\Lambda$$
  $\Lambda$ 

$$= \sum_{1=1}^{\infty} a_1 DTt - 1 + \sum_{j=1}^{\infty} \beta_j INQ + -J + U_{jt}$$

DTt 
$$\Lambda$$
  $\Lambda$ 

$$= \sum_{j=1}^{\infty} \lambda_{1} DT_{t-1} + \sum_{j=1}^{\infty} \delta_{j} INQ_{t_{j}} + J + U_{2t}$$

The second causality test is stated thus;

The INQ Equation

$$INQ=B_0+B_1IT+U_3t$$

# The IT Equation

IT=
$$\alpha_0$$
+  $\alpha_1$  INQ+ $U_4$ t

Such that the granger test will involve estimating the following pair of regression;

INQ t 
$$\Lambda$$
  $\Lambda$ 

$$= \sum_{1=1}^{\infty} \pi_{1} 1T_{t-1} + \sum_{j=1}^{\infty} C_{j} iNQ_{t-j} + U_{3t}$$

$$IT_{t} \qquad \qquad \Lambda \qquad \qquad \Lambda$$

$$= \sum_{j=1}^{\infty} \lambda IT_{t-1} + \sum_{j=1}^{\infty} \delta j INQ_{t-j} + U_{4t}$$

$$1=1 \qquad \qquad j=1$$

Where it is assumed that the disturbance terms  $U_{1t}$ ,  $U_{2t}$ ,  $U_{4t}$  are uncorrelated.

There will be eight test expectations, they are;

- i) Undirectional causality from DT to INQ if  $\Sigma \alpha_1 \neq 0$  and  $\Sigma \delta j = 0$
- ii) Indirections causality from INQ to DT if  $\Sigma \alpha_1 \neq 0$  and  $\Sigma \delta j = 0$  are statically significant in both regression
- iii)  $B_1$  directional causality or feedback if  $\Sigma \alpha_1 \neq 0$ . In this case, the sets of DT and INQ coefficients are statistically significant in both regressions.

- iv) Independence if lot] = 0 and I5j = 0. In this case, the set DT and INQ coefficient are not statistically significant in both regressions. In the second case, that is the case of testing causality between IT and INQ, we also have if expectations similar to the above expectations they are;
- i) Unidirectional Causality from IT to INQ, if  $\Sigma \alpha_1 \neq 0$  and  $\Sigma \delta j = 0$
- ii) Unidirectional causality from INQ to IT, If  $\Sigma \alpha_1 \neq 0$  and  $\Sigma \delta j = 0$
- iii) Pi directional causality, IF  $\Sigma \pi_1 \neq 0$  and  $\Sigma \delta j = 0$  that is, case whereby the two coefficient are statistically significant in both regressions.
- iv) Independence, if IF  $\Sigma \pi_1 \neq 0$  and  $\Sigma \delta j = 0$ , that is both coefficient are not Statistically significant in regression.

#### 3.3 Methods of Evaluations

Evaluation methods consists of the method that will be used in deciding whether the estimates obtained are theoretically and statistically significant for the purpose of this study, we shall adapt the following method of evaluation for our estimates.

#### **3.3.1** Economic Theoretical Test

This criterion will be used to determined the consistency of our parameter using signs and magnitude defined by economic theory. As such if is our expectation that the parameter estimates of our study be consistent with these sign and magnitude. Theoretically the relationship between INQ and DT is expected to

be negative, while the relationship between INQ and IT is expected to be positive. Also total government expenditure on education, inflation are expected to have negative and positive relationship with inequality respectively while life expectancy rate have a negative relationship with inequality.

**Table 1: The A period expectation of the model** 

Variables	Expected Signs
DT	(-) Negative
IT	(+) Positive
TGEE	(-) Negative
LFEG	(-) Negative
INF	(+) Positive

## 3.3.2 Statistical Criteria (First Order Test)

The above test will be used to evaluate reliability of the parameter estimates.

According to Gujaradi (2004), "or test of significance is a procedure by which sample results are use to verify the truth or falsity of a null hypothesis.

#### 3.3.3. F-ratio Test:

F-test measures the overall significance of the regression results as against individual significance of the regression, and also the extent of relationship between the dependent and the independent variables.

# 3.3.4 R<sup>2</sup> and Adjusted R<sup>2</sup> Test (Coefficient of Determination):

R<sup>2</sup> measures how the variability in the independent variable is explained by the variability in the independent variables. Gujarati (2004) has noted that the adjusted R should be treated as another summary statistic.

#### 3.3.5 STANDARD ERROR TEST:

The estimates obtained from a given set of a sample observation are not free from sampling errors. It is therefore necessary to measure the size of the errors and subsequently determines the degree of confidence in the validity of the obtained estimates. Also the test will help us to know, our estimates are statistically significant or whether it is gotten from a population whose true parameter values are zero.

#### 3.3.6 t-Statistic Test:

This test is conducted in order to check for significance of the parameter estimates of the model.

#### 3.4 Econometric Criteria

The econometric tests will be performed on the regression results in other to evaluate it according to the classical assumptions of OLS. These test are discussed briefly below;

## 3.4.1 Autocorrelation Test

This test was performed to see whether the errors corresponding to different observations are uncorrelated. Essentially, this test ensures that assumption number four of the ordinary least square (Homoscedasticity) is not violated. The test shall make use of the conventional DW d statistic test.

# **3.4.2** Multicollinearity Test

This test will be conducted on the variables so as to measure the level of correlation between any two of the variables when all other variables are held constant. The test will rely on correlation matrix table.

# 3.4.3 Heteroscedasticity Test

This test was conducted to ascertain whether the error, Ut in the regression model have a common or constant variance. The white heteroscasticity test (with no cross terms) would be adopted.

## 3.4.4 Normality Test

The normality test using the Jarque-Bera (JB) Test of Normality test will be adopted, in order to ascertain if the error term corresponding to the different observation are normally distributed. (Gujarati, 2004: 148).

#### 3.4.5 Reset Test

This test is used to test if the model is wrongly specified. Specification biases are said to arise from inability of the researcher to formulate the model as precisely as possible because the underlying theory is weak or sometimes due to inability to obtain the model. Grujarati (2004) this test follows the f distribution, the formular is as follows;

$$F = \frac{(R_{new} - R_{old}) / number\ of\ new\ regressors}{(1 - R_{new}) l (n - number\ of\ parameters\ in\ the\ new\ model}$$

## 3.4.6 Stationarity Test

A test for Stationarity will be carried out to verify if the series are random walk or are stationary series at order zero. 1(0), The ADF method will be used in testing the Stationarity of our variables.

#### **CHAPTER FOUR**

The estimates from the regression carried out are presented and analyzed in this chapter. As stipulated in the previous chapter, the modeling procedure employed in this work is the ordinary least square (OLS) Rand the econometric software package used is E-view.

## Version 3.1

# **4.1** Presentation of Regression Results

The results of the estimated model are presented below:

**Table 1.0** 

Variables	Coefficients	Standard Error	t-statistic	Probability
Constant	25.37625	5.279602	4.806470	0.0001
LOG (CED)	0.077884	0.054393	1.431877	0.1651
LOG (CIT	0.009260	0.028619	0.323560	0.7491
LOG (TGEE)	0.863043	0.048546	17.77796	0.0000
LFEX	-0.629423	0.119319	-5.275132	0.0000
INF	-0.003287	0.003397	-0.967745	0.3428

 $R^2 = 0.960306$ 

Adjusted  $R^2 = 0.952037$ 

F- Statistic = 116.1265

DW= 1.729328

Where  $\sim R^2 = R^2$  Adjusted

 $R^2$  = Coefficient of multiple Determination

DW - Durbin Watson Statistic

The parameters estimate in table 1.0, measures the importance of our explanatory variables on the endogenous variable (income Gap). Standard errors and t-value will be used for the statistical significance of the parameters estimated. The R<sup>2</sup> tells us the percentage of variations in our income Gap that are explained by our independent variables. It also shows the overall "goodness of fit" of our regression result. The F-statistic is the variance to measure the overall impact of explanatory variables on the endogenous variable. DW - statistic will be used to detect the presence or absence of first-order serial correlation in our model.

Table 1.1 Expected and obtained signs of our parameters estimated

Variable	Expected	Obtained	Conclusion
LOG (CED)	NEGATIVE	POSITIVE	NOT CONFORM
LOG (CIT)	POSITIVE	POSITIVE	CONFORM
LOG (TGEE)	NEGATIVE	POSITIVE	NOT CONFORM
LFEX	NEGATIVE	NEGATIVE	CONFORM
INF	POSITIVE	NEGATIVE	NOT CONFORM

#### 4.2.1 Evaluation Based on Economic Criteria

# "LOG (CED) "

The coefficient of the Log of CED is 0.077884 which is positive. The a'priori sign does not agree with the economic theory.

## "LOG (CIT)"

The coefficient of the log of CIT positive which depicts that as custom and income tax increase, income Gap also increases.

# "LOG (TGEE)"

The coefficient of the Log of Total government expenditure on education is positive which also depicts a positive relationship with the dependent variable (income Gap).

#### "LFER"

The coefficient of Life expectancy rate is negative, which depicts a negative relationship with the dependent variable. It means that as LFER is increasing the income Gap is reducing.

"INF"

The coefficient of the level of in relation rate is -0.003287. The a priori sign does not agree with economic theory. It means that as inflation rate rises, invariably income Gap rises with that same proportion.

## **4.2.2** Evaluation Based on statistical criteria (first-order Tests)

# The coefficient of Multiple Determination (R<sup>2</sup>)

The  $R^2$  is 0.960306 and  $R^2$  (adjusted for loss in degree at freedom) is 0.952037. This means that the independent variables explain variations in income Gap to the tune of 96%. That is 96% of the variations in the dependent variables is explained by the explanatory variables in the model.

The hypothesis to be verified here is

 $H_0$ :  $R^2 = 0$  (the  $R^2$  is statistically insignificant)

H1:  $R^2 \pm 0$  (the  $R^2$  is statistically significant)

The test statistic for the critical R<sup>2</sup> is given as;

$$R^2 = \frac{(k-1)F}{(k-1) + (n-k)}$$

Where F is the critical F is the critical F value at a level of significance. K is the number of parameters, n is the number of observations.

**Decision Rule:** Reject HO it observed that  $R^2$  is greater than the critical  $R^2$ . Otherwise do not reject HO from the regression result K = 6; n = 3.1

$$R^2 = \frac{6-1}{6-1+(41-6)}$$

**Conclusion:** Since observed R = 0.960306 is greater than the critical  $R^2$ =0.402, we therefore reject H0 and conclude that the coefficient of determination ( $R^2$ ) is statistically significant and a true goodness of fit for the model.

## **T-Test**

This is an alternative test to standard error test. It was developed jointly by Newman and pea-son. The critical value is obtained from the standard t-distribution table at  $\alpha/2$  level of significance and (n-k) degrees of freedom to evaluate the working hypothesis.

#### **Decision Rule:**

Reject  $H_0$  if/tcal/>t $\alpha$ /2 (n-k) d.f. Otherwise do not reject at a = 0.05,

 $n = t \ 0.025 \ (35) = 2.042$ . The hypothesis to be verified is  $H_0$ :  $\alpha_1 = 0$  (the estimated parameter is statistically insignificant).

 $H_1$ :  $\alpha_{1\neq} 0$  (the estimated parameter is statistically significant. The test statistics to give as:

$$T = \frac{\alpha}{\text{Se}(\alpha)}$$

The calculated t-values are presented below on the result obtained from the regression of the model.

**Table 1.2** 

Variable	t-statistic	Critical	Decision	Conclusion
LOG (CED)	1.431877	2.042	/t/ <t1*: do="" ho<="" not="" reject="" td=""><td>Statistically insignificant</td></t1*:>	Statistically insignificant
LOG (CIT)	0.323560	2.042	/t/ <t1*: do="" ho<="" not="" reject="" td=""><td>Statistically insignificant</td></t1*:>	Statistically insignificant
LOG (TGEE)	17.77796	2.042	/t/ <t1*: ho<="" reject="" td=""><td>Statistically significant</td></t1*:>	Statistically significant
LFEX	-5.275132	2.042	/t/ <t1*: ho<="" reject="" td=""><td>Statistically significant</td></t1*:>	Statistically significant
INF	-0.967745	2.042	/t/ <t1*: do="" ho<="" not="" reject="" td=""><td>Statistically insignificant</td></t1*:>	Statistically insignificant

From the result displayed in table 1.2 above, we conclude that all the parameter estimates are statistically significant at 5% level of significance excepted, CIT and INF, which are statistically insignificant at 5% level of significance.

# **F-Test**

F-test analysis shall be carried out under the following hypothesis:

 $H_0$ :  $\alpha_1=\alpha_2=\alpha_3=\alpha=\alpha_5=\alpha_6=0$  (all slope coefficient are simultaneously zero).

HI:  $\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \alpha_4 \neq \alpha_5 \neq 0$  (slope coefficients are not simultaneously zero).

**Decision Rule**: Reject  $H_0$ : if  $f_{cal} > ft_{ab}$ 

Accept H<sub>0</sub>, if otherwise, under 5% level of significance.

$$F = \frac{ESS/(k-n)}{RSS(n-k)} \approx F\alpha (k-1) (n-k) d.f$$

The critical value is obtained from the F-distribution table at a level of significance and (K-l, n-k) degrees of freedom, from the regression result.

F - statistics = 116.1265

$$F_{tab} = F0.05 = 2.52$$

Conclusion: Since  $f_{cal}$  statistics > critical  $f_{tab}$  we therefore reject  $H_0$  and conclude that the model has a magnificent impact on the dependent variable i.e. It is highly statistically significant.

## 4.2.3 Evaluation Based on econometrics criteria

# (Second-Order Tests)

# 1) Normality

The purpose of the normality test is to determine whether or not our residual is in line with the normality assumption that  $N \sim NID (0, \delta^2)$  where NID stands for Normally and independently distributed. The Jacquo-Bera (JB) is adopted the best is carried out under the following hypothesis:

 $H_o$ : US = 0 (Normally Distributed)

 $H_1$ : US  $\neq 0$  (Not Normally Distributed)

The JB statistic asymptotically follows the chi-square distribution with two (2) degrees of freedom.

**Decision Rule:** Reject  $H_0$ : If JB cal > JB 0.05 (2.d.f) ie JB tab.

Accept H<sub>0</sub> if otherwise

JB calculated = 0.138509

JB tabulated-5.99147

Since JB cal >JB tab at jb level of significance, we accept  $H_0$ , hence the error terms are normally distributed.

# 2) TEST FOR MULTICOLLINEARITY (CORRELATION MATRIX

	CED	CIT	TGEE	LFEX	INF
CED	1.000000	-0.095205	-0.314627	-0.374374	0.380176
CIT	-0.095205	1.000000	0.725576	0.632175	-0.245599
TGEE	-0.314627	0.725576	1.000000	0.977055	-0.400824
LFEX	-0.374374	0.632175	0.977055	1.000000	-0.400824
INF	0.380176	-0.24559	-0.400824	-0.466733	1.000000

CED & CIT	0.095205	NM
CIT & TGEE	0.725576	NM
TGEE & LFEX	0.977055	M
LFEX & INF	-0.400824	NM

Note: NM stands for No. multicollineaity among the variables while M means multicollinearity.

#### 3) TEST FOR HETEROSCEDASTICTTY

The presence of heteroscedasticity depicts that the error of the various terms are non constant. We shall adopt the white's general heteroscedasticity test. This test follows a chi-square distribution with degrees of freedom equal to the number of repressers (excluding the constant term) in the auxiliary regression. This is denoted by N x R in  $X_2$  d.f, where R is from auxiliary regression,

This is done under the following hypothesis:

HO: 
$$\alpha_1 = \alpha_2 = \dots \alpha_6 = 0$$
 (homoscedastic)

$$H_1$$
:  $\alpha \neq \alpha_2 \neq \dots \qquad \alpha_6 \neq 0$  (heteroscedastic).

$$X^2$$
 cal =  $n.R^2$ 

d.f= K - constant in Auxiliary regression

**<u>Decision Rule:</u>** Reject HO if the  $X^2$ cal  $> X^2$ tab at 5% level of significance and accept HO if otherwise.

$$X^2$$
cal = 9.023460

$$X^2$$
tab = 28.8693

Conclusion: since 9.023460<28.8693, we accept H0.therefore, there is no heteroscedasticity i.e. the error term have a constant variable

## 4) TEST FOR SPECIFICATION ERROR

The Ramsey's Reset test will be adopted for this purpose. The test follows the F-distribution and it is conducted to ensure that the model is correctly specified.

# **Hypothesis**

 $H_0$ : U=0 (the model is well specified)  $H_0$ :  $U\ 2\ 0$  (the model is not well specified) at 5%

**Decision Rule:** Reject HO: If  $f_{cal}^{>} f_{tab}$  accept  $H_0$  if otherwise. -

$$F_{cal} = 3.171015$$

$$F_{tab} = 2.53$$

#### **Conclusion:**

Since 3.171015 > 2.53, we accept the null hypothesis that the model is correctly specified.

# 5) Test for Autocorrelation

One of the assumptions of OLS regression model is that errors are independent. In the context of time series analysis, this means that an error  $(u_t)$  is not correlated with one or more of previous errors  $(u_{t}$ -i)

The Durbin –Watson (d) test compares the empirical (d\*) value, calculated from the regression residuals with dL and du in D-W tables to their transforms (4-dL) and (4-du).

## Decision rule

- i) If d\* value<dL we reject the null hypothesis of no autocorrelation and accept that there is positive autocorrelation of first order.
- ii) If d\*>(4-dL)we reject the null hypothesis and accept that there is negative autocorrelation of first order.
- iii) If du<d\*<(4-du)we accept the null hypothesis of no autocorrelation
- iv) If  $dL < d^* < du$  or if  $(4-du) < d^* < (4-dL)$  the test is inconclusive.

From our regression result the

$$d*=1.73$$
 4-dL=2.93

du=1.833

 $dL(1.071) < d^*(1.73) < du(1.833)$  We conclude that the test is inconclusive.

#### CHAPTER FIVE

# 5.1 Research Finding

From the research conducted, we were able to find out that taxation in Nigeria does have a statistical significant effect on inequality in the country. This can be attributed to the system of taxation in the country whereby the percentage taxed to the rich ones in the country does not go in line with the amount of income they receive. Also, this can be as a result of tax avoidance and tax evasion by the rich ones in the country thereby making it impossible for taxation to breach the inequality gap in the country.

Also, from the result, the total government expenditure on education has a positive relationship with inequality in the country ie. An increase in total government expenditure on education leads to an increase in inequality in the country. This situation can be as a result of conducting standard schools with adequate facilities in the rich urban areas of the country by the government, compared to the local and outdated community schools in the

rural and poor areas. This very pattern of expenditure on education by the government leads to an increase in inequality in the country.

# 5.2 Policy Recommendation

Based on the findings of the study, the following recommendations are suggested by the research to the government. The government should;

- 1) The government should make sure that the percentage taxed on the rich ones in the country goes with the income they received.
- 2) The government should make sure that the tax avoidances and tax evasion are caught and punished.
- 3) The government should make sure that a well constructed standard schools are built in the rural areas.
- 4) The government should make sure that the old schools in the rural areas are reconstructed and equipped for the students.
- 5) The government should improve financial system or operation and allocation of government revenue and scarce resources for an optimal yielding in mostly rural areas.
- 6) Government in all their actions should portray very high level of transparency.

7) The Nigerian economy should provide avenues for checking misallocation and misappropriation of fund and punish the offender severely.

## 5.3 Conclusion

This study attempts to examine the impact of taxation on inequality in Nigeria from (1980-2010). The work is in no way exhaustive but we have done what is within our ability to examine the topic or the work. We found out that taxation does not increase inequality in the country. Taxation is necessary for the economic and for the development of the state. It is true that the level of inequality has been increasing year to year but there are certain factors that lead to the increase.

Finally the research listed many ways to which the government can reduce inequality in the country and if this solutions are used it will help to bridge the gap between the rich and the poor in the society.

#### **BIBLOGRAPHY**

#### **TEXTBOOKS**

- Anyanwu, J. C. (1997). Nigerian Public Finance. Onitsha: Manke Publishers.
- Appah, E. (2004). *Principles and Practice of Nigeria Taxation*. Port Harcourt: Ezeuin Mints Printers.
- Bhartia, H. L. (2009). *Public Finance*, (14<sup>th</sup> Edition). New Delhi: Vikas Publishing House PV.
- Jhingan, M. L. (2004). *Money Banking International Trade and Public Finance*. New Delhi, India: Vrinda Publications.
- Ktabe, B. D., & Nwikpasi, N. N. (2009). *Selected Aspects of Nigeria Taxation*. Port Harcourt: Mgba Commercial Enterprises.
- Musgrave, R. A., & Musgrave, P. B. (2004). *Public Finance in Theory and Practice*. New Deihi, India: McGraw Hill Publishers.
- Nwezeaku, N. C. (2005). *Principles and Practice: Taxation in Nigeria*. Owerri: Spring Field Publisher.

#### **JOURNALS**

- Ahluwalia, M. (1976). *Journal of Development Economics*. Inequality Poverty and Development. Vol. 6, pgs. 307-342.
- Appah, E., & Oyandonghan, J. K. (2011). *Bus. Admin. Management*. The Challenges of Tax Mobilization and Management in the Nigerian Economy. Vol. 6, pgs. 128-136.
- Atkinson, Anthony, B., & Andrea, B. D. (2001). *Journal of Economic Literature*. Promises and Pitfalls in the use of Secondary Data-sets. Income Inequality in OECD Countries. *Vol.* 39 Pgs. 771-799.
- Central Bank of Nigeria. (2010). *Statistical Bulletin*. Abuja: Central Bank of Nigeria.
- Deininger, K., & Square, L. (1996). *World Bank Economic Review*. A New Data Set Measuring Income Inequality. Vol.10, Pg. 565.
- Engen, E., & Skinner, J. (1996). *Tax Journal*. Taxation and Economics Growth Nail. Vol.4, Pgs. 617-642.
- Kakwani, N. (1980). An International Comparison Journal of Development Economic. Welfare Measures. Vol. 8, Pgs. 21 -45.
- Musgrave, R. A., & Thin, T. (1948). Income Tax Progression. Vol. 19, Pg. 574.
- Tosun, M. S., & Abizadeh, S. (2005). An Analysis of Tax Change. *Economic Growth and Tax Components*. Vol. 6, Pg. 48.