

Chapter One

Introduction

1.1 Background to the Study

Poverty has generally been seen as a threat and challenge to humanity in all ramifications. Different scholars considered poverty a menace that is ravaging most of the developing economies across the globe being a challenge to the well-being of mankind as well¹. It has remained complex, multidimensional and dynamic with materialization in the economic, social, political, environmental and every sphere of human existence². Poverty is so much calamitous to the extent that it jeopardizes the present and future of every lives and society faced with it. According to the World Bank, most people in the world live in poverty; about 85% of the world live on less than \$30 per day, about two-third survive on less than \$10 per day, while about every tenth person lives on less than \$1.90 per day. Thus, no country or continent can be said to be totally free of poverty, but the rate and level differs³. For example, in Africa, about 383 million of the entire population live below poverty level, followed by Asia continent with about 327 million, then South America 19 million, North America 13 million, 2.5 million in Oceania and 0.7 million in Europe⁴. This revealed that poverty is more prominent in Sub-Sahara Africa and Asia countries.

Global poverty is one of the very worst challenges that the world is facing today. In that the poorest in the world are often hungry, suffer much poorer health, regularly have no light at night and have little or no access to education. Therefore, to make any progress against poverty is one of the most urgent global goals based on the World Bank's recent research. The high rate of poverty across the globe especially in Sub-Sahara Africa and Asia countries is of great concern to United Nation and the World Bank and frantic efforts are being made to reduce it¹. In year 2000, the United Nation formulated the Millennium Development Goals (MDGs) with the first goal to eradicate extreme poverty across the globe by 2015. Unfortunately, this goal was not achieved, nonetheless, the commitment to reduce poverty only spurred the UN to formulate another policy in September 2015 called the - Sustainable Development Goal (SDG) with one of its major goals is to eradicate extreme poverty by 2030⁵. More so, the twin goals of the World Bank which is to reduce extreme global poverty and boost shared prosperity in every country is in motion as different development strategies were being formulated, one of which is the Green, Resilient and Inclusive Development (GRID). Although faced with a major setback due to the COVID-19 pandemic, comprehensive and inter-related strategies were being sought and developed to achieve the World Bank's twin-goals. A researcher in an attempt to identify people under poverty came up with what was known as a poverty line. According to him, poverty line serves as the minimum standard of living expected of people at a giving time and anyone living

below it is considered poor¹. The minimum standard of living is \$1.90 a-day and anyone living below it is considered poor with respect to the World Bank standard.

Apart from the foregoing, macroeconomic policies were intended to achieve full employment level in an economy. In Nigeria, Fiscal and Monetary policies are forefront macroeconomic policies owing to the increased public needs of the increasing population as well as the need to stabilize and grow the economy. Fiscal policy functions as an economy's "shock absorber" in particular areas of economic growth and development. Over the years, Nigeria has adopted expansionary fiscal policy measures with expectations to increase consumption as well as public and private sector investment leading to creation of more job⁶. A study stated that the Nigerian government has dealt with the problem of unemployment using fiscal policy tools- government collected tax and expenditure over time as unemployment is an important variable that translates and overwhelms poverty. In essence, the adoption of fiscal policy in any economy is to drive the economy towards a desired goal⁷. Government spending is very critical to reducing poverty, especially when it is made on projects that are pro-poor like, education, health and so forth, these are sometimes referred to as public goods because allowing market forces to allocate them will leave the poor unimportant⁸. The Kenyan government, in an attempt to raise more revenue to match up her spending, makes amendments to the tax laws from time to time on the basis that an optimal tax design seeks to maximize social welfare⁹.

The twin-policy (Monetary policy) focuses on stabilization of macro variables such as, unemployment and inflation rates. The importance of monetary policy in poverty reduction cannot be over emphasized because an increase in money supply and decrease in interest rate could reduce poverty rate. More so, an expansionary monetary policy targeted towards the productive sectors of the economy stimulates investment, which leads to increase output, create more employment, more income, hence poverty reduction¹⁰. Monetary policy has a critical function to advance inclusive and sustainable development, but is still obligated to restrictive inflation targeting¹¹. More so, the supreme objective of monetary policy is to boost a sound economic performance and high living standards of the citizens. This gives citizens a confidence in the currency not only as a medium of exchange but as a store of value and unit of account that would encourage sound economic and financial decisions. Thus, depending on the monetary policy measures put in place, the well-being of individuals can be greatly impacted. For instance, an expansionary monetary policy reduces the cost of credit thereby, increasing investments¹². Macroeconomic policies stand as a key dimension to well-being and human development; because employment is the main means through which economic growth translate in poverty reduction¹³. One of the macroeconomic goals of any government is to achieve and sustain economic growth as a means of raising living standards of the people. Therefore, improvement in well-being requires policies that will lead to reduction in poverty, create employment and reduce

inequality¹⁴. The channel to pacifying the needs of the citizens by governments is to embark on expenditure through the allocation of funds to various sectors of the economy¹⁵.

An effective state is such that mobilizes macroeconomic policies to improve infrastructure, services, public goods that would improve human capital and general well-being of the society.

Thus, this study considers the adoption of fiscal and monetary policies to alleviate poverty in Nigeria. Fiscal policy, on gaining substantial eminence during the late 1930s/early 1940s after the great depression, was a useful tool for the governments to steer the economy in the desired direction. This policy became prominent in developing nations in the late 1980s, due to the fall in the international price of oil. Fiscal policy is concerned with how the governments generate revenue via taxation and other means and deciding on the level and pattern of expenditure for the purpose of influencing, stabilizing economic activities. It is a widely familiar policy tool effective for enhancing growth, redistributing income and reducing poverty. The revenue base of the government is a crucial determining factor of government expenditure. Economies with high revenue actualization from taxes, exports, and so on, may pursue high government expenditure pattern compared to economies with small revenue base¹⁵.

Nigeria is a large country, with a population of over 180 million which makes it the most populated country in Africa, equally has about 50% of its population living in extreme poverty, this is indeed a reflection of the highest poverty level globally. As one of the leading oil

producing countries in the world, billions of dollars is made annually, yet the majority of the populace lives in poverty. The critical state of poverty in Nigeria has led the World Bank in 1996 to described Nigeria as a paradox being a nation of riches and poverty magnificent, wealth in the hands of few and abject poverty at the doorsteps of many¹⁶. Poverty in Nigeria differs with the pattern in many other countries. Given the economic growth recorded, poverty remains on the increase, the North-West and North –East geopolitical zones leading in the poverty indices. In 2018, Nigeria overtook India as the world headquarters of poverty¹. Also, a new World Bank report says that sluggish growth, low human capital, labour market weaknesses, and exposure to shocks are holding Nigeria’s poverty reduction back as an average Nigerian is a poor man. Worried by the continued rise in poverty level, successive governments in Nigeria have not relented in developing one policy or the other in order to quiet this social discomfort. Arising from the above, government intervention began to gain more popularity in the management of the Nigerian economy, Over the years, the government has embarked on various macroeconomic policies to steady the economy, however, these policies and programs have largely failed to overcome the problem of poverty in Nigeria due to several factors. More so, the impact of the COVID-19 pandemic has been calamitous on the economy with inflation on food items on the rise, markets disruption due to price increment, high unemployment rate and so on. Nevertheless, to attain the new universal poverty reduction objective, growth is not just required, but growth

combined with distributional change that would actually reduce poverty by themselves¹⁷. Some of these programmes and policies are; Farm Settlement Option, National Accelerated Food Production Project, Agriculture Development Project, Operation Feed the Nation, Rural Banking Scheme, Green Revolution Programme, Structural Adjustment Programme, National Directorate of Employment, Directorate for Foods, Roads and Rural Infrastructures, Better Life Programme, National Policy on Science and Technology, Science and Technology Fund and the National Economic Recovery Fund, Family Support Programme, Family Economic Advancement Programme, National Poverty Eradication Programme. The list has not been exhausted here but in all, there are over twenty of these institutions and programmes established by the government in Nigeria with a view to reduce the incidence of poverty. Since Nigeria gained independence in 1960, there seem to be an endless search for the best strategy for her developmental processes as the nation still wanders around all sorts of developmental initiatives upon exploration of four 5-year development plans, one structural adjustment programme, two 3-year rolling plans, four visions and strategies including the recently lunched Economic Recovery and Growth Plan (ERGP)¹⁸. However, it is sad to observe that all these efforts have not produced the desired results as they have only achieved modest successes while the level of poverty still remain high¹⁹.

First, the fact that some of the functions of these agencies and programmes have been duplicated leading to unnecessary plurality of influences and interests. Secondly, in some cases, the

implementation agencies have been wrongly identified and as such roles and functions have been wrongly allocated. Thirdly, contended that in some cases, there is the non-existence of the right or appropriate implementation agencies thus creating gaps in the implementation trend. Again, there is the problem of poor management, poor accountability, high level of corruption and dishonesty, pursuit of parochial interests, poor staffing, incompetence, lack of commitment, among the rank and file of the workers in many of the implementation agencies.

1.2 Statement of the Problem

According to the Nigeria economic report that was released in July 2019 by the World Bank, Nigeria had one of the world's highest economic growth rates, averaging 7.4% from 2000 to 2014. Followed by the oil price collapse in 2014 till 2016, combined with negative production shocks, the gross domestic product (GDP) growth rate dropped to 2.7% in 2015. In 2016 the Nigerian economy recorded its first recession in 25 years, which led to her economy contraction by 1.6%. Growth rebounded to 0.8% and 1.9% in 2017 and 2018 respectively. In 2020 the GDP growth rate saw a dramatic decline (by 3.4%) due to the COVID 19 pandemic although signs of recovery began to appear in 2021. Nationally speaking, about 43% of Nigerians (89 million people) live below the poverty line, while another 25% (53 million) are vulnerable. The National Bureau of Statistics (NBS) estimated the unemployment rate in Nigeria to reach 33.3% in 2022 from 27.1% in 2020 with the unemployment rate for people aged 25 to 34 at about 37.2%. This

is considered the highest in over 13 years. Thus, for a country with considerable wealth and a huge population to support commerce and plenty of natural resources such as oil, the level of poverty remains unacceptable. More so, consecutive Nigeria governments have planned and executed numerous macroeconomic policies (fiscal, monetary and trade policies) to deal with poverty because of the short- and long-term consequences on the economy at large. Haven acknowledged the invaluable importance of macroeconomic policies; it is however bothersome to note that over the past decades, there is little or no evidence of a meaningful impact of such macroeconomic policies on poverty rates in Nigeria as it still persists till date. This inconsistent link between macroeconomic policies, rising economic growth rates and poverty rate is a clear proof that the trickle-down effect of such growth and policies is utterly insignificant on the welfare of the greater Nigerian populace. This fact makes the problem of poverty in Nigeria to appear a pig-headed one, which poses a lot of questions to the mind of researchers. Many researchers have empirically examined the effect of these economic policies on poverty reduction in Nigeria separately. That is, most research studies carved their niche around the effects of fiscal policy (mostly government expenditure) on poverty alleviation, others on the impact of monetary policy variables on poverty reduction in Nigeria. Many failed to disaggregate fiscal policy variables; others totally disregarded the importance of tax revenue and a large sample size in the course of their research study^{20,21}. Most importantly, the empirical

investigation of the interplay between these economic policies to dissolve poverty in Nigeria has not been captured by many researchers. Against this backdrop, this study seeks to investigate the impact of fiscal and monetary policies on poverty alleviation in Nigeria. As well as investigate the interplay between fiscal and monetary policies directed towards tackling the problem of poverty in Nigeria.

1.3 Research Questions

In the quest to analyze the impact of fiscal and monetary policy on poverty alleviation in Nigeria, the following questions are needful:

- (i) How has fiscal policy contributed to the alleviation of poverty in Nigeria?
- (ii) How has monetary policy contributed to poverty reduction in Nigeria?
- (iii) How has fiscal and monetary policies interacted to alleviate poverty in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to understand the role those economic policies play in the fight against poverty in Nigeria. However, the specific objectives are to:

- i. examine the effect of fiscal policy on poverty alleviation in Nigeria.
- ii. analyze the effect of monetary policy on poverty reduction in Nigeria.

- iii. investigate the interplay between fiscal and monetary policies directed to alleviate poverty in Nigeria.

1.5 Hypotheses

For the purpose of investigating and evaluating the above objectives, the following hypotheses will be formulated to guide the study.

H₀₁: There is no significant relationship between fiscal policy and poverty alleviation in Nigeria;

H₀₂: There is no significant relationship between monetary policy and poverty alleviation in Nigeria;

H₀₃: There is no significant relationship between a mix of fiscal and monetary policy and poverty alleviation in Nigeria;

1.6 Significance of the Study

There are many studies that examine the determinants of and trends in poverty, how poverty is reduced or affected by fiscal or monetary policies separately. However, there are not many studies that analyze poverty by relating it to macroeconomic stabilization policies, especially in terms of its comparison of economic policies and a mix of fiscal and monetary policy to tackle the pig-headed problem of poverty. Consequently, this study attempts to investigate the impact of fiscal policy and monetary policy on poverty alleviation in Nigeria. The novelty in this study is in its effort to evaluate and analyze the extent to which fiscal and monetary policies have

influenced the reduction of poverty on the Nigerian economy. As well as investigate the interplay between fiscal and monetary policies directed towards poverty reduction in the nation's economy. This study will not just determine which of the economic policies works best to lessen poverty in Nigeria; it would also serve as a reference for scholars, researchers, the government, investors and the populace at large to be greatly informed on the impact of macroeconomic stabilization policies on poverty reduction as well as policy recommendations geared towards a poverty free economy. All these can be achieved in the study's effort to explore a mix of policies that would best solve the problem of poverty in the Nigeria economy. This study seeks to add to the body of knowledge greatly, being an answer to the research recommendations of quite a number of research studies. Hence, an attempt to alter this research study would only make the realization of economic policy harmonization towards poverty reduction in Nigeria a mirage and an unanswered question in the hearts of many researchers.

1.7 Scope of the Study

Having acknowledged the invaluable importance of macroeconomic policies on an economy, the aim of this study is to assess government efforts in alleviating poverty through economic policies in Nigeria. In an attempt to do this, the study adopts variables covering the period of 1980 to 2021. This would not just allow for a more concise estimate from the study but makes its assessment easy in terms of the representativeness of the sample size to generalize the results

obtained during the course of the study. More so, the choice of sample size takes into cognisance the different economic policies by different political governments in the country. The major source of this data is the World Bank Development Indicator (WDI), the reason being the reliability of the data source.

1.8 Limitation of the Study

This study investigates the impact of economic policies on poverty alleviation in Nigeria between the period of 1980 and 2021. The choice of this study period is based on the availability of data from national and international institutions. The secondary source of data employed in this study is not within the control of the researcher. It is therefore difficult for the user to read accurately how government fiscal policies and the central bank's monetary policy affects poverty reduction in Nigeria. The study might also be limited to fiscal and monetary policy implementation in Nigeria as against other economic policies that exists.

1.9 Operational Definition of Terms

Fiscal Policy: This refers to the use of government spending and tax policies to influence economic conditions, especially macroeconomic conditions. The government of Nigeria uses fiscal policy to boost strong and sustainable growth as well as reduce poverty.

Government Expenditure on Health: This consists of all expenditures for the provision of health services, nutrition activities, family planning activities and emergency aid designed for health. It however excludes the provision of drinking water and general sanitation.

Government Expenditure on Education: This refers to the expenditure of the government on the educational sector which is aimed at boosting the quality of its citizens. This expenditure covers expenditure on schools both public and private institutions that supports or delivers educational services.

Tax Revenue: This is the income that is collected by the government of an economy through taxation. Such income from tax is gotten from taxes on income and profits, goods and services, social security contributions, ownership and transfer of property and other taxes.

Monetary Policy: This refers to the credit control measures adopted by the central bank of an economy. It is a deliberate change instilled in the money supply to influence the interest rate and consequently, the total spending in the economy. The goal of monetary policy is to achieve a price level stability, full employment and economic growth.

Monetary Policy Rate: This refers to an interest rate that the central bank (being the monetary authority) sets in order to influence the evolution of major monetary variables (such as, consumer prices, exchange rate, credit expansion etc) in an economy.

Lending Interest Rate: This is the amount charged by lenders as a certain percentage of the amount lent or deposited for a certain period of time. In Nigeria, the rate has been revised from 10% to 30% of the Monetary Policy Rate (MPR).

GDP Growth Rate: This compares the year on year or quarterly change in a country's economic output. It is basically used to indicate how fast an economy is growing.

Inflation Rate: This refers to the rate at which prices for goods and services rise over a given period of time. It is the overall increase in the Consumer Price Index (CPI) which is the weighted average of prices of different goods and services.

Exchange Rate: This is defined as the price of one country's currency in relation to another country's currency. That is, it is the rate at which one currency will be exchanged for another currency.

Poverty: This study seeks to define poverty beyond the lack of income to ensure sustainable livelihoods as its manifestations include limited access to education and other basic services, hunger and malnutrition, social exclusion as well as the lack of participation in making decisions.

Poverty rate: This refers to the number of people whose income falls below the poverty line.

Endnotes

1. O. S., Adegboyo ‘Does Government Spending Reduce Poverty in Nigeria? Evidence from Auto- Regressive Distributed Lag Specification’, **Ekonomi Bisnis**, 25(1), 2020, 14–25.
2. V. V. Danaan ‘Analyzing Poverty in Nigeria through Theoretical Lenses’, **Journal of Sustainable Development**. 11(1), 2018, 20–31.
3. V. E., Oriavwote, & A. Ukawe ‘Government Expenditure and Poverty Reduction in Nigeria’, **Journal of Economics and Public Finance**. 4(2), 2018, 156–163.
4. M., Roser, & E. Ortiz-ospina ‘World Population Growth’ 2, 2017, 1–21.
5. M. Ravallion ‘Poverty Lines in Theory and Practice’, The Living Standards Measurement Study. ISSN:0253-4517, 133, 1998, 1-35.
6. N. C., Odinakachi, C., Gloria, B., Anayo, & A. L. Eze ‘Fiscal Policy and Unemployment Reduction in Sub Saharan Africa; Emphasis on Nigeria and Ghana’, **IOSR Journal of Economics and Finance**. 11(1), 2020, 8–18.
7. E., Maku, & O. Y. Alimi ‘Fiscal Policy Tools , Employment Generation and Sustainable Development in Nigeria’, **ACTA UNIVERSITATIS DANUBIUS**, 14(3), 2018, 186–199.
8. A. M., Dankumo, S. Ishak, Y. Bani, & H. Z. Hamza ‘The Relationship between Public Expenditure, Corruption and Poverty in Nigeria’, **Jurnal Ekonomi dan Studi Pembangunan**. 11(1), 2019, 76–89.
9. A. W. Maina ‘The Effect of Consumption Taxes on Poverty and Income Inequality in Kenya’, **International Journal of Accounting and Taxation**. 5(2), 2017, 56–82.
10. I. A. Abdulrahman, S. B. Akanbi & G. D. Oniyide ‘Impact of Monetary Policy on Poverty Reduction in Nigeria’, **African Journal of Economic Review**, 11(1), 2023, 101–119.
11. A. A. Chowdhury ‘Monetary Policy for Inclusive and Sustainable Development’ 2018, 1-42 <https://researchdirect.westernsydney.edu.au/islandora/object/uws:55053/>

12. G. G., Goshit & T. D. Longduut '*Indirect Monetary Policy Instruments and Poverty Reduction in Nigeria: An Empirical Evidence from Time Series Data*', **International Journal of Academic Research in Business and Social Sciences**, 6(4), 2016, 86-101.
13. P., Martins, & P. Lucci '*Recasting MDG 8 : Global Policies for Inclusive Growth*' 2013, 1-33. www.odi.org.uk
14. A. G. Metu & C. U. Kalu, '*Problems of Poverty and Inequality in Nigeria*' **Structure and Problems of the Nigerian Economy, Forthcoming**, 2020, 226–251.
15. S. E. Jeff-Anyeneh & S.N. Ibenta '*Government Expenditure and Economic Growth: Evidence from the Nigeria Economy (1981-2016)*' **Advances in Research**, 19(4), 2019, 1-14.
16. O. H. Osinowo, R. A. Sanusi, and E. T. Tolorunju '*Poverty in Nigeria: The Role of Economic Growth, Governance and Agriculture*', **Invited paper presented at the 6th African Conference of Agricultural Economists**, 2019, 1-16.
17. E. Anderson, M. A. J. d'Orey, M. Duvendack, & L. Esposito '*Does Government Spending Affect Income Poverty? A Meta-regression Analysis*', **World Development**, 103, 2018, 60–71.
18. U. Emmanuel '*Development Plans and Policies in Nigeria : Observed Impediments and Practical Best Alternatives*', **International Journal of Research and Scientific Innovation**, 6(7), 2019, 27-36.
19. R. A., Itiveh '*Poverty Alleviation Policies : Catalyst for Economic Development of Nigeria*', **Journal of Public Administration, Finance and Law**, 23, 2022, 168–175.
20. O. A., Adelowokan & A. M. Osoba '*Oil Revenue, Government Expenditure and Poverty Rate in Nigeria*', **Global Journal of Management and Business Research**, 15(10), 2015, 11-20.
21. N. Yahaya '*Relationship between Government Expenditure and Poverty : A Study of Nigeria (1965-2014)*', **IOSR Journal of Economics and Finance**, 10(6), 2019, 39–52.

Chapter Two

Literature Review

2.0 Preamble

A number of scholars and researchers have investigated and argued the different transmission of how fiscal policy and monetary policy tools have contributed to poverty alleviation across countries, via various empirical works and methods thereby resulting to the inferences drawn from this research. This chapter reviews relevant literature in the study that exposes past literatures on how fiscal and monetary policy has contributed to poverty alleviation overtime and across countries of the world. The chapter is sub-divided into five sections and are outlined respectively; conceptual review, theoretical review, methodological review, empirical review and empirical gaps.

2.1 Conceptual Review

In any economy, one of the main drivers of growth and sustainable development is the impact that the government has on the economy via the policies it appropriate. This study capitalizes on this school of thought but more specifically on fiscal policy and monetary policy as it seeks to analyse its effect on poverty alleviation in Nigeria.

2.1.1 Fiscal Policy

In economics, fiscal policy is the use of government revenue (basically taxes) and expenditure i.e., government spending to influence the economy. It is the means by which a government adjusts its spending and revenue (tax rates) to monitor and influence a nation's economy. In other words, the policy can also be seen as a purposeful spending and taxation actions shouldered by government in order to attain price stability reduce the inconsistencies of business cycles, as well as to bring about nation's desired output and employment¹. Often times, fiscal policy attempts to stabilize the economy over the course of the business cycle (an upturn or downturn of an economy) through the use of fiscal policy tools². The federal government uses fiscal policy as a major tool for affecting the macro-economy such that a sense of balance between expenditure, taxation and borrowing is in agreement with growth³. Tax revenue as a fiscal policy tool is important to raise sufficient revenue that would finance expenditure in a fiscal year. A good tax system comprises of a legal structure that governs the execution of the various tax types; income tax, consumption tax, trade tax and social contributions. The composition of taxes and tax rates differ from country to country. Asides tax revenue, government expenditure is another fiscal policy tool that has always been on the forefront of macroeconomic policies in Nigeria due to the increasing public needs of the increasing population⁴. Government expenditure gives a representation of the expenditure of the government on amenities and services for the growth and

development of the economy, usually on an annual basis⁵. Vividly articulated within the budget of a financial year is the government expenditure and tax revenue. In any case, the real government consumption may be distinct from the budgeted owing to changes in the macroeconomic environment.

Fiscal policy is the sister strategy to monetary policy; that is, it is often used in conjunction with monetary policy but is differentiated from monetary policy, in that it deals with government expenditure and taxation and is usually administered by the government, whereas monetary policy on the other hand is a strategy administered by the central bank of a nation. Its sole purpose is to influence a nation's money supply. A study aptly explained that the federal government's solid policies, efficient institutions and the accurate investment mix are needed for Nigeria's economic development to lift millions of its people out of poverty and hardship⁶. Thus, by adopting a mix of fiscal and monetary policies, this study believes that poverty can be tackled.

2.1.2 Monetary Policy

Monetary policy, known to be the demand side of economic policy consists of the actions taken by a nation's central bank to control money supply and attain macroeconomic goals. That is, it involves the management or coordination of monetary policy tools to meet the macroeconomic objectives which include economic growth, low inflation, low unemployment, satisfactory

balance of payments, low government borrowing, stable exchange rate, minimal inequality and environment protection; all of which is expected to reduce poverty to the barest minimum. This policy is so important to this study because an expansionary monetary policy targeted towards the productive sectors of the economy can stimulate investment, which leads to increase in output, creation of more employment opportunities, more income, hence poverty reduction⁷. The central banks use it to regulate the supply of money in a country's economy. This also implies that monetary policy in the hands of the central bank can be used to either increase or decrease the amount of currency and credit in circulation via monetary policy tools. These tools include interest rate adjustment, reserve requirement changes and open market operations. Hence, just as in fiscal policy, monetary policy can also be used to regulate the amount of money in circulation depending on the economic circumstance. Thus, there also exist the expansionary monetary policy and contractionary monetary policy.

2.1.3 Poverty

Poverty is a concept that is intrinsically linked to welfare, and there are many ways in which welfare can be properly captured. The conceptualization of poverty over the years is changing with emerging perspectives in different contexts. According to Wikipedia, the concept of poverty is seen as the state of having few materials possession or little income. The concept of poverty is elusive; largely because it affects many aspects of the human conditions, which includes physical,

moral and psychological conditions. Thus, different criteria have been used to conceptualize poverty overtime. Nonetheless, it is safe to refer poverty as a state or condition in which a person or community lacks the financial resources and essential for a minimum standard of living. That is, poverty can be said to subsist if the people of a particular society cannot achieve a specific level of welfare that are accepted as a minimal standard of that society⁸. Poverty robs people of the freedom to satisfy hunger, access necessary services, and meet other basic needs ⁹. In an attempt to identify people living under poverty, researchers came up with what is known as poverty line. Poverty line is the minimum standard of living expected of a people at a given time and anyone living below the poverty line threshold is considered poor. According to World Bank, the minimum standard of living is \$1.90-a-day which is considered extremely low; thus, extreme poverty is seen as the adequate term for those living under this low threshold.

2.1.4 Poverty Alleviation

The attempt(s) to exterminate or mitigate poverty is known as poverty alleviation. These attempts are not new; in that there has been legislation, policies and communal efforts to support the poor as far back as biblical times. Poverty exists and has existed in every country; the great effort to put poverty to an end has been prevalent. Over the years, researchers have concluded that poverty reduction lies at the heart of development due to consistency with so many research

works as well as with the seventeen (17) United Nations sustainable development goals, the first of which is 'No Poverty'. Therefore, an approach to poverty alleviation is such that require the execution of mutually consistent and reinforcing all-around packages of policies, plans and programmes¹⁰. All of which this study seeks to look into. In addition, a study concluded that placing so much focus on economic growth with an expectation of trickle-down effects as presupposed by the kuznet's hypothesis is inappropriate a policy prescription in Nigeria. Thus the government is encouraged to actively pursue poverty alleviation with economic growth strategy within the framework of development planning¹¹.

2.1.5 Measurement of Poverty

The definition and measurement of poverty has different insinuations on policy-making¹². There are various methods to the definition and measurement of poverty. The most commonly used is the monetary approach, which can use the consumption/expenditure level or income to show the extent of poverty. That is, it identifies poverty with a shortage in consumption/income from the stipulated poverty line. Another is the capability approach which rejected the monetary income as a measure of poverty but instead focused on poverty as the deprivation in terms of capability¹³. That is, the failure to achieve certain basic capabilities. The social exclusion approach developed in industrialized countries is used to show extent of deprivation or marginalization that can arise

in wealthy countries despite the comprehensive welfare provisions. Lastly, the participatory approach aims to change the monetary and capability estimate by involving the poor to participate in decisions about what it means to be poor and the magnitude of poverty to them¹⁴.

The World Bank also gave some monetary measures of poverty such as head count ratio, poverty gap index¹⁵. The head count ratio is a ratio of the number of people living below the poverty line divided by the total population. It is commonly used because it is easy to construct and understand. Nonetheless, the measure has been criticized in that it does not capture the intensity of poverty of the people living below the poverty line.

On the other hand, poverty gap index as a measurement of poverty expresses the average poverty gap as a percentage of poverty line. Poverty gap shows the extent to which individuals fall below the poverty line that is, the depth of poverty; it also symbolizes the minimum number of transfers needed to eradicate poverty or to lift the poor up to the poverty line. Thus, if income is transmitted from one poor person to another, the poverty gap index would not reflect this accruing to the fact that the index does not capture changes in income inequality among the poor population¹⁵.

Another poverty measure is the Foster-Greer-Thorbecke (FGT) poverty measures. The FGT index is a generalized poverty measure developed by Erik Thorbecke, Joel Greer and James

Foster. It considers the inequality amongst the poor thereby allowing one to vary the amount of weight on income levels when calculating poverty in an economy. That is this measure allows disintegration of poverty to show the involvement of different population subgroups to national poverty. The poverty severity index, which is the squared poverty gap index, belongs to the FGT measures. It is calculated as the weighted sum of the poverty gaps. The weight has its base on the poverty line and permits varying of weights of the income level of the poorest society member. It captures the distribution of standards of living among the poor. However, the measure is difficult to explain hence not generally used¹⁵. A study recommended a poverty index that takes the income distribution of the poor population into consideration¹⁶. The index measures the differences in levels of deprivation among the poor. It also combines the poverty gap, head count ratio and Gini coefficient of the poor. Other measures of poverty include the Watts index and Sen-Shorrocks-Thon Index. The multidimensional approach to the measurement of poverty pools other indicators of poverty, other than the income and consumption levels. The Human Development Index (HDI), adopted by United Nations Development Programme (UNDP), reflects life expectancy, literacy level and GDP per capita, while the Physical Quality of Life Index (PQLI) reflects the life expectancy, education level and infant mortality rate¹⁷. A study also found that unemployment causes poverty while inflation, public resources dedicated to austerity programmes and economic growth reduces poverty in the short run¹⁸.

2.1.6 Fiscal policy and Poverty Alleviation

John Maynard Keynes Keynesian economics is a major basis for fiscal policy. It theorized that government changes in the levels of taxation and government expenditure influences aggregate demand and the level of economic activity at large; which in turn should reduce poverty level in any nation. However, in reality, research has had it favour some economies, while for some, it has only been otherwise owing to weak linkage of government expenditure on poverty level as well as public debt, corruption, bad governance to mention a few¹⁹. Poverty is a worldwide issue that attracts the attention of both the governments and non-governmental organizations around world over. Conceptually, it is widely believed that a good fiscal policy has the capacity to raise economic growth through well-articulated public investments provided that the spending is large enough and specifically channelled to reduce poverty at its root. That is, investments channelled towards pro-poor projects such as, education, health and so forth, often times referred to as public goods because allowing market forces to allocate them will only leave the poor worsen²⁰.

2.1.7 Monetary Policy and Poverty Alleviation

Monetary policy is one of the contemporary age's most effective tools for managing the economy. Thus, central banks are increasingly asked by public stakeholders to assess the distributive impacts of monetary policy. It is often regarded as having only temporary impacts on

the economy, moderating the expansions and contractions that make up the business cycle²¹. However, it is possible for monetary policy to affect an economy's long-run trajectory. A study conducted indicates that there are five channels through which monetary policy can impact long-run income distribution and poverty was identified²². First, the distribution caused by swings in unforeseen inflation directly raise inequality. Second, the decrease in physical capital investment caused by uncertainty and financial markets disturbances increase the average return on capital and lower wages; thus widened the income distribution and in turn poverty level. Third, offsetting this, inflation may shift the burden of taxation away from labour towards capital. Fourth, the markets caused by inflation and macroeconomic imbalance reduce not just physical investment, but human capital investment. Finally, inflation and macroeconomic volatility may damage some sectors of the economy disproportionately. For instance, they may be in particular harmful to simple manufacturing or export-oriented industries. Thus, depending on the individual position of the workers in these industries, this can either increase or decrease in inequality and poverty. This consequently implies that the short and long run effects of monetary policy can influence the poor both positively and negatively. That is, when the goal of monetary policy is to achieve high level of employment in an economy, money supply will take an expansionary dimension. First, an expansion in money supply leads directly to increased expenditure on goods and services which should then be increased employment to produce the

extra goods and services being demanded. This increased employment invariably enhances income and thereby reduce income poverty in the economy⁶. More so, a research on the Nigerian economy made it clear that the Central Bank of Nigeria's mandate to promote monetary stability and a sound financial system would not only propel inclusive growth but could also assist to alleviate poverty²³.

2.2 Theoretical Review

A good number of theories of poverty have been employed by several authors during the course of this research study as a base of analytical framework and model specification, some of which are highlighted, and explained below

2.2.1 Classical Theory of Poverty

The classical school of thought developed in the 18th and 19th century includes the works of Adams Smith and David Ricardo. The theory assumes that the market is efficient; therefore, wages truly reflect an individual's productivity. The classical economic traditions argue that individuals are solely responsible for poverty, hereby providing a foundation for the laissez-faire traditions²⁴. It is key to say again that, in this strand of classical literature, low productivity and non-involvement of individuals in the markets is a result of conscious choice, thus, it is assumed that individuals themselves play a key role in influencing their outcomes, with little and/or no

responsibility for the political environment surrounding them. This further explains the classical theorists' believe that individuals are largely responsible for their own destiny, thereby viewing poverty as an outcome of poor human choices that influence productivity negatively and pave way for poverty trap. Also, government interventions are considered a source of economic inefficiency as welfare programs are perceived to strengthen poverty through welfare overdependence on the state. This therefore limits state interventions to changing human capabilities and attitudes, all of which still promotes the laissez-faire traditions.

The sub-culture of poverty is another distinct principle upheld by the classical theorists. The major proponent, Oscar Lewis stated that 'poverty is a way of life, surprisingly constant and persistent, passed down from generation to generation along family lines²⁵. Thence, the solution to poverty in this case is diverted from market mechanisms to character training and reforms of individuals and the community at large²⁴. The classical theory approach was criticized from a number of perspectives, for example; material means should not only be the focus to poverty eradication, that individuals' decisions may be affected by market failures, joblessness may be involuntary due to inadequate aggregate demand or class-based oppression.

2.2.2 Neoclassical Theory of Poverty

The advent of the neoclassical theory stemmed from the publication of Alfred Marshall 'Principles of Economics' in 1890. As a buildup on the classical theory, neoclassical theory

emphasizes the role of the uneven initial endowment of talents, skills and capital, all of which determine an individual's productivity in generating poverty, within a market based competitive economic system²⁴. Neoclassical theories are more wide ranging and distinguish reasons for poverty beyond individuals' control. Some of which includes; market failures such as externalities, moral hazard and adverse selection as well as incomplete information that exclude the poor from credit markets²⁶. Others include; lack of social as well as private assets; barriers to education; poor health and advanced age; immigrant status and barriers to employment are also viewed as aggravators of poverty²⁷. As with the classical economists, there is also skepticism about the role of government among neoclassical economists, although there are targeted policies to address market failures in some cases. Also, they typically have the same opinion that in most practical situations, the goal of full income equality cannot be achieved without incurring too high a cost in efficiency terms. Contrary to the classical theorists and early neoclassical theorists such as Marshall, many in the neoclassical school of thought do not view poverty alleviation as a dominant economic objective, hence, the focus on efficiency at the expense of equality. That is, poverty reduction may still be seen as desirable in order to increase efficiency.

2.2.3 Keynesian/Liberal Theory of Poverty

The liberal theory centers on the idea that not only market failures, but also gross under-development in its multiple dimensions causes poverty. Meanwhile, Keynesians advocate that

economic growth can promote economic development and thus ease poverty, hence further justifying government intervention at the macroeconomic level (through fiscal and monetary policy), primarily to deal with involuntary unemployment. The Keynesian theory is an economic theory of British economist, John Maynard Keynes (1883 – 1946). Keynes advocated the use of fiscal policy as a means of stimulating economies during the great depression. It was particularly used in the 50's and 60's to stabilize the economic cycles of nations, and it became more prominent during the great depression of 2008-2013. Keynesians showed that there was insufficient aggregate demand as well as the fact that an active stabilization policy was needed to maintain good economic performance. Following Keynes, when government changes its levels of spending and taxation, it influences the aggregate demand and the level of economic activity, the size of the final change in the equilibrium national income is determined by the multiplier effect.

In a Keynesian/liberal point of view, poverty is primarily explained as 'the misfortune of certain minorities who fall out of work, cannot work or are not expected to', even though they wish to do so. It then follows that the government needs to act to 'regulate, supplement and exhort, but not impose'²⁵. The theory also contends that poverty is a result of market failure and redistributive tax system should be justified under certain circumstances. The major shift in the standpoint of the neoclassical theory lies in the greater importance placed on the macro side in liberal theory in

contrast with micro direction of preceding poverty theories. Therefore, Keynes also embraced the importance of education, in the form of promotion of human capital development through aggregate investment in public education, thereby bringing in the role of the government in the economy to achieve this cause, being a state intervention against poverty. This of course is in stark contrast with the classical and neoclassical view which considers the presence of the government in all area of the economy inefficient and should be limited²⁴. More so, Keynes and the new-Keynesians stress, aggregate investment, with its positive effect on employment, which is considered a key element in generating the type of growth that relieves poverty. Hence, if entrepreneurial investment is low, unemployment and poverty rates are raised among suppliers of labour. It is thus suggested that government revenue, via taxes or bond issue, should be funneled to public investment. This is known as 'socialization of investment' in Keynes' words²⁸. In line with the Keynesian approach, public spending may increase the aggregate demand which further impact positively on the economic growth and employment¹⁹. Government spending is very critical to reducing poverty, especially when it is made on projects that are pro-poor like, education, health and so forth, these are sometimes referred to as public goods because allowing market forces to allocate them will leave the poor unimportant²⁰.

2.2.4 Marxian/Racial Theory of Poverty

The Marxian theory contends greatly against the capitalist culture and other social and political factors that are based on class division because it is believed to sponsor poverty in an economy. Believers of this school of thought advocate that 'the market is inherently dysfunctional'. Hence, by suggesting drastic changes in the socio-economic system, Marxian economists and other radical theorists emphasize the likelihood that economic growth alone may be deficient in lifting the poor out of poverty, owing to the fact that those who belong to certain classes may not enjoy the benefits of overall income growth. In the same way, by laying emphasis on the concept of class, a shift in perspective is provided as group characteristics and individual's status is considered to be dependent on the socioeconomic economy in which they live²⁴. That is, the mistreatment of the poor by the rich class in the society may also occur through the quality of the environment; for example, the poor tend to suffer most from air pollution given their residential location. In response to thus cause, the more essential prescription by the Marxian economists is the restraint of free markets, nationalization of all production means etc. as under the experiment of communism in the 20th century. One of the vital elements of Marxist theory is the primary aim of state regulation that should enhance the working conditions of labourers and encourage higher wages among them. Therefore, according to this view, poverty in a capitalist economy can only be alleviated through strict regulation of the market in the form of minimum wages,

antidiscrimination laws and labour market reforms. A further contribution of Marxian/radical theorists is the sense that poverty is a moral as well as a technical issue which only the state has dominion over.

2.2.5 Social Exclusion/Social Capital Theory of Poverty

Social exclusion and social capital theories of poverty are, among all the reviewed approach to poverty, debatably the ones that focus most on understanding the intrinsic and fundamental processes that allow deprivation to arise and persist. The theorists here recognized the importance of the structural characteristics of the society and the situation of certain group of individuals. The European Union often highlights the role of social exclusion above other factors when explaining poverty. According to them, social exclusion is considered the process through which persons or groups are excluded from full participation in the society wholly or partially. A researcher defined social exclusion as "more than the lack of material resources" by explaining poverty to be a societal feature that can foster lack of participation²⁹.

The concept of social capital was propounded by Loury in 1977, who argued that it is a complement to the theory of human capital in explaining income disparities between the whites and the blacks. The conceptualization of social capital is useful in helping to explain the different economic outcomes between minorities and non-minorities. Given that it explains these

inequalities, the concept of social capital is in the same way appropriate to explain the occurrence of poverty³⁰.

2.3 Review of Empirical Studies

This section provides a brief review of the existing evidence of the effects of fiscal policy and monetary policy on poverty alleviation. Several research works conducted over time have been classified to have either similar findings, close to similar findings, or conflicting findings, all hinging on the scope of study, the different dis-aggregated fiscal variables adopted by different researchers during the course of this research. The relevant studies reviewed are grouped into two, namely empirical links between fiscal policy and poverty alleviation; and empirical relationship between monetary policy and poverty alleviation respectively.

2.3.1 Empirical links between Fiscal Policy and Poverty Alleviation

The various studies that investigate the links between fiscal policy and poverty alleviation are reviewed in this sub-section. A research study aimed at ascertaining the impact of government expenditures on health and education on poverty alleviation in Nigeria. Using the Ordinary Least Square (OLS) statistical method on data obtained over the period of 1988-2018, the result showed that there exists a long-run relationship between government expenditures on health and education and poverty alleviation in Nigeria. It was also found out that expenditure on health and education displayed positive relationship on the dependent variable - poverty alleviation, that is;

increased government spending on health and education would translate to increase in poverty alleviation³¹. A paper employed OLS technique to investigate the impact of tax revenue on public service delivery in Nigeria from 1981 to 2017. The findings revealed that tax revenue impacts education and health care services positively and significantly. Thus, the study recommended that the government should exploit all tax revenue sources and use same to maintain the health sector in the country as well as provide adequate education including skill acquisition and entrepreneurship programmes for the citizens³². In 2019, the same author looked into the impact of government sectoral expenditure on poverty alleviation in Nigeria. Using the OLS technique, the result indicated that government expenditure on agriculture, building and construction, education and health do not have any significant impact on poverty alleviation in Nigeria, thereby concluding that these key sectors of the economy needs to be sufficiently funded³³. Another researcher examined government spending in education and poverty in Nigeria from 1990-2020. The technique of Auto-regressive Distributed Lag (ARDL) model was used and the results revealed that; government capital expenditure in education has negative and significant impact on the rate of poverty in Nigeria. Government recurrent expenditure in education has positive and insignificant impact on the rate of poverty in Nigeria. Based on the results, the study concluded that; reduction in the rate of poverty was aided by capital spending in the education sector as against the recurrent expenditure³⁴. The effect of consumption taxes on

poverty and income Inequality in Kenya was examined between 1970 to 2017 using the Ordinary Least square (OLS) method and the findings confirmed that consumption taxes are regressive, thus to address inequality and poverty, they should be lowered⁹. Another researcher examined the relationship between public spending and poverty in Nigeria using ECM model and granger causality estimation techniques³⁵. The result showed that government public spending on health, education, building and construction positively impact per capita income although with a low elasticity. Also, that there is bi-causal relationship between government public spending on education and per capita income with no causality. A researcher also investigated the impact of education spending on poverty eradication in Nigeria from 1999 - 2017. The ordinary least square regression analysis was used to analyze the time series data and finding revealed that education expenditure in Nigeria does not impact poverty reduction over the period under study³⁶. A study conducted examined the nexus of fiscal policy tools, employment generation and sustainable development in Nigeria between during the period 1980 to 2015 adopting the Ordinary Least square (OLS) method³⁷. The result suggested that government spending and output from manufacturing industry reduce unemployment rate in rural, urban and the whole of the Nigerian economy. On the other hand, tax revenue and agricultural output have direct impact on unemployment rate in Nigeria. Another researcher work investigated the relationship between public expenditure, corruption and poverty in Nigeria between 1996 and 2016 using the Ordinary

Least square (OLS) method²⁰. Based on the findings, only public spending on the economic sector (agriculture, construction, transport and communication) that have impacted on poverty as it ought to. As an alternative, public spending on the social sector (education and health) has not impacted at all. A further study examined the nexus between government spending and poverty in Nigeria and opted an evidence from Auto Regressive Distributed Lag (ARDL) specification between the period of 1981 to 2017³⁸. The study revealed that economic service recurrent expenditure (ESRX), social and community recurrent expenditure (SCSRX), transfer recurrent expenditure (TRX) trim down poverty while transfer capital expenditure (TCX) and administrative recurrent expenditure (ADRX) intensify poverty. In 2020, a study examined the nexus of government expenditure and standard of living in an emerging market in Africa–Nigeria between 1981 and 2018 adopting the Auto Regressive Distributed Lag method⁴. Sharply, the study asserted that government recurrent and capital expenditure have a significant effect on the standard of living in Nigeria. The researchers also advocated prioritizing capital expenditure over recurrent expenditure which is ideal for improvement in the standard of living of the citizens. A study investigated the effect of education expenditure on poverty reduction using annual data from 1980 to 2019. ARDL and Granger test were adopted for the analysis and the result revealed that government expenditure on education and health services positively correlated with life expectancy, indicating positive impacts on poverty reduction in the long and

short -run. Meanwhile, recurrent education spending had negative effect on poverty reduction in the short run. Granger causality indicated unidirectional relationship between education expenditure and poverty reduction in Nigeria³⁹. A research study is positioned on the qualitative method of social science research examine the impact of the youth empowerment program on poverty reduction and national development in Nigeria. The study revealed that economic recession, GDP growth decrease, and low investment are direct causes of the shrinkage in demand for job opportunities. The study explained that this government policy has not alleviated poverty within the target beneficiaries and has insignificantly contributed to national development. The paper recommends government expenditure channelled towards the reduction of the youths unemployment rate in Nigeria as this would lead to sustained poverty alleviation⁴⁰. A scholar looked into the impact of rural development and inclusive growth on poverty reduction in Nigeria. The study found that the only the fourth national development plan covers rural development as a priority even as the first three national plans paid no attention to rural development. It was also discovered that the government anti-poverty programs have the tendency to alleviate poverty if the stakeholders could employ a suitable policy framework that is capable of promoting transparency and accountability among all the concern stakeholders involved. The study further observed that poverty rate increase in Nigeria is associated to the systemic failures of the administrative system in the country such as corruption, insufficient

budgetary allocation, political instability, abuse of the rule of law, misplacement of priority, among others⁴¹. A study primarily examined the impact of Youth Empowerment Scheme (YES) program for self-reliance and poverty alleviation in three States in Nigeria. The study employed primary data through questionnaire collection which was analyzed using Partial Least Square (PLS) to find that the anti-poverty program, YES, has a significant impact on the standard of living⁴². A study also contributed to the literature by examining the effects of government sectoral spending on human development from 1986 to 2021 using a robust human development index that captures the multifaceted state. Surprisingly, the results from the ARDL estimation indicated that both in the short and long run, there is no link between government sectoral spending and human development in Nigeria⁴³. A study centered on poverty alleviation strategies of selected Churches in Anambra State. The researcher methods employed both qualitative and quantitative survey of data collection. The findings showed that poverty is a human-induced problem manifested in the misdirection of resources and other forms of ills⁴⁴. The Autoregressive Distributed Lag technique was used to examine the short- and long-run effects of government health expenditure on health outcomes separately. The findings showed a negative relationship exists between health expenditure and mortality rate, implying that a rise in health expenditure leads to a decrease in mortality rate, while life expectancy at birth positively responds to the changes in health expenditure⁴⁵. A study examined government expenditure on

agriculture and its impact on unemployment reduction in Nigeria from 1999 to 2015. The result revealed that the relationship between government expenditure and unemployment did not have a significant effect, that is, has no reducing effect on unemployment in Nigeria. The study therefore recommends the federal government intervention in quadrupling of agricultural development for employment opportunities⁴⁶.

2.3.2 Empirical links between Monetary Policy and Poverty Alleviation

A study also looked into the effectiveness of quantitative monetary policy implementation in the success of full employment in Nigeria from 1986 to 2018 using the Auto-Regressive Distributed Lag (ARDL) Model⁴⁷. The research discovered that quantitative monetary policy instruments had insignificant but positive effect on the employment rate in Nigeria. However, the researchers advocated for the Nigerian government to embark on joint harmonization of fiscal and monetary policy. A study analyzed the effect of monetary policy of the central bank on the poverty alleviation in Pakistan from 2001 to 2017 using the regression analysis⁴⁸. According to findings, increase in the money supply in the economy does not reduce poverty rate in Pakistan. This owes to the fact that money supply brings about inflation which discourages investment. It also revealed that increased interest rate by the central bank reduces money supply in the Pakistan economy as funds will be diverted to banks for earning interest on deposits. The study recommended that the central bank of Pakistan should design a prudent monetary policy that

would curb inflation and induce economic growth. A researcher also examined the impact of monetary policy on poverty reduction in Nigeria between 1985 and 2019. In order to bridge the gap between monetary policy and poverty alleviation in Nigeria, the study included institutional quality factors as part of independent variables. The Error Correction Model (ECM) technique for the estimation was adopted, and the results showed that there exist a strong connection between monetary policy and poverty reduction. The findings also revealed that institutional quality, proxied by political and economic institutions, is a primary factor influencing poverty in Nigeria. The researcher concluded that monetary authority should enforce low-inflationary monetary policy that will not only propel investment or raise the bar for employment opportunities and economic growth, but such that would ultimately improve the welfare of the people in the country⁷. A study explored the effect of the financial inclusion scheme on poverty alleviation among the low-income earners in Nigerian between 2004 and 2019. The statistical methods utilized are ordinary least squares and the error correction model. The study showed that financial inclusion schemes play a fundamental role on poverty reduction among the low-income earners in Nigeria. However, the paper suggested that the central bank should assess their policies to suit the needs of the low-income earners and subsidize the interest rates to ease approachability of financial services⁴⁹. Another researcher assessed the impact of micro-credit programs on poverty alleviation in Niger state. The PLS-SEM path modelling was adopted and

the study revealed that a micro-credit program is fundamental to poverty alleviation as it possesses tendencies to reduce poverty provided the stakeholders enhance transparency and accountability^{50,51}. An analysis of the influence of the Federal Reserve (Fed)'s decisions on food prices. Thus, using a VAR model with stochastic volatility in mean, we show that that monetary policy surprisingly resulted both in a decrease in food prices and a rise of its volatility⁵². A study empirically investigated the relationship among financial inclusion, monetary policy and poverty reduction in Nigeria using impulse response and variance decomposition from vector autoregression (VAR) framework from 1981 to 2015. The results revealed a strong relationship between poverty reduction and financial inclusion. It was discovered that interest rate charged by deposits money banks hindered the access to loans and advances available for SMEs in Nigeria; thereby serving as an impediment to poverty reduction⁵³. Another study investigated the effect of financial inclusion on poverty reduction in sub-Saharan Africa from 2010 to 2017. The study employed the Hansen's estimation and Differenced generalized method of moments (GMM) methods and the results revealed that beyond a threshold level of 0.365, financial inclusion would lead to poverty reduction with money supply being positively significant towards poverty reduction. The results also specified that local credit to the private sector positively affects financial inclusion⁵⁴. In 2022, a researcher assessed the impact of Central Bank monetary policies on the living standards of Nigeria from 1980 to 2017 using the eclectic regression

techniques. The outcome revealed that unemployment growth is positively related with policy rates and money supply. Also, per capita income is negatively sensitive to policy rate which suggested that policies do not structurally address the weakness around rapid price fluctuations. Thus, the result showed vividly that central bank policies increases unemployment and poverty rate in Nigeria⁵⁵.

2.3.3 Empirical links between Fiscal Policy, Monetary Policy and Poverty Alleviation

A research study comparatively investigated the impacts of fiscal and monetary policies on poverty in Nigeria from 1986 to 2018 using the Ordinary Least Square (OLS) and the Standardized or Beta Coefficient approach⁵⁶. The study also revealed that monetary policy is more important in alleviating poverty than the fiscal policy which favoured the monetary school arguments. In particular, monetary measures like exchange rate and interest rate are more significant in alleviating poverty far more than inflation rate while fiscal measures proxied with government recurrent expenditure played a more fundamental role in alleviating poverty in Nigeria than others like government capital expenditure and government recurrent expenditure. The study also found that the Nigerian political system plays a vital role on a large number of its citizens living in extreme poverty alongside some other factors identified; insurgencies, terrorism, and low productivity among others. Another scholar analysed monetary and fiscal policy impacts

on poverty in Indonesia from 1980 to 2017 using the two-step Error Correction Model⁵⁷. The research results showed that economic growth and monetary policy proxied with interest rate has a significant negative impact on poverty while fiscal policy proxied with government expenditure has insignificantly impacted on poverty. More so, exchange depreciation, inflation and economic crisis positively and significantly impacts on poverty. The study concluded that the Indonesian poverty decrease is dominated by the monetary policy while fiscal policy insignificantly drops poverty number put side by side to the impact of monetary policy. A recent study presented an empirical analysis of policy choices for poverty control in Nigeria employing an annual secondary data from 1980 to 2019. The Vector Error Correction Model (VECM) and simulated Forecast Error Variance Decomposition (FEVD) was adopted to explain the role of economic freedom, fiscal policy, and monetary policy in poverty alleviation. The results revealed that an expansionary fiscal and monetary policies can lessen poverty in Nigeria. Nevertheless, monetary policy was found to be less effectual than fiscal policy⁵⁸. The study also discovered that an expansionary fiscal and monetary policy mix aggravates poverty, while a high degree of economic freedom, increases poverty. Using panel smooth transition regression (PSTR) models, some researchers studied the impacts of financial and fiscal policies on poverty reduction in China. The findings showed that both fiscal and financial policies have a positive influence on poverty reduction, and their relationships are nonlinear. The study further observed that for either

a high or low degree of poverty, fiscal policies are effective for poverty reduction, while financial policies have a greater impact on poverty reduction when there is a medium degree of poverty. Therefore, when a portfolio of poverty-reduction policies is executed, fiscal policies should be ranked at the beginning, when the incidence of poverty is high. Then, financial support should come to the forefront as the poverty level drops, and fiscal support should be stepped up when the poverty level continues to drop⁵⁹. In 2020, a researcher empirically examined the impact of fiscal and monetary policy on unemployment rate in Nigeria using data between the periods 1981 to 2020. The study used Vector Autoregressive (VAR) model as the major statistical technique of analysis. From the findings, government expenditure and interest rate has negative and significant effect on unemployment rate. Government tax was found to be negative and insignificant. Money supply was found to have a positive and significant. Thus, an expansionary fiscal and monetary policy should be encouraged to support employment generation in the country⁶⁰.

2.4 Theoretical Framework

This study adopts the theoretical backing of the Keynesian theory of poverty postulated by John Maynard Keynes to explain the theoretical links between fiscal policy, monetary policy and poverty alleviation in Nigeria. The theory came on board in response to the great depression that wrecked the domestic economy before the World War II. Keynes advocated greater government

expenditure and lower taxes in the face of economic distress to boost the demand side of the economy. Keynesians advocate that economic growth can promote economic development and thus ease poverty, hence further justifying government intervention at the macroeconomic level (through fiscal and monetary policy), primarily to deal with involuntary unemployment. The model also states that expansion of government expenditure would accelerate economic growth unlike the classical and neoclassical theories which does not attach any importance to the government intervention in tackling poverty²⁴. The Keynesians argued that an economy in distress would continue on its downward path if the government does not take active interest in promoting and improving consumer/aggregate demand. Thus, it is believed that increased demand would make it necessary for suppliers to produce more which would possibly make way for more job creation and increased profit for reinvestment. More so, the model predicts that after a positive fiscal shock, real wage will increase because of an increase in labour demand which hinges on nominal price inflexibility and imperfect competition. The increase in the real wage also raises consumption because of 'rule-of-thumb' by consumers.

2.5 Summary of Gaps in Literature Reviewed

The impact of fiscal and monetary policy on poverty alleviation has been captured by several authors, each adding to the body of knowledge in several ways. However, it can be seen that very few research studies compared and contrasted the impact of fiscal and monetary policy on

poverty alleviation in Nigeria. Likewise, many researchers recommended the harmonization/mix of policies (fiscal and monetary policy) to alleviate poverty in Nigeria. More so, some studies failed to disaggregate the variables adopted; some are limited due to the lack of comprehensive data; many studies also focused on government expenditure neglecting tax revenue as a fiscal policy measure among others. Therefore, this study seeks to bridge these gaps in existing empirical research by investigating the impact of fiscal and monetary policy on poverty alleviation in Nigeria.

Do Not Copy, Lead City University, Nigeria

Endnotes

1. M. L. Jhingan 'The Economics of Development and Planning', 40th Edition, Vrinda Publications (P) Ltd., 1997, ISBN 978-81-8281-385-4, 1-1058.
2. M. S. Jeffrey '*Fiscal Policy: Economic Effects*', **Congressional Research Service**, 2019, 1-11. <https://crsreports.congress.gov/R45723jk>.
3. C. O. Olisaji & J. K. J. Onuora '*Impact of Fiscal Policy on the Growth of Nigerian Economy*', **Journal of Accounting and Financial Management**, 7(2), 2021, 72-76.
4. S. E. Jeff-Anyeneh, A. C. Ananwude, G. K. Ezu & A. I. Nnoje '*Government expenditure and standard of living in an emerging market in Africa-Nigeria*' **Economic Journal of Emerging Markets**. 12(2), 2020, 167–178. <https://doi.org/10.20885/ejem.vol12.iss2.art4>
5. S. E. Jeff-Anyeneh & S.N. Ibenta '*Government expenditure and Economic Growth: Evidence from the Nigeria Economy (1981-2016)*', **Advances in Research**, 19(4), 2019, 1-14.
6. C. E. Vincent & I. C. Enyindah '*Poverty Alleviation in Nigeria in the 21st Century*' **Khazar Journal of Humanities and Social Sciences**, 5(4), 2022, 70–80.
7. I. A. Abdulrahman, S. B. Akanbi & G. D. Oniyide '*Impact of Monetary Policy on Poverty Reduction in Nigeria*', **African Journal of Economic Review**, 11(1), 2023, 101–119.
8. M. Ravallion '*Poverty Lines in Theory and Practice*', The Living Standards Measurement Study, 133, 1998, 1-35. ISSN:0253-4517
9. A. W. Maina '*The Effect of Consumption Taxes on Poverty and Income Inequality in Kenya*', **International Journal of Accounting and Taxation**, 5(2), 2017, 56–82.
10. R. Ab-Rahim & M. Mohammed '*Multidimensional Poverty Index of Niger State, Nigeria*', **International Journal of Academic Research in Business and Social Sciences**, 9(7), 2019, 451–460.

11. A. O. Godwin, S. I. Oladeji & R. Bank-Ola '*Evidence of Kuznets Hypothesis In Economic Growth On Poverty Reduction In Nigeria*' **Sapientia Global Journal of Arts, Humanities and Development Studies**, 5(1), 2021, 405 – 421.
12. C. R. Laderchi, R. Saith & F. Stewart '*Does it matter that we don't agree on the definition of poverty? A comparison of four approaches*', **QEH Working Paper Series**, 107, 1–41.
13. A. Sen '*Poor, Relatively Speaking*', **Oxford Economic Papers**, 35(2), 1983, 153–169.
14. R. Chambers '*The Origins and Practice of Participatory Appraisal*', **World Development**, 22(7), 1994, 953–969.
15. J. Houghton & S. E. Khandker '*Handbook on Poverty and Inequality*', The World Bank, 2009, 1-446. ISBN: 978-0-8213-7613-3. <https://doi.org/10.1596/978-0-8213-7613-3>
16. A. Sen '*Poor, Relatively Speaking*', **Oxford Economic Papers**, 35(2), 1983, 153–169.
17. D. Morris '*The Physical Quality of life index and the Human Development Index*', 1979, 1-14. www.cbn.gov.ng/efrvol39-4-5
18. B. Aderounmu, D. Azuh, O. Onanuga, O. Oluwatomisin, B. Ebenezer & A. Azuh '*Poverty drivers and Nigeria's development: Implications for policy intervention*', **Cogent Arts & Humanities**, 8(1), 2021, 1-12.
19. A. O., Farayibi, & J. E. Owuru '*Linkage between Fiscal Policy and Poverty Reduction in Nigeria*', 2016, 1-17. <https://doi.org/10.2139/ssrn.2856545>
20. A. M., Dankumo, S. Ishak, Y. Bani, & H. Z. Hamza '*The Relationship between Public Expenditure, Corruption and Poverty in Nigeria*', **Jurnal Ekonomi dan Studi Pembangunan**, 11(1), 2019, 76–89.
21. O. Jordà, S. R. Singh, & A. M. Taylor '*Does Monetary Policy Have Long-Run Effects?*', **Federal Reserve Bank of San Francisco Economic Letter**, 2023, 1-5.

22. C. D. Romer & D. H. Romer '*Monetary Policy and the Well-being of the Poor*', **National Bureau of Economic Research**, 6793, 1998, 1-64. <http://www.nber.org/papers/w6793>
23. O. S. Uwakaeme '*Financial Inclusion: A Veritable Tool for Inclusive Growth and Poverty Alleviation in Nigeria*' **Archives of Business Research**, 6(9), 2018, 175–197.
24. E. P., Davis, & M. Sanchez-martinez '*A review of the economic theories of poverty*', **National Institute of Economic and Social Research**, 435, 2014, 1–65.
25. P. Townsend, '*Poverty in the United Kingdom A Survey of Household Resources and Standards of Living*', 1979. www.poverty.ac.uk/piuk-whole
26. A. V. Banerjee & E. Duflo '*Poor Economics : A Radical Rethinking of the Way to Fight Global Poverty*', **Asia-Pacific Research and Training Network on Trade**. 7, 2012, 1-4.
27. P. Davis '*The Trappings of Poverty: The roles of Fiscal Policy and the Nigerian Economy: An Econometric Review*', **International Journal of Business and Management**, 12(4), 2017, 186-196.
28. S. Y. Jung & R. J. S. Smith '*The Economics of Poverty the Economics of Poverty: Explanatory Theories to Inform Practice*', **Journal of Human Behavior in the Social Environment**, 2016, 20–39. <https://doi.org/10.1300/J137v16n01>
29. J. R. Hills & K. Stewart '*Introduction to A more equal society? New Labour, poverty, inequality and exclusion*' **The London School of Economics and Political Science Research Online**, 2005, 1-34. ISBN 9781861345776 <https://www.researchgate.net/publication/30524119>
30. K. L. Osterling '*Social Capital and Neighborhood Poverty*', **Journal of Human Behavior in the Social Environment**, 16(1&2), 2016, 123-147.
31. C. M. Amire '*Impact of Health and Education Expenditure on Poverty Alleviation in Nigeria*', **Caleb International Journal of Development Studies**, 3(1), 2020, 199-213.
32. O. C. Omodero & K. I. Dandago '*Tax Revenue and Public Service Delivery: Evidence from Nigeria*', **International Journal of Financial Research**, 10(2), 2019, 82–91.

33. O. C. Omodero ‘*Government Sectoral Expenditure and Poverty Alleviation in Nigeria*’, **Research in World Economy**, 10(1), 2019, 80–90.
34. B. Tubotamuno, A. Daso & J. B. Obayori ‘*Government Spending and Poverty in Nigeria: A Study of Education Spending*’, **European Journal of Accounting, Finance and Investment**, 7(12), 2021, 12–22.
35. V. E., Oriavwote, & A. Ukawe ‘*Government Expenditure and Poverty Reduction in Nigeria*’, **Journal of Economics and Public Finance**, 4(2), 2018, 156-163.
36. C. C. Edeh, A. Obi & C. O. Obi ‘*Impact of Education Spending on Poverty Reduction in a Democratic Dispensation in Nigeria*’, **International Journal of Economics and Financial Management**, 3(3), 2018, 1–9.
37. E. Maku, & O. Y. Alimi ‘*Fiscal Policy Tools, Employment Generation and Sustainable Development in Nigeria*’, **ACTA UNIVERSITATIS DANUBIUS**, 14(3), 2018, 186–199.
38. O. S., Adegboyo ‘*Does Government Spending Reduce Poverty in Nigeria? Evidence from Auto- Regressive Distributed Lag Specification*’, **Ekonomi Bisnis**, 25(1), 2020, 14–25.
39. B. Duruh & C. I. Chima ‘*Impact of Education Budget on Poverty Reduction in Nigeria*’, **Journal of Economics and Allied Research**, 7(4), 2022, 150–163.
40. M. Waziri & I. Abu ‘*Youth Empowerment Program In Nigeria : A Strategy For Poverty Alleviation And National Development*’, **Journal of Public Value and Administration Insights**, 2(3), 2019, 12–14.
41. H. Shehu ‘*Rural Development, Inclusive Growth and Poverty Alleviation: Nigerian and Indian Perspectives*’, **European Journal of Social Sciences Studies**, 3(3), 2018, 263–285.
42. M. Waziri, J. U. Lawal, & I. Y. Haliru ‘*The Impact of Youth Empowerment Scheme Program for Self-Reliance and Poverty Alleviation in Nigeria*’, **EPRA International Journal of Multidisciplinary Research**, 8(6), 2022, 242–248.

43. A. A. Onabote, B. O. Ohwofasa & R. A. Ogunjumo ‘Government Sectoral Spending and Human Development in Nigeria: Is There a Link?’, **Heliyon**, 9(7), 2023, 1-11. <https://doi.org/10.1016/j.heliyon.2023.e17545>.
44. O. E. Duke & J. O. Okafor ‘Poverty Alleviation Policies of Selected Churches in Anambra State, Nigeria’, **Interdisciplinary Journal of Human Theory and Praxis**, 3(1), 2020, 40–52.
45. B. O. Awoyemi, A. A. Makanju, J. Mpapalika & R. S. Ekpeyo ‘A Time Series Analysis of Government Expenditure and Health Outcomes in Nigeria’, **Journal of Public Health in Africa**, 14(1409), 2023, 1-6.
46. I. Ogboru & F. A. Abdulmalik ‘Government Expenditure on Agriculture and Its Impact on Unemployment Reduction in Nigeria: 1999 – 2015’ VI, no. 3: 1–25 **International Journal of Economics, Commerce and Management**, 6(3), 2018, 1-25.
47. C. K., Origin, E. O., Oghenetega & C. B. Ubah ‘Effectiveness of Quantitative Monetary Policy Implementation in the Success of Full Employment in Nigeria: 1986-2018’, **Asian Journal of Economics, Business and Accounting**, 21(4), 2021, 38–56.
48. M. Saeed ‘The Effects of Monetary Policy on Poverty Alleviation in Pakistan’, **Journal of Research & Reviews in Social Sciences Pakistan**. 3(1), 2020, 624–638.
49. F. O. Aribaba, J. O. Adedokun, R. Oladele, A. D. Babatunde, A. O. Ahmodu & S. A. Olasshinde ‘Financial Inclusion Scheme and Poverty Alleviation in Nigeria (2004 – 2019)’, **ACTA UNIVERSITATIS DANUBIUS**, 16(4), 2020, 220–233.
50. M. Waziri ‘An Assessment of the Impact of Microcredit Programs on Poverty Alleviation’, **Management Research Spectrum**, 9(2), 2019, 35-38.
51. F. Fagbemi, F. B. Oladejo, & O. A. Adeosun ‘The Effectiveness of Poverty Alleviation Policy: Why Is the Quality of Institutions the Bane in Nigeria?’, **Review of Development and Change**, 2020, 1–22. <https://doi.org/10.1177/0972266120975262>.
52. A. Leroy & M. El-Herradi ‘Monetary Policy and Food Prices’ 2023, 1-9. <https://ssrn.com/abstract=4614805>

53. A. R. Ajisafe, T. F. Ajide & F. Akinkuotu ‘*Dynamics Among Financial Inclusion, Monetary Policy, and Poverty Reduction in Nigeria*’, **International Journal of Social Sciences, Management and Engineering**, 2(1), 2018, 49-64.
54. A. Y. Nsiah, H. Yusif, G. Tweneboah, K. Agyei & S. T. Baidoo ‘*The effect of financial inclusion on poverty reduction in Sub-Sahara Africa: Does threshold matter?*’, **Cogent Social Sciences**, 7(1), 2021, 1-17.
55. P. O. Eke ‘*An Assessment of Central Banking on Employment and Poverty: The Case of Nigeria*’, **Journal of Management Info**, 9(1), 2022, 20 – 37.
56. O. E. Maku, A. T., Tella, & A. C. Fagbohun ‘*Alleviating Poverty in Nigeria: Keynesian Vs Monetary Theory of Poverty*’, **Studia Universitatis Economics Series**, 30(1), 2020, 103–120.
57. A. A. Tanjung, M. Daulay, Irsad, D. Ruslan ‘*The Impact of Monetary and Fiscal Policy on Poverty in Indonesia*’, **Journal of Applied Economic Sciences**, 14.4(66), 2019, 1068-1073. [https://doi.org/10.14505/jaes.v14.4\(66\).12](https://doi.org/10.14505/jaes.v14.4(66).12)
58. A. R., Adediyin & B. O. Omo-Ikirodah ‘*Fiscal and Monetary Policy Adjustment and Economic Freedom for Poverty Alleviation in Nigeria*’, **Iranian Economic Review**, 27(1), 2023, 201-217. <https://doi.org/10.22059/ier.2021.81925>
59. X. Kuang, H. Liu, G. Guo & H. Cheng ‘*The nonlinear effect of financial and fiscal policies on poverty alleviation in China—An empirical analysis of Chinese 382 impoverished counties with PSTR models*’, **PLOS ONE**, 14(11), 1-19.
60. C. E. Onwuka ‘*The Impact of Fiscal and Monetary Policy on Unemployment Rate in Nigeria*’, 2020, 1–20. <https://ssrn.com/abstract=3959996>

Chapter Three

Methodology

3.0 Preamble

The methodology of this study is presented in a way to explain the empirical modelling and estimation approaches used to estimate the parameters. The discussion under this chapter is divided into four different sections. The first section expresses the empirical modelling specified in line with the specific objectives of the study. In the second section, the theoretical expectation is presented to explain the a-priori presumptions between the variables in the model specifications. The third part provides the estimation techniques used to estimate the coefficients while the last part reveals the data sources and measurements.

3.1 Model Specification

A multivariate model is adopted in this study because it allows for the introduction of other variables to determine the links between the independent and dependent variables, providing a powerful test of significance and/or specify the conditions under which the association takes place, this allows for a richer, realistic and reliable picture than a single variable model. This study adopts a unique model by including a disaggregation of fiscal policy variables (government expenditure on health, education and tax revenue) and monetary policy variables (Monetary policy rate and interest rate) as independent variables and poverty level as the main

dependent variable. However, exchange rate, inflation rate, unemployment rate, GDP growth rate and GDP per capita are incorporated into the model as independent variables; being other factors that could have an impact on poverty rate, in the scope covered in the study. Hence, these variables are introduced, in an attempt to reduce the error term in the model, as well as its usefulness in the robustness of the study, modeling them in line with the theoretical framework and objectives of the study. The model of this research is developed from¹. In Keynesian theory, fiscal policy is a demand-side instrument. The government affects aggregated demand directly through its expenditure and indirectly by taxation. The economic model is specified thus:

$$POV = f(FP) \quad (3.1)$$

Where: POV = Poverty index; FP = Fiscal policy.

This study however disaggregates fiscal policy (FP) into: government expenditure on health, education and tax revenue. It is then re-specified thus:

$$POV = f(GEXPH, GEXPE, TXR) \quad (3.2)$$

Where: POV = Poverty index; GEXPH = Government expenditure on health;

GEXPE = Government expenditure on education; TXR = Tax revenue.

In addition, the monetarist theory sees government spending as having a significant supply-side effect but no demand-side function unless it activates changes in monetary measures¹. They, however, believe in the power of money supply to boost the economy as well as deduce that

monetary policy will have a direct effect on poverty. Therefore, the economic model is specified

as:

$$POV = f(MP) \quad (3.3)$$

Where: POV = Poverty index; MP = Monetary policy.

Likewise, this study disaggregates monetary policy (MP) into; interest rate and monetary policy rate. It is then respecified as thus:

$$POV = f(INT, MPR) \quad (3.4)$$

Where: POV = Poverty index; INT = Interest rate and MPR= Monetary policy rate. Some scholars, support that there are lots of potential determinants of poverty^{2,3}. Some of which this study adopt based on data availability and level of importance of the researcher. Consequently, the model of poverty based on its potential determinant is specified thus:

$$POV = f(EXR, INF, GDPG, GP) \quad (3.5)$$

Where: POV-Poverty index; EXR-Exchange rate; INF-Inflation rate; UNEMP-Unemployment rate; GDPG-GDP growth rate; CORRUPT-Corruption index; GEFT-Government effectiveness.

However, merging all equations, the model is re-specified thus:

$$POV = f(GEXPH, GEXPE, TXR, INT, MPR, EXR, INF, GDPG, GP) \quad (3.6)$$

In its functional form:

iv. Fiscal Policy: Poverty Model

$$POV = \alpha + \beta_1 GEXPH_{it} + \beta_2 GEXPE_{it} + \beta_3 TXR_{it} + \beta_4 EXR_{it} + \beta_5 INF_{it} + \beta_6 GDPG_{it} + \beta_7 GP + \varepsilon_t \quad (3.7)$$

$$\beta_1 < 0, \beta_2 < 0, \beta_3 < \text{or } > 0, \beta_4 > 0, \beta_5 > 0, \beta_6 < 0, \beta_7 < 0$$

v. Monetary Policy: Poverty Model

$$POV = \alpha + \beta_1 INT_{it} + \beta_2 MPR_{it} + \beta_3 EXR_{it} + \beta_4 INF_{it} + \beta_5 GDPG_{it} + \beta_6 GP + \varepsilon_t \quad (3.8)$$

$$\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 < 0, \beta_6 < 0$$

(3) Fiscal, Monetary Policy: Poverty Model

$$POV = \alpha + \beta_1 GHM_{it} + \beta_2 GHI_{it} + \beta_3 GEM_{it} + \beta_4 GEI_{it} + \beta_5 TXM_{it} + \beta_6 TXI_{it} + \beta_7 EXR_{it} + \beta_8 INF_{it} + \beta_9 GDPG_{it} + \beta_{10} GP + \varepsilon_t \quad (3.9)$$

Where: POV = Poverty index; GHM = A mix of government expenditure on health and monetary policy rate; GHI = A mix of government expenditure on health and interest rate; GEM = A mix of government expenditure on education and monetary policy rate ; GEI = A mix of government expenditure on education and interest rate and TXM = A mix of tax revenue and monetary policy rate; TXI = A mix of tax revenue and interest rate; EXR = Exchange rate; INF = Inflation rate; GDPG = GDP growth rate; GP = GDP per capita.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}$ = coefficients of the independent variable.

3.2 Description and Measurement of Data

The variables and data employed in this study include: disaggregation of fiscal policy variables (government expenditure on health, government expenditure on education and tax revenue) and monetary policy variables (interest rate and monetary policy rate) as independent variables and poverty level as the main dependent variable. However, inflation rate, exchange rate, unemployment rate, GDP growth rate and GDP per capita are incorporated into the model as independent variables; being other factors that could have an impact on poverty rate. The study focused on Nigeria as a whole, spanning a period of 1980 to 2021. The annual time series data for Nigeria from 1980 to 2021 has its source from the World Bank Development Indicator (WDI), published by the World Bank and the International Financial Statistics (IFS) published by International Monetary Fund (IMF) the reason being the reliability of the data sources and the number of countries involved in the research work.

Table 3.1 Data Description, Measurement and Sources of Data

Variables	Description	Measurement	Data Source
<i>GEXPH</i>	This is investment on human capital that foster economic growth, enhance productivity, contribute to personal and social development and lessen social inequality. It also includes expenditure funded by transfers from foreign sources to government.	General government expenditure on health (current, capital, and transfers) expressed as a percentage of GDP.	WDI (2022)
<i>GEXPE</i>	This indicator is defined as the level of total expenditure on education expressed as a percentage of GDP, where GDP is the value of all final goods and services within a nation in a given year.	Current education expenditure total (percentage of GDP).	WDI (2022)
<i>TXR</i>	It is the income gained by the government through taxation. It forms part of the receipt budget. It is the result of tax rate application to a tax base.	Tax Revenue (% of GDP)	WDI (2022)

<i>INT</i>	An interest rate is the amount of interest that is due per period, as a proportion of the amount lent, deposited or borrowed	Lending interest rate as a percentage.	WDI (2022)
<i>MPR</i>	This is an interest rate that the monetary authority (the central bank) sets in order to influence the evolution of the main monetary variables in the economy. It is the rate at which the central bank is willing to lend money to commercial banks.	Monetary Policy Rate	CBN (2022)
<i>EXR</i>	This is the rate at which one currency will be exchanged for another. It can also be said to mean the value of one's currency in relation to another currency.	Percentage change in the official exchange rate of the Naira (₦/US\$1.00).	WDI (2022)
<i>INF</i>	Inflation is measured as the percentage change in general price level using 2005 as the base year.	It is measured as an annual rate of consumer price index.	WDI (2022)
<i>GDPG</i>	This compares the year-to-year change in a country's economic output to measure how fast an economy is growing	GDP growth (annual percentage)	WDI (2022)

<i>POV</i>	This measures the ratio of the number of people (in a given age group) whose income falls below the poverty line; taken as half the median household income of the total population	Poverty, percent of population	OECD
<i>GP</i>	This shows a country's GDP divided by the total population. It is often considered as a measurement for a country's standard of living.	GDP Per capita index	WDI (2022)

Source: Author (2023).

3.3 Estimation Techniques

To investigate the impact of fiscal and monetary policy on poverty alleviation in Nigeria, this study adopts a three-phases method of analysis. The first is the preliminary analysis/test; the second phase includes the model estimation proper while the third phase reveals various diagnostic tests of the model estimated to enhance its interpretation.

3.3.1 Pre-Estimation Test

The preliminary analysis involves the following: descriptive statistics, pre-estimation test Unit, root test and co-integration test as the need may arise. Descriptive statistics is done in other to carry out a firsthand view of the features of the variables. This includes the mean, median,

standard deviation, kurtosis, skewness, Jarque-Bera and so on. The graphical representation is done to have a cursory assessment of the trends of the variables over time and finally, the unit root test/co-integration test is carried out to check for the stationarity of the variables as well as the short or long run relationship respectively.

Unit-Root Tests

The specification and estimation of the models requires that we test the time series properties of the data in order to determine whether the variables contain integrated components, hence, before estimating the parameters, the study examines the stationarity of the variables by testing the unit squares developed by Dickey-Fuller. The alternative of the Dickey-Fuller test is the Augmented Dickey-Fuller (ADF) test which tried to reduce autocorrelation⁴. The unit root test was employed because in the literature most time series variables are non-stationary and using non-stationary variables in the model might lead to a spurious regression. This test consists of regression of the first difference of time-series data on the lag variable, lagged difference terms, constant and trend variable. The ADF is based on regression model:

$$y_t = \alpha y_{t-1} + e_t$$

Subtracting y_{t-1} from both sides, we have

$$y_t - y_{t-1} = \alpha y_{t-1} - y_{t-1} + e_t$$

$$\Delta y_t = (\alpha - 1)y_{t-1} + e_t$$

$$\Delta y_t = \gamma y_{t-1} + e_t$$

Where γ is $(\alpha - 1)$

The null hypothesis $H_0: \gamma = 0$

The alternative that $H_1: \gamma < 0$.

(If $H_0: \gamma = 0$ is rejected in favour of $H_1: \gamma < 0$, it is concluded that the series y is stationary).

Co-integration Test

The study tests for the co-integration of the variables depending on the results of the stationarity of the variables. This test is a statistical method used to test the correlation between two or more non-stationary time series in the long run. Also, to test whether the residual regression is stationary or not as well as know whether in the long term there is a connection between the independent variable and dependent variable (by using Engle-Granger test).

3.3.2 ARDL Estimation Test

This study adopted the autoregressive distributed lag (ARDL), to estimate the short-run and long-run relationship between fiscal policy, monetary policy and poverty alleviation in Nigeria.

This accrues to some of the advantages that this estimation technique has over others. Some of which is; it encourages a small sample size, welcomes variables with stationarity level of with $I(0)$ or $I(1)$, likewise, both the long and short run estimates can be derived simultaneously. The

lag length is selected using the Akaike information criteria (AIC). The calculated F-statistic value is used to make the decision about the co-integration. The decision criteria support co-integration if the calculated value is greater than the upper bound value; no co-integration if the value is lesser than the lower bound value; and inconclusive if the value lies between the two bounds values. Thus, the ARDL equation model of poverty as the dependent variable with fiscal policy variables, monetary policy variables and other independent variables is given below:

$$\begin{aligned}
 POV_t = & \alpha_0 + \beta_1 POV_{t-1} + \beta_2 GEXPH_{t-1} + \beta_3 GEXPE_{t-1} + \beta_4 TXR_{t-1} + \beta_5 INT_{t-1} + \beta_6 MPR_{t-1} + \\
 & \beta_7 EXR_{t-1} + \beta_8 INF_{t-1} + \beta_9 GDPG_{t-1} + \beta_{10} GP_{t-1} + \sum_{i=1}^p \alpha_{1i} POV_{t-i} + \sum_{i=1}^q \alpha_{2i} GEXPH_{t-i} + \sum_{i=1}^r \alpha_{3i} GEXPE_{t-} \\
 & i + \sum_{i=1}^s \alpha_{4i} TXR_{t-i} + \sum_{i=1}^t \alpha_{5i} INT_{t-i} + \sum_{i=1}^u \alpha_{6i} EXR_{t-i} + \sum_{i=1}^v \alpha_{7i} EXR_{t-i} + \sum_{i=1}^w \alpha_{8i} INF_{t-i} + \sum_{i=1}^x \alpha_{9i} GDPG_{t-i} \\
 & + \sum_{i=1}^y \alpha_{10i} GP_{t-i} + \varepsilon_t
 \end{aligned}$$

In this equation, $\alpha_{1i} - \alpha_{11i}$ are the coefficient of the model's short run-dynamics merging to equilibrium, α denotes the speed of adjustment while ε is the usual random disturbance term.

ARDL models and its related ECM were estimated using OLS method. This has provided the basis for measuring the behaviour of the variables at the short-run and the speed of adjustment back to the long run steady position after a shock.

3.3.3 Post-Estimation Technique

This is basically the diagnostic test where the estimated ARDL model is tested for heteroscedasticity, serial correlation, functional form misspecification, parameter stability and normality.

Do Not Copy, Lead City University, Nigeria

Endnotes

1. E. Maku, & O. Y. Alimi '*Fiscal Policy Tools, Employment Generation and Sustainable Development in Nigeria*', **ACTA UNIVERSITATIS DANUBIUS**, 14(3), 2018, 186–199.
2. D. Morris '*The Physical Quality of life index and the Human Development Index*', 1979, 1-14. www.cbn.gov.ng/efrvol39-4-5
3. A. Sen '*Poor, Relatively Speaking*', **Oxford Economic Papers**, 35(2), 1983, 153–169.
4. A. A. Tanjung, M. Daulay, Irsad, D. Ruslan '*The Impact of Monetary and Fiscal Policy on Poverty in Indonesia*', **Journal of Applied Economic Sciences**, 14.4(66), 2019, 1068-1073. [https://doi.org/10.14505/jaes.v14.4\(66\).12](https://doi.org/10.14505/jaes.v14.4(66).12)

Chapter Four

Results and Discussion of Findings

4.0 Preamble

This chapter is dedicated to the presentation and analysis of the empirical analysis results, encompassing six sections. Section two describes the data used in the study, including descriptive statistics. Section three focuses on the correlation analysis, while section four presents the outcomes of the Augmented Dickey-Fuller (ADF) and Phillip Perron (PP) unit root tests. In section five, the results of the ARDL Bounds test for cointegration are discussed, followed by the interpretation of the short-run and long-run ARDL analysis in section six. The final section addresses the post-estimation test, providing a comprehensive and coherent examination of the research findings.

4.1 Descriptive Analysis

In this section, a thorough and detailed account of the data relating to all the variables employed in the study is presented. Particular attention is given to essential statistical indicators, including the mean, median, and standard deviation, for each of the ten variables under examination. The comprehensive description aims to offer a clear and informative overview of the dataset, laying the foundation for further analysis and interpretation of the research findings.

Table 4.1: Descriptive Statistics

	<i>POV</i>	<i>GEXPH</i>	<i>GEXPE</i>	<i>TXR</i>	<i>INT</i>	<i>MPR</i>	<i>EXR</i>	<i>INF</i>	<i>GDPG</i>	<i>GP</i>
Mean	53.89	96.83	159.90	1467.17	2.55	13.45	131.30	19.08	4.09	270887.3
Median	54.60	33.73	70.64	762.41	4.43	13.5	100.26	12.72	4.21	245112.9
Maximum	66.9	423.33	646.75	3905.38	18.18	26	536.89	72.84	15.33	379251.6
Minimum	40.1	0.04	0.20	4.40	-31.45	6	49.75	5.39	-2.04	199311.3
Std. Dev.	6.75	126.04	196.73	1527.47	9.69	3.75	104.70	17.21	3.91	66871.5
Skewness	-0.08	1.23	1.14	0.42	-1.24	0.88	2.71	1.81	0.47	0.35
Kurtosis	2.46	3.35	3.08	1.46	5.50	5.09	10.03	4.99	3.31	1.434
Jarque-Bera	0.51	9.83	8.18	4.89	19.63	11.78	124.49	26.90	1.56	4.67
Probability	0.774	0.007	0.017	0.087	0.000	0.003	0	0.000	0.460	0.097
Sum	2047.79	3679.40	6076.99	55752.6	97.06	511	4989.26	725.19	155.56	1029377
Sq. Dev.	1684.71	587804.4	1432003	8632734	3470.92	520.40	4055549	10952.3	564.65	1.65E+1
Obs.	38	38	38	38	38	38	38	38	38	38

Source: Author's Computation (2023) using E-Views 10

Table 4.1 presents the descriptive statistics, facilitating a comprehensive grasp of the dataset. The descriptive analysis of the dataset yields significant insights into both the dependent variable, namely the poverty rate (POV), and the array of independent variables, including Government expenditure on health (GEXPH), Government expenditure on education (GEXPE), Tax rate (TXR), Interest rate (INT), Monetary policy rate (MPR), GDP growth (GDPG), Inflation rate (INF), Exchange rate (EXR), and GDP per capita (GP). The mean poverty rate is computed at approximately 53.89%, with a median value of 54.60%, indicating a relatively symmetrical

distribution. The observed poverty rates vary substantially, ranging from a minimum of 40.1% to a maximum of 66.9%, thereby highlighting notable disparities in poverty levels among the data points. The standard deviation of 6.75 reflects the degree of dispersion around the mean poverty rate. Notably, the skewness value of -0.08 indicates a slight deviation from a perfectly symmetrical distribution, and the kurtosis value of 2.45 suggests a moderate peakedness in the distribution. However, the results of the Jarque-Bera test reveal a departure from normality in the poverty rate distribution. Shifting focus to the independent variables, Government expenditure on health (GEXPH) exhibits the highest standard deviation of 126.04, underscoring significant variability in health expenditure across the dataset. These comprehensive descriptive statistics serve as a vital groundwork for subsequent in-depth analyses and interpretations, aimed at exploring the intricate relationships between the variables in the ensuing sections.

4.2 Correlation Analysis

The correlation analysis reveals the relationships between the dependent variable, the poverty rate (POV), and the independent variables: Government expenditure on health (GEXPH), Government expenditure on education (GEXPE), Tax rate (TXR), Interest rate (INT), Monetary policy rate (MPR), GDP growth (GDPG), Inflation rate (INF), Exchange rate (EXR), and GDP per capita (GP). The poverty rate (POV) exhibits negative correlations with Government expenditure on health (GEXPH) and Government expenditure on education (GEXPE), indicating

that higher spending on these sectors is associated with lower poverty rates. Additionally, the poverty rate (POV) shows negative correlations with the Tax rate (TXR) and Interest rate (INT), suggesting that higher tax and interest rates are linked to lower poverty levels.

On the other hand, the Monetary policy rate (MPR) displays a positive correlation with the poverty rate (POV), indicating that higher monetary policy rates coincide with higher poverty rates. Moreover, the Exchange rate (EXR) demonstrates a negative correlation with the poverty rate (POV), suggesting that a stronger exchange rate may be associated with reduced poverty levels. However, the Inflation rate (INF) and GDP growth (GDPG) show relatively weak correlations with the poverty rate (POV). These variables appear to have a limited impact on poverty rates compared to other factors. Lastly, GDP per capita (GP) exhibits a negative correlation with the poverty rate (POV), implying that higher GDP per capita is linked to lower poverty rates. In summary, these correlation coefficients offer valuable insights into the potential relationships between the variables, providing a basis for further examination and interpretation in the context of the research objectives.

Table 4.2: Correlation Matrix

	<i>pov</i>	<i>gexph</i>	<i>gexpe</i>	<i>txr</i>	<i>int</i>	<i>mpr</i>	<i>exr</i>	<i>inf</i>	<i>gdp</i>	<i>gp</i>
<i>Pov</i>	1									
<i>Gexph</i>	-0.37524	1								
<i>Gexpe</i>	-0.34748	0.991423	1							
<i>Txr</i>	-0.24653	0.885991	0.906808	1						
<i>Int</i>	-0.0036	0.295406	0.299705	0.38913	1					
<i>Mpr</i>	0.289413	-0.25824	-0.25841	-0.42314	-0.18708	1				
<i>Exr</i>	-0.24398	-0.16412	-0.17576	-0.23003	0.073226	-0.33956	1			
<i>Inf</i>	0.034594	-0.29791	-0.31361	-0.38939	-0.77639	0.388543	-0.137	1		
<i>Gdp</i>	0.222946	-0.16542	-0.13906	0.064638	0.298494	-0.1268	-0.223	-0.310	1	
<i>Gp</i>	-0.19894	0.853604	0.866848	0.967926	0.401775	-0.38228	-0.267	-0.374	0.068748	1

Source: Author's Computation (2023) using E-Views 10

The correlation analysis reveals the relationships between the dependent variable, the poverty rate (POV), and the independent variables: Government expenditure on health (GEXPH), Government expenditure on education (GEXPE), Tax rate (TXR), Interest rate (INT), Monetary policy rate (MPR), GDP growth (GDPG), Inflation rate (INF), Exchange rate (EXR), and GDP per capita (GP). The poverty rate (POV) exhibits negative correlations with Government expenditure on health (GEXPH) and Government expenditure on education (GEXPE), indicating that higher spending on these sectors is associated with lower poverty rates. Additionally, the poverty rate (POV) shows negative correlations with the Tax rate (TXR) and Interest rate (INT), suggesting that higher tax and interest rates are linked to lower poverty levels.

On the other hand, the Monetary policy rate (MPR) displays a positive correlation with the poverty rate (POV), indicating that higher monetary policy rates coincide with higher poverty rates. Moreover, the Exchange rate (EXR) demonstrates a negative correlation with the poverty rate (POV), suggesting that a stronger exchange rate may be associated with reduced poverty levels. However, the Inflation rate (INF) and GDP growth (GDPG) show relatively weak correlations with the poverty rate (POV). These variables appear to have a limited impact on poverty rates compared to other factors. Lastly, GDP per capita (GP) exhibits a negative correlation with the poverty rate (POV), implying that higher GDP per capita is linked to lower poverty rates. In summary, these correlation coefficients offer valuable insights into the potential relationships between the variables, providing a basis for further examination and interpretation in the context of the research objectives.

4.3 Unit Root Test

The table above presents the results of the unit root for ADF and PP. The Unit Root analysis investigates the order of integration for the variables, distinguishing between those integrated of order one $I(1)$ and those integrated of order zero $I(0)$. The results indicate that the poverty rate (POV), Government expenditure on health (GEXPH), Government expenditure on education (GEXPE), Tax rate (TXR), GDP per capita (GP), and GDP growth (GDPG) are integrated of order one $I(1)$, implying that these variables are non-stationary in their levels but stationary in

their first differences. Additionally, the Interest rate (INT) and Monetary policy rate (MPR) are integrated of order zero $I(0)$, suggesting that these variables are stationary in their levels. Furthermore, the Exchange rate (EXR) and Inflation rate (INF) also exhibit integration of order zero $I(0)$, indicating stationarity in their levels.

The findings suggest that the poverty rate, government expenditures on health and education, tax rate, GDP per capita, and GDP growth are characterized by persistent trends, necessitating first differencing to achieve stationarity. Conversely, the interest rate and monetary policy rate, as well as the exchange rate and inflation rate, exhibit stationarity without the need for differencing. These unit root analysis results hold significance for further econometric modelling, as they inform the selection of appropriate time-series models and help ensure the robustness of the statistical analyses conducted in the subsequent stages of the research.

Table 4.3: Unit Root Test Results

Variables	At Levels		First difference		Order of Integration
	ADF	PP	ADF	PP	
<i>Pov</i>	-2.16	-2.09	-7.07***	-7.21***	I (1)
<i>Gexph</i>	-1.36	-1.77	-9.99***	-15.06***	I (1)
<i>Gexpe</i>	-2.83*	-2.11	-7.67***	-9.34***	I (1)
<i>Txr</i>	-2.68*	-2.44	-2.68**	-4.56***	I (1)
<i>Int</i>	-6.21***	-6.21***	-	-	I (0)
<i>Gp</i>	-0.59	-0.67	-4.10**	-4.02**	I (1)
<i>Mpr</i>	-2.81*	-2.82*	-	-	I (0)
<i>Exr</i>	-4.68***	-3.52**	-	-	I (0)
<i>Inf</i>	-3.13**	-2.97**	-	-	I (0)
<i>Gdpd</i>	-1.99	-5.66***	-2.32**	-29.64***	I (1)

Note: ***, ** & * denotes 1%, 5%, and 10% level of significance respectively.

Source: Author's Computation (2023) using E-Views 10

4.4 Co-integration Analysis

In the context of the study exploring the impact of fiscal policy on poverty in Nigeria, the co-integration analysis aims to ascertain whether there exists a long-run relationship among the variables under investigation. The null hypothesis tested is that there is no long-run relationship between the variables. The obtained T-statistics value of 3.82 and the corresponding F-statistics value of 5 play a crucial role in assessing the significance of the co-integration relationship.

Table 4.4 Model 1: Fiscal Policy Co-integration Analysis

Null hypothesis: no long-run relationship		
T-statistics	Value	K
F-statistics	3.82	5
Critical Value Bound		
Significance	I (0)	I(1)
10%	2.08	3
5%	2.39	3.38
2.50%	2.7	3.73
1%	3.06	4.15

Source: Authors Computation (2023) using E-Views 10

To evaluate the significance of the co-integration relationship, critical value bounds are considered at different significance levels. At a 10% significance level, the critical values for I(0) and I(1) are 2.08 and 3, respectively. At a 5% significance level, the critical values are 2.39 for I(0) and 3.38 for I(1). For a more stringent significance level of 2.50%, the critical values are 2.7 for I(0) and 3.73 for I(1). Finally, at the 1% significance level, the critical values are 3.06 for I(0) and 4.15 for I(1). The results reveal that the F-statistics value of 3.82 exceeds the critical values for both I(0) and I(1) at all considered significance levels. Additionally, the degrees of freedom (K) of 5 also support the presence of a co-integration relationship among the variables. As a

result, the null hypothesis of no long-run relationship between the variables is rejected. The analysis provides robust evidence of a significant co-integration relationship, suggesting that the variables are interconnected in the long run. These findings are of utmost importance for policymakers and researchers, as they indicate the presence of sustainable and enduring relationships between fiscal policy measures and poverty levels in Nigeria. The identified co-integration can inform the formulation of effective fiscal strategies to address poverty-related challenges and foster inclusive economic growth in the country. Moreover, this analysis contributes to the existing body of knowledge in the field of fiscal policy and poverty reduction, providing valuable insights for future research and policy formulation to enhance socio-economic well-being in Nigeria.

Table 4.5 Model 2: Monetary Policy Co-integration Analysis

Null hypothesis: no long-run relationship		
T-statistics	Value	K
F-statistics	1.33	4
Critical Value Bound		
Significance	I (0)	I (1)
10%	2.2	3.09
5%	2.56	3.49
2.50%	2.88	3.87
1%	3.29	4.37

Source: Author's Computation (2023) using E-Views 10

In the study examining the impact of monetary policy on poverty in Nigeria, the co-integration analysis aims to determine whether there exists a long-run relationship among the variables under investigation. The null hypothesis being tested is that there is no long-run relationship between the variables. The F-statistics value of 1.33 and the corresponding degrees of freedom (K) of 4 play a crucial role in assessing the significance of the co-integration relationship. To evaluate the significance of the co-integration relationship, critical value bounds are considered at various significance levels. At a 10% significance level, the critical values for I(0) and I(1) are 2.2 and 3.09, respectively. At a 5% significance level, the critical values are 2.56 for I(0) and 3.49 for I(1). For a more stringent significance level of 2.50%, the critical values are 2.88 for I(0)

and 3.87 for I(1). Finally, at the 1% significance level, the critical values are 3.29 for I(0) and 4.37 for I(1). The results indicate that the F-statistics value of 1.33 does not exceed the critical values at any of the considered significance levels, while the T-statistics value of 4 exceeds the critical values for I (0) and I (1) at all significance levels.

As a result, the null hypothesis of no long-run relationship between the variables cannot be rejected based on the F-statistics value, but it can be rejected based on the T-statistics value. The analysis provides limited evidence of a significant co-integration relationship between monetary policy and poverty in Nigeria. This suggests that while the F-statistics do not support the presence of co-integration, the T-statistics indicate the possibility of a long-run relationship between these variables. These findings carry implications for policy-makers and researchers, signalling the need for further investigation and robustness checks. Additional research could explore alternative methodologies or consider a more extended time period to provide more conclusive insights into the long-run relationship between monetary policy and poverty in Nigeria. By gaining a deeper understanding of this relationship, policymakers can design more effective monetary policy measures to address poverty-related challenges and foster sustainable economic development in the country. The analysis contributes to the ongoing discourse on monetary policy and its potential impact on poverty alleviation in Nigeria, providing a foundation for future research endeavours and informed policy decisions.

Table 4.6 Model 3: Mixed Policy Co-integration Analysis

Test Statistics	Value	K
F-statistics	3.04	4

Critical Value Bounds		
Significance	I (0) Bound	I (1) Bound
10%	2.2	3.09
5%	2.56	3.49
2.50%	2.88	3.87
1%	3.29	4.37

Source: Author's Computation (2023) using E-Views 10

This co-integration analysis serves as a methodical endeavor to elucidate the intricate relationship between variables through rigorous statistical examination. Central to this endeavor is the F-statistic, registering a value of 3.04. This metric assumes a pivotal role in assessing the presence of a sustained and meaningful linkage between the variables under scrutiny. However, the interpretation of the F-statistic's significance necessitates the utilization of critical value boundaries. These thresholds demarcate the extent of statistical significance required to establish a substantial relationship at varying levels of confidence. Specifically, significance levels of 10%, 5%, 2.50%, and 1% are considered, each corresponding to distinct critical values. For instance, at a 10% significance level, the F-statistic would need to exceed 3.09 to attain statistical

significance. Similar considerations apply to the 5%, 2.50%, and 1% levels, each entailing specific upper and lower bounds.

Upon a meticulous evaluation of the F-statistic vis-à-vis the prescribed critical values, it becomes evident that the F-statistic falls below the established thresholds of 3.29 (lower), 3.49 (upper), 3.87 (upper), and 4.37 (upper). This outcome underscores that the calculated F-statistic fails to attain the requisite significance to affirm a robust co-integrating relationship between the variables. In essence, this analysis implies that the observed variables may not exhibit a durable, steadfast connection over the examined time frame. Hence, this study warrants cautious interpretation, casting doubt on the enduring nature of the relationship between the variables within the current empirical context.

4.5 Presentation of ARDL Results

This subsection presents the result obtained from estimating the ARDL model of the previous chapter. In order to ensure a proper insight into the impact of economic policies on poverty alleviation in Nigeria, all three models are estimated. The results are presented below;

Table 4.7 Model 1: ARDL Estimation of Fiscal Policy and Poverty

PANEL A: Short-run Estimates

Variable	Coefficient	Std. Error
Δ (LPOV (-1))	-0.4**	0.11
Δ (LPOV (-2))	-0.88**	0.16
Δ (LPOV (-3))	-1.22***	0.18
Δ (LGEXPH)	-0.51*	0.11
Δ (LGEXPH (-1))	1.12***	0.15
Δ (LGEXPH (-2))	1.11***	0.14
Δ (LGEXPH(-3))	0.30**	0.06
Δ (LGEXPE)	0.59**	0.11
Δ (LGEXPE(-1))	-0.89**	0.13
Δ (LGEXPE(-2))	-1.01***	0.13
Δ (LGEXPE(-3))	-0.24***	0.05
Δ (LTXR)	-0.01	0.07
Δ (LTXR(-1))	-0.33**	0.08
Δ (LTXR(-2))	-0.08	0.1
Δ (LTXR(-3))	-0.80***	0.13
Δ (LINF)	0.19***	0.04
Δ (LINF(-1))	0.36***	0.05
Δ (LINF(-2))	0.07	0.04
Δ (LINF(-3))	0.25***	0.04
Δ (LEXR)	0.16**	0.05
Δ (LEXR(-1))	0.35***	0.07
Δ (LEXR(-2))	0.28***	0.06
CointEq(-1)*	-0.21***	0.03

Adjusted R-squared: 0.75

PANEL B: Long-Run Estimates

Variable	Coefficient	Std. Error
LGEXPH	-10.95796	13.81738
LGEXPE	9.451023	11.82589
LTXR	2.527301	3.245877
LINF	-1.101934	1.670122
LEXR	0.345357	0.775543

Note: ***, **, &* indicates 1%, 5% and 10% level of significance respectively

Source: Author's Computation (2023) using E-Views 10

The ARDL short-run analysis investigates the dynamic relationships between the dependent variable, the poverty rate (POV), and the array of independent variables: Government expenditure on health (GEXPH), Government expenditure on education (GEXPE), Tax rate (TXR), Inflation rate (INF) and Exchange rate (EXR). The coefficients estimated for the lagged differences of the variables provide valuable insights into the short-term interactions among the variables. The results indicate that the lagged differences of the poverty rate ($\Delta(LPOV)$) have significant negative coefficients, with -0.4^{**} , -0.88^{**} , and -1.22^{***} for lag 1, lag 2, and lag 3, respectively. This implies that the poverty rate exhibits a significant response to its own past values, indicating persistence in poverty levels over time. Additionally, the lagged differences of Government expenditure on health ($\Delta(LGEXPH)$) and Government expenditure on education ($\Delta(LGEXPE)$) exhibit noteworthy effects on the poverty rate (POV). $\Delta(LGEXPH)$ has a significant negative coefficient of -0.51^{*} , while $\Delta(LGEXPH (-1))$ and $\Delta(LGEXPH (-2))$ have

significant positive coefficients of 1.12*** and 1.11***, respectively. Similarly, $\Delta(\text{LGEXPE})$ has a significant positive coefficient of 0.59**, and $\Delta(\text{LGEXPE}(-1))$ and $\Delta(\text{LGEXPE}(-2))$ have significant negative coefficients of -0.89** and -1.01***, respectively. These results suggest that changes in government expenditures on health and education have both short-term positive and negative impacts on poverty rates.

Furthermore, the lagged differences of the Tax rate ($\Delta(\text{LTXR})$) and Inflation rate ($\Delta(\text{LINF})$) have significant effects on the poverty rate (POV). $\Delta(\text{LTXR}(-1))$ has a significant negative coefficient of -0.33**, indicating that changes in tax rates in the previous period influence poverty levels. $\Delta(\text{LINF})$ and $\Delta(\text{LINF}(-1))$ have significant positive coefficients of 0.19*** and 0.36***, respectively, suggesting that recent changes in inflation also affect poverty rates. Moreover, the lagged differences of the Exchange rate ($\Delta(\text{LEXR})$) exhibit a significant positive coefficient of 0.16**, indicating that changes in the exchange rate have a short-term impact on poverty levels.

In summary, the ARDL short-run model yields an adjusted R-squared value of 0.75, indicating that approximately 75% of the variation in the poverty rate (POV) can be explained by the short-term dynamics of the independent variables considered in the analysis. These findings provide valuable insights into the short-term relationships between poverty and the selected independent variables, contributing to a comprehensive understanding of poverty dynamics in the studied context.

Table 4.8 Model 1: ARDL Estimation Result of Monetary Policy and Poverty

Variable	Coefficient	Std. Error
$\Delta(\text{MPR})$	-0.004	0.004
$\Delta(\text{MPR}(-1))$	0.063	0.005
$\Delta(\text{MPR}(-2))$	-0.002	0.004
$\Delta(\text{MPR}(-3))$	0.008**	0.004
CointEq(-1)*	-0.249**	0.08

Adjusted R-squared: 0.30

Note: ***, **, and * indicates at 1%, 5% and 10% level of significance respectively

Source: Author's Computation (2023) using E-Views 10

The ARDL short-run analysis examines the dynamic relationships between the dependent variable, the poverty rate (POV), and the specified independent variables: Interest rate (INT), Monetary policy rate (MPR), GDP growth (GDPG), Inflation rate (INF), Exchange rate (EXR), and GDP per capita (GP). The estimated coefficients for the lagged differences of the variables provide valuable insights into the short-term interactions among them. The results indicate that the lagged differences of the Monetary policy rate ($\Delta(\text{MPR})$) have relatively small and statistically insignificant coefficients. $\Delta(\text{MPR})$ has a coefficient of -0.004, $\Delta(\text{MPR}(-1))$ has a coefficient of 0.063, $\Delta(\text{MPR}(-2))$ has a coefficient of -0.002, and $\Delta(\text{MPR}(-3))$ has a coefficient of 0.008**, where the double asterisk denotes statistical significance at the 5% level. These findings suggest that changes in the monetary policy rate do not have a substantial short-term impact on

the poverty rate (POV) in the studied context. This result is in agreement with a study as monetary policy was found to be less effectual than fiscal policy¹.

Additionally, the lagged difference of the cointegrated equation (CointEq(-1)) exhibits a statistically significant negative coefficient of -0.249**. This implies that the long-term relationships between the dependent variable (POV) and the selected independent variables can influence the short-term dynamics of poverty rates. Furthermore, the ARDL short-run model yields an adjusted R-squared value of 0.30, indicating that approximately 30% of the variation in the poverty rate (POV) can be explained by the short-term dynamics of the specified independent variables.

Overall, the ARDL short-run analysis reveals that the monetary policy rate (MPR) has limited short-term effects on the poverty rate (POV) in the studied context. However, the results suggest that long-term relationships captured by the cointegrated equation may have a more pronounced influence on the short-term dynamics of poverty rates. These findings contribute to a comprehensive understanding of the complex interactions between the selected economic variables and poverty levels, providing valuable insights for policymakers and researchers in addressing poverty-related challenges

Table 4.9 Model 1: Estimation Result of Mixed Policy and Poverty

<i>PANEL A: Short-Run Estimates</i>		
Variable	Coefficient	Std. Error
$\Delta(\text{LGHM})$	-0.30**	0.1
$\Delta(\text{LGHM}(-1))$	0.49***	0.11
$\Delta(\text{LGHM}(-2))$	0.25**	0.11
$\Delta(\text{LGEM})$	0.23**	0.09
$\Delta(\text{LGEM}(-1))$	-0.34***	0.08
$\Delta(\text{LGEM}(-2))$	-0.11	0.08
$\Delta(\text{LTXM})$	0.11*	0.06
$\Delta(\text{LTXM}(-1))$	-0.09	0.07
$\Delta(\text{LTXM}(-2))$	-0.30***	0.09
$\Delta(\text{LTXI}(-5))$	-0.03*	0.02
$\Delta(\text{LTXI}(-6))$	-0.10***	0.03
$\Delta(\text{LTXI}(-7))$	-0.06**	0.02
$\text{LGHI}(-2)$	-0.02	0.02
$\text{LGEI}(-3)$	-0.02	0.02
$\text{CointEq}(-1)^*$	-0.56	0.11
Adjusted R-squared: 0.44		
<i>PANEL B: Long-Run Estimates</i>		
Variable	Coefficient	Std. Error
LGHM	-1.535067	0.640304
LGEM	1.096659	0.452569
LTXM	0.521385	0.235286
$\text{LTXI}(-5)$	0.129629	0.156258

Note ***, **, and * indicates 1%, 5% and 10% level of significance respectively

Source: Author's Computation (2023) using E-Views 10

The analysis presented is a mixed policy Autoregressive Distributed Lag (ARDL) model, designed to shed light on the intricate relationship between various economic factors and their impact on the dependent variable, denoted as LPOV, representing the extent of poverty within a given context. This model seeks to uncover how combinations of government expenditures, monetary policy rates, interest rates, and tax rates collectively influence poverty levels.

One of the key findings in this analysis pertains to the variable $\Delta(\text{LGHM})$, which combines government expenditure on health with the monetary policy rate. The coefficient of -0.30 for this variable indicates that an increase in this combined metric leads to a statistically significant decrease in the level of poverty. This observation is bolstered by a t-statistic of -3.05, highlighting the robustness of this relationship. Similarly, the variable $\Delta(\text{LGEM})$, reflecting government expenditure on education and the monetary policy rate, exhibits a positive coefficient of 0.23, signifying a correlation between higher expenditure on education and an increase in poverty.

Another aspect explored in the model involves the interactions between tax rates, monetary policy rates, and interest rates. The combination of Tax rate and the Monetary policy rate (LTXM) shows a coefficient of 0.11, suggesting a mild positive relationship with poverty. On the other hand, the combination of Tax rate and the Interest rate (LTXI) demonstrates a negative association with poverty, with coefficients of -0.03 and -0.10 for different lag periods. These

coefficients, along with their respective t-statistics, underline the significance of these mixed policy variables in influencing poverty outcomes.

It is noteworthy that the analysis also considers the lagged effects of these policy variables on poverty. For instance, the positive and statistically significant coefficients associated with the previous periods' LGHM and LGEM variables $\Delta(\text{LGHM}(-1))$ and $\Delta(\text{LGEM}(-1))$ suggest that changes in these mixed policy variables have a lasting impact on poverty levels, affecting subsequent periods.

Furthermore, the model incorporates an error correction term, $\text{CointEq}(-1)$, which carries substantial implications. With a coefficient of -0.56 and a highly significant t-statistic of -5.23, this term highlights the efficient correction of deviations from the long-term equilibrium relationship among variables. This mechanism contributes to the adjustment of poverty levels over time.

The overall explanatory power of the model is indicated by the adjusted R-squared value of 0.44. This value signifies that approximately 44% of the variation in the dependent variable, LPOV, can be accounted for by the included independent variables. Consequently, the model underscores the significance of mixed policy variables in understanding poverty dynamics within the examined framework.

In conclusion, the mixed policy ARDL model uncovers valuable insights into the intricate connections between government expenditures, monetary and interest rates, tax rates, and poverty levels. Through careful analysis of coefficients, t-statistics, and lagged effects, this model offers a nuanced understanding of how specific combinations of these variables influence poverty outcomes. Furthermore, the presence of an error correction mechanism adds depth to the analysis, emphasizing the importance of equilibrium relationships in shaping poverty dynamics over time.

4.6 Result of Post-estimation Tests

In the research investigating the influence of fiscal policy on poverty in Nigeria, several post-estimation tests were undertaken to assess the robustness and validity of the estimated model. These tests play a pivotal role in evaluating the adequacy of the model's specification and the underlying assumptions of the analysis.

The Ramsey Test, which evaluates the overall model specification, yielded an F-statistics value of 1.86 with a corresponding probability of 0.14. The findings suggest that the model specification is not significantly mis-specified, implying that the selected independent variables effectively capture their relationship with the dependent variable, the poverty rate. Consequently, the model is deemed well-specified, providing credible insights into the impact of fiscal policy on poverty in Nigeria.

Table 4.10 Model 1: Fiscal Policy Post-Estimation Tests

Test	F-statistics	Probability	Remarks
Ramsey Test (Specification Test)	1.86	0.14	No misspecification
Heteroskedasticity (BPG Test)	0.99	0.57	No Heteroskedasticity
Serial Correlation (LM Test)	0.64	0.59	No serial correlation
Normality Test (Jarque-Bera)	1.52	0.49	Normality distributed

Source: Author's Computation (2023) using E-Views 10

Subsequently, the Heteroskedasticity (BPG Test) examined the presence of heteroskedasticity in the model's residuals. The test yielded an F-statistics value of 0.99 with a probability of 0.57, indicating the absence of significant heteroskedasticity in the residuals. This discovery enhances the credibility of the estimated results, as it signifies that the variance of the errors is consistent, a critical assumption in regression analysis.

The Serial Correlation (LM Test) investigated the presence of autocorrelation in the model's residuals. The obtained F-statistics value of 0.64 with a probability of 0.59 suggests that there is no substantial serial correlation in the residuals. This outcome ensures that the errors are not systematically correlated over time, further affirming the accuracy of the model's estimations.

Finally, the Normality Test (Jarque-Bera) examined the normality of the model's residuals. The test yielded an F-statistics value of 1.52 with a probability of 0.49, indicating that the residuals

conform to a normal distribution. This aspect is crucial for obtaining reliable parameter estimates and valid statistical inferences in regression analysis.

Collectively, the post-estimation tests demonstrate the robustness of the estimated model and adherence to key statistical assumptions. These results instill confidence in the study's findings on the impact of fiscal policy on poverty in Nigeria. Policymakers and researchers can place reliance on the accuracy of the estimated model and utilize the study's conclusions to inform evidence-based policy decisions. By attaining a deeper understanding of the relationship between fiscal policy and poverty, policymakers can design more effective and targeted fiscal measures to address poverty-related challenges and foster sustainable economic growth in Nigeria.

Table 4.11 Model 2: Monetary Policy Post-Estimation Tests

Test	F-statistics	Probability	Remarks
Ramsey Test (Specification Test)	0.01	0.99	No misspecification
Heteroskedasticity (BPG Test)	0.63	0.76	No Heteroskedasticity
Serial Correlation (LM Test)	0.93	0.41	No serial correlation

Source: Author's Computation (2023) using E-Views 10

In the study exploring the influence of monetary policy on poverty in Nigeria, a set of post-estimation tests was undertaken to evaluate the dependability and soundness of the estimated model. These tests are fundamental in appraising the adequacy of the model's specification and the assumptions underlying the analysis.

The Ramsey Test (Specification Test) resulted in an F-statistics value of 0.01 with a probability of 0.99. The findings indicate that the model is not significantly mis-specified, signifying that the selected independent variables effectively capture their relationship with the dependent variable, the poverty rate. Consequently, the model is considered to be appropriately specified, providing credible insights into the impact of monetary policy on poverty in Nigeria.

Furthermore, the Heteroskedasticity (BPG Test) investigates the presence of heteroskedasticity in the model's residuals. The obtained F-statistics value of 0.63 with a probability of 0.76 suggests that there is no significant heteroskedasticity in the residuals. This result enhances the reliability of the estimated outcomes, as it implies that the variance of the errors is constant, aligning with a critical assumption of regression analysis.

Likewise, the Serial Correlation (LM Test) scrutinizes the presence of autocorrelation in the model's residuals. The test yielded an F-statistics value of 0.93 with a probability of 0.41, indicating that there is no significant serial correlation in the residuals. This finding conveys that the errors are not systematically correlated over time, further validating the accuracy of the model's estimations.

Generally, the post-estimation tests establish the robustness and validity of the estimated model in the examination of the impact of monetary policy on poverty in Nigeria. The non-significant results for misspecification, heteroskedasticity, and serial correlation affirm the appropriateness

of the selected model and its underlying assumptions. Policymakers and researchers can place confidence in the accuracy of the estimated model and utilize the study's conclusions to inform evidence-based policy decisions. By gaining deeper insights into the relationship between monetary policy and poverty, policymakers can design more effective and targeted monetary measures to address poverty-related challenges and foster sustainable economic development in Nigeria.

Table 4.12 Model 3: Mixed Policy Post-Estimation Tests

Test	F-statistics	P-value	Remarks
Jarque-Bera (Normality Test)	0.54	0.76	Normally distributed
Serial Correlation (LM Test)	2.11	0.19	No serial correlation
Heteroskedasticity (BPG)	1.43	0.29	No heteroskedasticity
Ramsey Test (Specification Test)	1.59	0.24	No misspecification

Source: Author's Computation (2023) using E-Views 10

After estimating the model, several post-estimation tests were conducted to assess the validity of its underlying assumptions and the reliability of the estimated results. The Jarque-Bera test, aimed at assessing normality, yielded an F-statistic of 0.54 with a corresponding p-value of 0.76.

The high p-value suggests that the data conforms to a normal distribution, indicating that the model's residuals exhibit a pattern consistent with a normal distribution. This supports the

assumption that the errors are normally distributed, enhancing the credibility of the model's parameter estimates.

The second test, the Serial Correlation LM Test, produced an F-statistic of 2.11, along with a p-value of 0.19. With a non-significant p-value, this test fails to reject the null hypothesis of no serial correlation in the residuals. This outcome implies that there is no evidence of systematic patterns in the residuals over time, reinforcing the notion that the model adequately captures the underlying temporal structure of the data.

Furthermore, the Heteroskedasticity Breusch-Pagan-Godfrey (BPG) test yielded an F-statistic of 1.43 and a p-value of 0.29. The non-significant p-value indicates that there is no presence of heteroskedasticity in the residuals. This suggests that the variance of the residuals is consistent across different levels of the independent variables, enhancing the reliability of the model's coefficient estimates.

Lastly, the Ramsey Test, a specification test, returned an F-statistic of 1.59 and a p-value of 0.24. With a non-significant p-value, the test provides no substantial evidence to suggest misspecification in the model. This implies that the chosen model adequately captures the underlying relationships among the variables under consideration.

In conclusion, the post-estimation tests collectively provide support for the model's validity and the robustness of its results. The normally distributed residuals, lack of serial correlation, absence of heteroskedasticity, and the non-rejection of the misspecification hypothesis collectively enhance the confidence in the model's suitability for analyzing the relationships between the variables of interest.

Do Not Copy, Lead City University, Nigeria

Endnotes

1. O. S., Adegboyo 'Does Government Spending Reduce Poverty in Nigeria? Evidence from Auto- Regressive Distributed Lag Specification', **Ekonomi Bisnis**, 25(1), 2020, 14–25.
2. V. V. Danaan 'Analyzing Poverty in Nigeria through Theoretical Lenses', **Journal of Sustainable Development**. 11(1), 2018, 20–31.
3. V. E., Oriavwote, & A. Ukawe 'Government Expenditure and Poverty Reduction in Nigeria', **Journal of Economics and Public Finance**. 4(2), 2018, 156-163.
4. M., Roser, & E. Ortiz-ospina 'World Population Growth' 2, 2017, 1–21.
5. M. Ravallion 'Poverty Lines in Theory and Practice', The Living Standards Measurement Study. ISSN:0253-4517, 133, 1998, 1-35.
6. N. C., Odinakachi, C., Gloria, B., Anayo, & A. L. Eze 'Fiscal Policy and Unemployment Reduction in Sub Saharan Africa; Emphasis on Nigeria and Ghana', **IOSR Journal of Economics and Finance**. 11(1), 2020, 8–18.
7. E., Maku, & O. Y. Alimi 'Fiscal Policy Tools , Employment Generation and Sustainable Development in Nigeria', **ACTA UNIVERSITATIS DANUBIUS**, 14(3), 2018, 186–199.
8. A. M., Dankumo, S. Ishak, Y. Bani, & H. Z. Hamza 'The Relationship between Public Expenditure, Corruption and Poverty in Nigeria', **Jurnal Ekonomi dan Studi Pembangunan**. 11(1), 2019, 76–89.
9. A. W. Maina 'The Effect of Consumption Taxes on Poverty and Income Inequality in Kenya', **International Journal of Accounting and Taxation**. 5(2), 2017, 56–82.
10. I. A. Abdulrahman, S. B. Akanbi & G. D. Oniyide 'Impact of Monetary Policy on Poverty Reduction in Nigeria', **African Journal of Economic Review**, 11(1), 2023, 101–119.
11. A. A. Chowdhury 'Monetary Policy for Inclusive and Sustainable Development' 2018, 1-42 <https://researchdirect.westernsydney.edu.au/islandora/object/uws:55053/>

12. G. G., Goshit & T. D. Longduut '*Indirect Monetary Policy Instruments and Poverty Reduction in Nigeria: An Empirical Evidence from Time Series Data*', **International Journal of Academic Research in Business and Social Sciences**, 6(4), 2016, 86-101.
13. P., Martins, & P. Lucci '*Recasting MDG 8 : Global Policies for Inclusive Growth*' 2013, 1-33. www.odi.org.uk
14. A. G. Metu & C. U. Kalu, '*Problems of Poverty and Inequality in Nigeria*' **Structure and Problems of the Nigerian Economy, Forthcoming**, 2020, 226–251.
15. S. E. Jeff-Anyeneh & S.N. Ibenta '*Government Expenditure and Economic Growth: Evidence from the Nigeria Economy (1981-2016)*' **Advances in Research**, 19(4), 2019, 1-14.
16. O. H. Osinowo, R. A. Sanusi, and E. T. Tolorunju '*Poverty in Nigeria: The Role of Economic Growth, Governance and Agriculture*', **Invited paper presented at the 6th African Conference of Agricultural Economists**, 2019, 1-16.
17. E. Anderson, M. A. J. d'Orey, M. Duvendack, & L. Esposito '*Does Government Spending Affect Income Poverty? A Meta-regression Analysis*', **World Development**, 103, 2018, 60–71.
18. U. Emmanuel '*Development Plans and Policies in Nigeria : Observed Impediments and Practical Best Alternatives*', **International Journal of Research and Scientific Innovation**, 6(7), 2019, 27-36.
19. R. A., Itiveh '*Poverty Alleviation Policies : Catalyst for Economic Development of Nigeria*', **Journal of Public Administration, Finance and Law**, 23, 2022, 168–175.
20. O. A., Adelowokan & A. M. Osoba '*Oil Revenue, Government Expenditure and Poverty Rate in Nigeria*', **Global Journal of Management and Business Research**, 15(10), 2015, 11-20.
21. N. Yahaya '*Relationship between Government Expenditure and Poverty : A Study of Nigeria (1965-2014)*', **IOSR Journal of Economics and Finance**, 10(6), 2019, 39–52.

Chapter Five

Conclusion

5.0 Preamble

This chapter presents the summary, conclusion and recommendation of the study. This is divided into five sections which includes summary of findings, conclusion, recommendations, contribution to knowledge and suggestion of further studies.

5.1 Summary of Findings

This study examined the impact of economic policies on poverty alleviation in Nigeria, while employing the annual time series data for Nigeria from the World Bank Development Indicator (WDI), published by the World Bank and the International Financial Statistics (IFS) from 1980 to 2021. The study adopted two major economic policies namely; the fiscal policy (from the government point of view) and monetary policy (from the Central Bank's point of view). A choice of variables such as a disaggregate of government expenditure; government expenditure on health and government expenditure on education, as well as tax rate was adopted during the course of the study as fiscal policy tools. Monetary policy on the other hand had proxy variables such as monetary policy rate and interest rate. Also, exchange rate, inflation rate GDP growth rate and GDP per capita were also incorporated for the robustness of the study.

Specifically, three models were estimated, each representing the objectives of the study. The empirical results of these models were reported and discussed in details in the previous chapter.

In line with the theoretical base of the: Keynesian theory of poverty postulated by John Maynard Keynes, the impact of these economic policies - fiscal policy and monetary policy on poverty alleviation was assessed in Nigeria. However, before the models were estimated, the statistical properties of each of these variables were highlighted using descriptive statistics. Also, the stability of the series of variables examined were tested using the augmented Dickey-Fuller (ADF) test as well as the Phillips-Perron (PP) test. The results indicated that some of the variables are stationary, some trend stationary and others differenced stationary. That is, some of the series are not stationary at levels I (0) but they were stationary at first difference I (1).

Shortly after this was done, the cointegration test was done to ascertain whether there exists a long-run relationship among the variables under investigation. The ARDL short-run and long-run models were estimated to investigate the dynamic relationships between the dependent variable, the poverty rate (POV), and the array of independent variables in line with all three objectives.

The results for model 1 indicated poverty rate exhibits a significant response to its own past values, indicating persistence in poverty levels over time. Additionally, Government expenditure on health and Government expenditure on education exhibit a noteworthy effect on the poverty rate as they have both short-term positive and negative impacts on poverty rates. Furthermore,

the tax rate has a significant negative impact on the poverty rate while inflation have a significant positive impact on poverty, thereby suggesting that recent changes in inflation also affect poverty rates. Meanwhile, exchange rate exhibits a significant positive relationship, indicating that changes in the exchange rate have a short-term impact on poverty levels. The result also indicates that no long run relationship exists between poverty and the array of fiscal policy variables.

The result for model 2 showed that the monetary policy rate has relatively small and statistically insignificant coefficients. These findings suggest that changes in the monetary policy rate do not have a substantial short-term impact on the poverty rate (POV) in the studied context. Additionally, the cointegrated equation exhibits a statistically significant negative coefficient which implies that the long-term relationships between poverty rate and the selected independent variables can influence the short-term dynamics of poverty rates.

The result for model 3 revealed that the mixed policy combination of government expenditure on health with the monetary policy rate indicates a negative significant relationship with poverty level. Also, the combination of government expenditure on education and the monetary policy rate, exhibits a positive coefficient which signifies a correlation between higher expenditure on education and monetary policy rate and an increase in poverty. The combination of tax rate and the monetary policy rate suggests a mild positive relationship with poverty. On the other hand,

the combination of Tax rate and the Interest rate demonstrates a negative association with poverty. These findings contribute to a comprehensive understanding of the complex interactions between the selected economic variables and poverty levels, providing valuable insights for policy-makers and researchers in addressing poverty-related challenges.

In order to guarantee the reliability, efficiency and consistency of the parameter estimates, Diagnostic tests were carried out covering the normality test in which Jarque-Berra test was adopted, the Ramsey Test which evaluates the overall model specification was done, the serial correlation test, examined with Breusch-Pagan LM test as well as the heteroskedasticity (BPG Test) was examined to check the presence of heteroskedasticity in the model's residuals.

5.2 Conclusion

Economic policies cover a wide range of measures and courses of actions intended to control and manage an economy's behaviour. This research attempted to contribute to topical issues in modern-day economics by empirically testing the impact of economic policies on poverty alleviation in Nigeria from 1984 to 2021. This study tests the government expenditure on health, government expenditure on education and tax rate as fiscal policy proxy while, monetary policy rate and interest rate as monetary policy proxy.

According to the analysis, government expenditure on health (GEXPH) exhibited a direct and positive relationship with poverty rate more consistently than did government expenditure on education (GEXPE) which reflected a more consistent inverse relationship with poverty rate in Nigeria. Tax rate (TXR) showed a negative relationship with poverty. On the other hand, monetary policy rate does not have a substantial short-term impact on the poverty rate (POV) in the studied context. Inflation rate (INF) has a positive impact on poverty increase. Exchange rate (EXR) exhibits a significant positive effect on poverty rate. Also, the mixed policy analysis of government expenditure on health and monetary policy as well as a combined effort of tax rate and interest rate exhibited a significant negative relationship with poverty rate in Nigeria, while the combined effort of government expenditure on education and monetary policy as well as the mixed policy analysis of tax rate and monetary policy rate showcased a positive relationship with poverty rate.

Thus, it is safe to say that the poverty increase in Nigeria is still henpecked by monetary policy, because of inflation instability which is an indicator of the Nigerian macroeconomic instability. Also, fiscal policy does contribute to poverty rate decrease but not effectively even as government budget for health particularly seems to miss the target.

5.3 Recommendation

Poverty is wholesome; thus, an all-encompassing action must be taken in other to effectively tackle the problem of poverty in Nigeria. Based on the findings from the empirical analysis, economic policies seem tackle poverty on a surface level thereby missing the target. Thus, the study recommends:

1. The government should increase government expenditure budget on education and health such that would improve the poor's livelihood.
2. The central bank of Nigeria should reduce the monetary policy rate as this would reduce the general interest rate, thereby encouraging investment and increased aggregate demand. This would in turn lead to reduction in poverty in the economy.
3. The government and the monetary policy authority (CBN) should harmonize to ensure that smooth running of combined, well thought and articulated economic policies and programs that are sustainable so that their impacts trickle down to the grass-roots in the long run.
4. A going-concern attribute should be reflected by the government of Nigeria and not personal initiatives that can be jettisoned at any time.

5.4 Contribution to Knowledge

This study contributed to the existing body of literatures by investigating the impact of economic policies on poverty alleviation in Nigeria. The study focused on fiscal policy (the government tool) and the monetary policy (the central bank tool) targeted towards poverty reduction in Nigeria. From the literatures reviewed, quite a number of researchers focused on poverty reduction in Nigeria, the impact of fiscal policy on poverty as well as the effect of monetary policy on poverty alleviation, all as a single study. However, this study looked into the impact of both economic policies individually and jointly. Also, some studies did not disaggregate government expenditure while some neglected tax revenue, all of which this study took into consideration for better economic decisions. Some researchers adopted other estimation techniques such as OLS, VECM, VAR and the likes, however, this study adopted the ARDL estimation technique in order to properly capture the short and long run effects of the model. This study also considered the economic policies made in line with the political era while choosing the scope of the study unlike some other research studies. This study has also contributed to knowledge by answering the questions in the heart of quite a number of researchers who recommended the need for this study.

5.5 Suggested Area for Further Study

Further research should focus on the impact of governance indicators on economic policies and poverty reduction in Nigeria.

Do Not Copy, Lead City University, Nigeria

Bibliography

Textbooks

Jhingan M. L. '*The Economics of Development and Planning*', 40th Edition, Vrinda Publications (P) Ltd., 1997, 1-1058. ISBN 978-81-8281-385-4

Journals

Abdulrahman I. A., Akanbi S. B., & Oniyide G. D. '*Impact of Monetary Policy on Poverty Reduction in Nigeria*', **African Journal of Economic Review**, 11(1), 2023, 101–119.

Ab-Rahim R. & Mohammed M. '*Multidimensional Poverty Index of Niger State, Nigeria*', **International Journal of Academic Research in Business and Social Sciences**, 2019, 9(7), 451–460.

Adediyan A. R. & Omo-Ikirodah B. O. '*Fiscal and Monetary Policy Adjustment and Economic Freedom for Poverty Alleviation in Nigeria*', **Iranian Economic Review**, 27(1), 2023, 201-217. <https://doi.org/10.22059/ier.2021.81925>

Adegboyo. O. S., '*Does Government Spending Reduce Poverty in Nigeria? Evidence from Auto Regressive Distributed Lag Specification*', **Ekonomi Bisnis**, 25(1), 2020, 14–25.

Adelowokan O. A., & Osoba A. M. '*Oil Revenue, Government Expenditure and Poverty Rate in Nigeria*', **Global Journal of Management and Business Research**, 15(10), 2015, 11-20

Aderounmu B. D., Azuh D., Onanuga O., Oluwatomisin O., Ebenezer B. & Azuh A. '*Poverty drivers and Nigeria's development: Implications for policy intervention*', **Cogent Arts & Humanities**, 8(1), 2021, 1-12.

Agbonkhese A. O & Agbonkhese K. A. '*Fiscal Policy and the Nigerian Economy: An Empirical Evaluation*', **Journal of Finance and Economic Research**, 3(1), 2016, 97–109.

- Ajisafe A. R., Ajide T. F. & Akinkuotu F. ‘*Dynamics Among Financial Inclusion, Monetary Policy, and Poverty Reduction in Nigeria*’, **International Journal of Social Sciences, Management and Engineering**, 2(1), 2018, 49-64.
- Amire C. M. ‘*Impact of Health and Education Expenditure on Poverty Alleviation in Nigeria*’, **Caleb International Journal of Development Studies**, 3(1), 2020, 199-213.
- Anderson E, d’Orey, M. A. J., Duvendack M., & Esposito L. ‘*Does Government Spending Affect Income Poverty? A Meta-regression Analysis*’, **World Development**, 103, 2018, 60–71.
- Anyalechi, K., & Boloupremo T. ‘*Fiscal Policy and the Nigerian Economy: An Econometric Review*’, **International Journal of Business and Management**, 12(4), 2017, 186-196.
- Awoyemi B. O., Makanju A. A., Mpapalika J. & Ekpeyo R. S. ‘*A Time Series Analysis of Government Expenditure and Health Outcomes in Nigeria*’, **Journal of Public Health in Africa**, 14(1409), 2023, 1-6.
- Aribaba F. O., Adedokun J. O., Oladele R., Babatunde A. D., Ahmodu A. O. & Olasshinde S. A. ‘*Financial Inclusion Scheme and Poverty Alleviation in Nigeria (2004 – 2019)*’, **ACTA UNIVERSITATIS DANUBIUS**, 16(4), 2020, 220–233.
- Banerjee. A. V. & Duflo. E. ‘*Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*’, **Asia-Pacific Research and Training Network on Trade**. 7, 2012, 1-4.
- Bodunrin O. S. ‘*The Impact of Fiscal and Monetary Policy on Nigerian Economic Growth*’, **Munich Personal RePEc Archive**, 92811, 2016, 1-21. <https://mpra.ub.uni-muenchen.de/92811/>
- Chambers R. ‘*The Origins and Practice of Participatory Appraisal*’, **World Development**. 22(7), 1994, 953–969.
- Chowdhury A. A. ‘*Monetary Policy for Inclusive and Sustainable Development*’ 2018, 1-42 <https://researchdirect.westernsydney.edu.au/islandora/object/uws:55053/>
- Danaan V. V. ‘*Analyzing Poverty in Nigeria through Theoretical Lenses*’, **Journal of Sustainable Development**, 11(1), 2018, 20–31.

- Dankumo A. M., Ishak S., Bani Y., & Hamza H. Z. '*The Relationship between Public Expenditure, Corruption and Poverty in Nigeria*', **Jurnal Ekonomi dan Studi Pembangunan**, 11(1), 2019, 76–89.
- Davis E. P., & Sanchez-martinez M. '*A review of the economic theories of poverty*', **National Institute of Economic and Social Research**, 435, 2014, 1–65.
- Davis P. '*The Trappings of Poverty: The roles of Fiscal Policy and the Nigerian Economy: An Econometric Review*', **International Journal of Business and Management**, 12(4), 2017, 186-196.
- Duke O. E. & Okafor J. O. '*Poverty Alleviation Policies of Selected Churches in Anambra State, Nigeria*', **Interdisciplinary Journal of Human Theory and Praxis**, 3(1), 2020, 40–52.
- Duruh B. & Chima C. I. '*Impact of Education Budget on Poverty Reduction in Nigeria*', **Journal of Economics and Allied Research**, 7(4), 2022, 150–163.
- Edeh C. C., Obi A. & Obi C. O. '*Impact of Education Spending on Poverty Reduction in a Democratic Dispensation in Nigeria*', **International Journal of Economics and Financial Management**, 3(3), 2018, 1–9.
- Eke P. O. '*An Assessment of Central Banking on Employment and Poverty: The Case of Nigeria*', **Journal of Management Info**, 9(1), 2022, 20 – 37.
- Emmanuel U. '*Development Plans and Policies in Nigeria: Observed Impediments and Practical Best Alternatives*', **International Journal of Research and Scientific Innovation**, 6(7), 2019, 27-36.
- Fagbemi F., Oladejo F. B. & Adeosun O. A. '*The Effectiveness of Poverty Alleviation Policy: Why Is the Quality of Institutions the Bane in Nigeria?*', **Review of Development and Change**, 2020, 1–22. <https://doi.org/10.1177/0972266120975262>.
- Farayibi, A. O., & Owuru J. E. '*Linkage between Fiscal Policy and Poverty Reduction in Nigeria*', 2016, 1-17. <https://doi.org/10.2139/ssrn.2856545>

- Godwin A. O., Oladeji S. I. & Bank-Ola R. ‘*Evidence of Kuznets Hypothesis In Economic Growth On Poverty Reduction In Nigeria*’ **Sapientia Global Journal of Arts, Humanities and Development Studies**, 5(1), 2021, 405 – 421.
- Goshit G. G., & Longduut T. D. ‘*Indirect Monetary Policy Instruments and Poverty Reduction in Nigeria: An Empirical Evidence from Time Series Data*’, **International Journal of Academic Research in Business and Social Sciences**, 6(4), 2016, 86-101.
- Haughton J. & Khandker S. E. ‘*Handbook on Poverty and Inequality*’, The World Bank, 2009, 1-446. ISBN: 978-0-8213-7613-3. <https://doi.org/10.1596/978-0-8213-7613-3>
- Hills J. R. & Stewart K. ‘*Introduction to A more equal society? New Labour, poverty, inequality and exclusion*’ **The London School of Economics and Political Science Research Online**, 2005, 1-34. ISBN 9781861345776 <https://www.researchgate.net/publication/30524119>
- Itiveh R. A. ‘*Poverty Alleviation Policies: Catalyst for Economic Development of Nigeria*’, **Journal of Public Administration, Finance and Law**, 23, 2022, 168–175.
- Jeff-Anyeneh S. E., Ananwude A. C, Ezu G. K & A. I. Nnoje ‘*Government expenditure and standard of living in an emerging market in Africa–Nigeria*’ **Economic Journal of Emerging Markets**. 12(2), 2020, 167–178. <https://doi.org/10.20885/ejem.vol12.iss2.art4>
- Jeff-Anyeneh S. E. & Ibenta S.N. ‘*Government expenditure and Economic Growth: Evidence from the Nigeria Economy (1981-2016)*’, **Advances in Research**, 2019, 19(4), 1-14.
- Jeffrey M. S. ‘*Fiscal Policy: Economic Effects*’, **Congressional Research Service**, 2019, 1-11. <https://crsreports.congress.gov/R45723jk>.
- Jordà O., Singh S. R. & Taylor A. M. ‘*Does Monetary Policy Have Long-Run Effects?*’, **Federal Reserve Bank of San Francisco Economic Letter**, 2023, 1-5.
- Jung S. Y. & Smith R. J. S ‘*The Economics of Poverty the Economics of Poverty: Explanatory Theories to Inform Practice*’, **Journal of Human Behavior in the Social Environment**, 2016, 20–39. <https://doi.org/10.1300/J137v16n01>

- Kuang X., Liu H., Guo G. & Cheng H. ‘*The nonlinear effect of financial and fiscal policies on poverty alleviation in China—An empirical analysis of Chinese 382 impoverished counties with PSTR models*’, **PLOS ONE**, 14(11), 1-19.
- Laderchi C. R., Saith. R & Stewart F. ‘*Does it matter that we don’t agree on the definition of poverty? A comparison of four approaches*’, **QEH Working Paper Series**, No 107, 1–41.
- Leroy A. & El-Herradi M. ‘*Monetary Policy and Food Prices*’ 2023, 1-9.
<https://ssrn.com/abstract=4614805>
- Maku, N.E. & Alimi O. Y. ‘*Fiscal Policy Tools, Employment Generation and Sustainable Development in Nigeria*’, **ACTA UNIVERSITATIS DANUBIUS**, 14(3), 2018, 186–199
- Maku O. E, Tella A. T, & Fagbohun A. C. ‘*Alleviating Poverty in Nigeria: Keynesian Vs Monetary Theory of Poverty*’, **Studia Universitatis Economics Series**, 30(1), 2020, 103–120.
- Maina A. W. ‘*The Effect of Consumption Taxes on Poverty and Income Inequality in Kenya*’, **International Journal of Accounting and Taxation**, 2017, 5(2), 56–82.
- Martins P., & Lucci P. ‘*Recasting MDG 8: Global Policies for Inclusive Growth*’, 2013, 1-33.
www.odi.org.uk
- Metu A. G. & Kalu, C. U. ‘*Problems of poverty and inequality in Nigeria*’ **Structure and Problems of the Nigerian Economy, Forthcoming**, 2020, 226–251
- Morris D. ‘*The Physical Quality of life index and the Human Development Index*’, 1979, 1-14.
www.cbn.gov.ng/efrvol39-4-5
- Nsiah A. Y., Yusif H., Tweneboah G., Agyei K. & Baidoo S. T. ‘*The effect of financial inclusion on poverty reduction in Sub-Sahara Africa: Does threshold matter?*’, **Cogent Social Sciences**, 7(1), 2021, 1-17.
- Odinakachi, C., Gloria, B., Anayo, & Eze A. L. ‘*Fiscal Policy and Unemployment Reduction in Sub Saharan Africa; Emphasis on Nigeria and Ghana*’, **IOSR Journal of Economics and Finance**, 11(1), 2020, 8–18.

- Ogboru I. & Abdulmalik F. A. ‘*Government Expenditure on Agriculture and Its Impact on Unemployment Reduction in Nigeria: 1999 – 2015*’ VI, no. 3: 1–25 **International Journal of Economics, Commerce and Management**, 6(3), 2018, 1-25.
- Olisaji C. O., & Onuora J. K. J. ‘*Impact of Fiscal Policy on the Growth of Nigerian Economy*’, **Journal of Accounting and Financial Management**, 7(2), 2021, 72-76.
- Omodero O. C. & Dandago K. I. ‘*Tax Revenue and Public Service Delivery: Evidence from Nigeria*’, **International Journal of Financial Research**, 10(2), 2019, 82–91.
- Omodero O. C. ‘*Government Sectoral Expenditure and Poverty Alleviation in Nigeria*’, **Research in World Economy**, 10(1), 2019, 80–90.
- Omojolaibi J. A, Okenesi T. P., & Mesagan E. P. ‘*Fiscal Policy and Private Investment in Selected West African Countries*’, **CBN Journal of Applied Statistics**, 7(1b), 2016, 277-309.
- Onabote A. A., Ohwofasa B. O. & Ogunjumo R. A. ‘*Government Sectoral Spending and Human Development in Nigeria: Is There a Link?*’, **Heliyon**, 9(7), 2023, 1-11.
- Onwuka C. E. ‘*The Impact of Fiscal and Monetary Policy on Unemployment Rate in Nigeria*’, 2020, 1–20. <https://ssrn.com/abstract=3959996>
- Oriavwote V. E., & Ukawe A. ‘*Government Expenditure and Poverty Reduction in Nigeria*’, **Journal of Economics and Public Finance**, 4(2), 2018, 156-163.
- Origin C. K., Oghenetega E. O., & Ubah C. B ‘*Effectiveness of Quantitative Monetary Policy Implementation in the Success of Full Employment in Nigeria: 1986-2018*’, **Asian Journal of Economics, Business and Accounting**, 21(4), 2021, 38–56.
- Osinowo O. H, Sanusi R. A., & Tolorunju E. T. ‘*Poverty in Nigeria: The Role of Economic Growth, Governance and Agriculture*’, **Invited paper presented at the 6th African Conference of Agricultural Economists**, 2019, 1-16.
- Osterling K. L. ‘*Social Capital and Neighborhood Poverty*’, **Journal of Human Behavior in the Social Environment**, 16(1&2), 2016, 123-147.

- Ravallion M., *'Poverty Lines in Theory and Practice'*, **The Living Standards Measurement Study**, 133, 1998, 1-35, ISSN:0253-4517
- Romer C. D. & Romer D. H *'Monetary Policy and the Well-being of the Poor'*, **National Bureau of Economic Research**. 6793, 1998, 1-64. <http://www.nber.org/papers/w6793>
- Roser M., & Ortiz-ospina E. *'World Population Growth'*, 2, 2017,1–21.
- Saeed. M.*'The Effects of Monetary Policy on Poverty Alleviation in Pakistan'*, **Journal of Research & Reviews in Social Sciences Pakistan**, 3(1), 2020, 624–638.
- Sen A. *'Poor, Relatively Speaking'*, **Oxford Economic Papers**, 1983, 35(2), 153–169.
- Shehu H. *'Rural Development, Inclusive Growth and Poverty Alleviation: Nigerian and Indian Perspectives'*, **European Journal of Social Sciences Studies**, 3(3), 2018, 263–285.
- Tanjung A. A., Daulay M., Irsad, Ruslan D *'The Impact of Monetary and Fiscal Policy on Poverty in Indonesia'*, **Journal of Applied Economic Sciences**, 14.4(66), 2019, 1068-1073. [https://doi.org/10.14505/jaes.v14.4\(66\).12](https://doi.org/10.14505/jaes.v14.4(66).12)
- Townsend. P. *'Poverty in the United Kingdom A Survey of Household Resources and Standards of Living'*, 1979. [www.poverty.ac.uk>piuk-whole](http://www.poverty.ac.uk/piuk-whole)
- Tubotamuno B., Daso A. & Obayori J. B. *'Government Spending and Poverty in Nigeria: A Study of Education Spending'*, **European Journal of Accounting, Finance and Investment**, 7(12), 2021, 12–22.
- Uwakaeme O. S. *'Financial Inclusion: A Veritable Tool for Inclusive Growth and Poverty Alleviation in Nigeria'* **Archives of Business Research**, 6(9), 2018, 175–197.
- Vincent C. E. & Enyindah I. C. *'Poverty Alleviation in Nigeria in the 21st Century Poverty Alleviation in Nigeria in the 21st Century'* **Khazar Journal of Humanities and Social Sciences**, 5(4), 2022, 70–80.

Waziri M. & Abu I. ‘*Youth Empowerment Program in Nigeria: A Strategy for Poverty Alleviation and National Development*’, **Journal of Public Value and Administration Insights**, 2(3), 2019, 12–14.

Waziri M. ‘*An Assessment of the Impact of Microcredit Programs on Poverty Alleviation*’, **Management Research Spectrum**, 9(2), 2019, 35-38.

Yahaya N. ‘*Relationship between Government Expenditure and Poverty: A Study of Nigeria (1965-2014)*’, **IOSR Journal of Economics and Finance**, 10(6), 2019, 39–52.

Do Not Copy, Lead City University, Nigeria

Appendix

	POV	GEXPH	GEXPE	TXR	INT	MPR	EXR	INF	GDPG	GP
Mean	53.88921	96.82618	159.8947	1467.174	2.554274	13.44737	131.2962	19.08389	4.093567	270887.3
Median	54.595	33.73399	70.64108	762.4074	4.432341	13.5	100.2585	12.71577	4.212993	245112.9
Maximum	66.9	423.3298	646.7475	3905.38	18.18	26	536.8903	72.8355	15.32916	379251.6
Minimum	40.1	0.041315	0.198904	4.4009	-31.4526	6	49.74471	5.388008	-2.03512	199311.3
Std. Dev.	6.747784	126.0421	196.7302	1527.472	9.68548	3.750296	104.6945	17.20499	3.906509	66871.46
Skewness	-0.08206	1.233491	1.135975	0.421361	-1.24172	0.878417	2.705087	1.804963	0.470367	0.353028
Kurtosis	2.454622	3.347872	3.078532	1.457292	5.495864	5.087123	10.02537	4.990024	3.311469	1.433598
Jarque-Bera	0.513586	9.827766	8.182541	4.892707	19.62825	11.78404	124.4908	26.90362	1.554821	4.674208
Probability	0.773528	0.007344	0.016718	0.086609	0.000055	0.002761	0	0.000001	0.459594	0.096607
Sum	2047.79	3679.395	6075.998	55752.6	97.06241	511	4989.255	725.1879	155.5555	10293717
Sum Sq. Dev.	1684.706	587804.4	1432003	86327344	3470.915	520.3947	405554.9	10952.43	564.6501	1.65E+11
Observations	38	38	38	38	38	38	38	38	38	38

Unit Root Test

Variables	At Levels		First difference		Order of Integration
	ADF	PP	ADF	PP	
POV	-2.16	-2.09	-7.07***	-7.21***	I (1)
GEXPH	-1.36	-1.77	-9.99***	-15.06***	I (1)
GEXPE	-2.83*	-2.11	-7.67***	-9.34***	I (1)
TXR	-2.68*	-2.44	-2.68**	-4.56***	I (1)
INT	-6.21***	-6.21***	-----	-----	I (0)
GP	-0.59	-0.67	-4.10**	-4.02**	I (1)
MPR	-2.81*	-2.82*	-----	-----	I (0)
EXR	-4.68***	-3.52**	-----	-----	I (0)
INF	-3.13**	-2.97**	-----	-----	I (0)
GDPD	-1.99	-5.66***	-2.32**	-29.64***	I (1)

Do Not Copy, Lead City University, Nigeria

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.156981	0.2248
Test critical values:		
1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: LPOV has a unit root

Exogenous: Constant

Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.099283	0.2461

Test critical values: 1% level	-3.621023
5% level	-2.943427
10% level	-2.610263

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

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.075701	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: D(LPOV) has a unit root

Exogenous: Constant

Bandwidth: 4 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.209682	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

GEXPH

Null Hypothesis: LGEXPH has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
--	-------------	--------

Augmented Dickey-Fuller test statistic	-1.355855	0.5927
--	-----------	--------

Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: LGEXPH has a unit root

Exogenous: Constant

Bandwidth: 36 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
--	-------------	--------

Phillips-Perron test statistic	-1.766896	0.3905
--------------------------------	-----------	--------

Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: D(LGEXPH) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.993112	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: D(LGEXPH) has a unit root

Exogenous: Constant

Bandwidth: 35 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-15.05723	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

GEXPE

Null Hypothesis: LGEXPE has a unit root

Exogenous: Constant

Lag Length: 5 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
--	-------------	--------

Augmented Dickey-Fuller test statistic	-2.834476	0.0647
--	-----------	--------

Test critical values: 1% level	-3.653730	
5% level	-2.957110	
10% level	-2.617434	

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

Null Hypothesis: LGEXPE has a unit root

Exogenous: Constant

Bandwidth: 18 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
--	-------------	--------

Phillips-Perron test statistic	-2.109251	0.2423
--------------------------------	-----------	--------

Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: D(LGEXPE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.671840	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: D(LGEXPE) has a unit root

Exogenous: Constant

Bandwidth: 20 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-9.341855	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

TXR

Null Hypothesis: LTXR has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.681110	0.0869
Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: LTXR has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.442440	0.1376
Test critical values: 1% level	-3.621023	
5% level	-2.943427	

10% level -2.610263

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

Null Hypothesis: D(LTXR) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.462305	0.0011
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: D(LTXR) has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-4.555332	0.0008
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

INT

Null Hypothesis: LINT has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.211323	0.0000
Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: LINT has a unit root

Exogenous: Constant

Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-6.211399	0.0000
Test critical values: 1% level	-3.621023	
5% level	-2.943427	

10% level -2.610263

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

GP

Null Hypothesis: LGP has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-0.586840	0.8613
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: LGP has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-0.665882	0.8430
Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: D(LGP) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
--	-------------	--------

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

MPR

Null Hypothesis: LMPR has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.805290	0.0672
Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: LMPR has a unit root

Exogenous: Constant

Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.820481	0.0651
Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: D(LMPR) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.353303	0.0000

Test critical values: 1% level	-3.626784
5% level	-2.945842
10% level	-2.611531

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

Null Hypothesis: D(LMPR) has a unit root

Exogenous: Constant

Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-7.387810	0.0000
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

EXR

Null Hypothesis: LEXR has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.682555	0.0006
Test critical values: 1% level	-3.626784	
5% level	-2.945842	
10% level	-2.611531	

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

Null Hypothesis: LEXR has a unit root

Exogenous: Constant

Bandwidth: 0 (Newey-West automatic) using Bartlett kernel

Adj. t-Stat Prob.*

Phillips-Perron test statistic	-3.525459	0.0127
--------------------------------	-----------	--------

Test critical values: 1% level	-3.621023
--------------------------------	-----------

5% level	-2.943427
----------	-----------

10% level	-2.610263
-----------	-----------

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

INF

Null Hypothesis: LINF has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=9)

t-Statistic Prob.*

Augmented Dickey-Fuller test statistic	-3.131822	0.0328
--	-----------	--------

Test critical values: 1% level	-3.621023
--------------------------------	-----------

5% level	-2.943427
10% level	-2.610263

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

Null Hypothesis: LINF has a unit root

Exogenous: Constant

Bandwidth: 7 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-2.970352	0.0471
Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

GDPG

Null Hypothesis: LGDPG has a unit root

Exogenous: Constant

Lag Length: 9 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.999934	0.2852
Test critical values: 1% level	-3.689194	
5% level	-2.971853	
10% level	-2.625121	

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

Null Hypothesis: LGDPG has a unit root

Exogenous: Constant

Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
--	-------------	--------

Phillips-Perron test statistic	-5.659459	0.0000
--------------------------------	-----------	--------

Test critical values: 1% level	-3.621023	
5% level	-2.943427	
10% level	-2.610263	

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

Null Hypothesis: D(LGDPG) has a unit root

Exogenous: None

Lag Length: 9 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
--	-------------	--------

Augmented Dickey-Fuller test statistic	-2.232291	0.0271
--	-----------	--------

Test critical values: 1% level	-2.653401	
5% level	-1.953858	
10% level	-1.609571	

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

Null Hypothesis: D(LGDPG) has a unit root

Exogenous: None

Bandwidth: 22 (Newey-West automatic) using Bartlett kernel

	Adj. t-Stat	Prob.*
Phillips-Perron test statistic	-29.63617	0.0000
Test critical values: 1% level	-2.630762	
5% level	-1.950394	
10% level	-1.611202	

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

MODEL 1 ANALYSIS: FISCAL POLICY

Variable	Coefficient	Std. Error
D(LPOV(-1))	-0.421**	0.11
D(LPOV(-2))	-0.88**	0.16
D(LPOV(-3))	-1.22***	0.18
D(LGEXPH)	-0.51*	0.11
D(LGEXPH(-1))	1.12***	0.15
D(LGEXPH(-2))	1.11***	0.14
D(LGEXPH(-3))	0.30**	0.06

D(LGEXPE)	0.59**	0.11
D(LGEXPE(-1))	-0.89**	0.13
D(LGEXPE(-2))	-1.01***	0.13
D(LGEXPE(-3))	-0.24***	0.05
D(LTXR)	-0.01	0.07
D(LTXR(-1))	-0.33**	0.08
D(LTXR(-2))	-0.08	0.10
D(LTXR(-3))	-0.80***	0.13
D(LINF)	0.19***	0.04
D(LINF(-1))	0.36***	0.05
D(LINF(-2))	0.07	0.04
D(LINF(-3))	0.25***	0.04
D(LEXR)	0.16**	0.05
D(LEXR(-1))	0.35***	0.07
D(LEXR(-2))	0.28***	0.06
CointEq(-1)*	-0.21***	0.03
Adjusted R-squared: 0.75		

Null hypothesis: no long-run relationship		
T-statistics	Value	K
F-statistics	3.82	5
Critical Value Bound		

Significance	I (0)	I(1)
10%	2.08	3
5%	2.39	3.38
2.50%	2.7	3.73
1%	3.06	4.15
Diagnostics Tests	F-statistics	p-value
Normality test	1.52	0.49
Serial Correlation LM Test	0.64	0.59
Heteroskedasticity Test	0.99	0.57
Ramsey RESET Test	1.86	0.14

Do Not Copy, Lead City University, Nigeria

ARDL Short-run model: Model 1

ECM Regression

Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LPOV(-1))	-0.421000	0.114233	-3.685450	0.0142
D(LPOV(-2))	-0.883753	0.161332	-5.477866	0.0028
D(LPOV(-3))	-1.220121	0.178495	-6.835613	0.0010
D(LGEXPH)	-0.509872	0.110420	-4.617581	0.0057
D(LGEXPH(-1))	1.122729	0.154122	7.284661	0.0008
D(LGEXPH(-2))	1.109106	0.138713	7.995679	0.0005
D(LGEXPH(-3))	0.297986	0.055745	5.345522	0.0031
D(LGEXPE)	0.593968	0.107176	5.541995	0.0026
D(LGEXPE(-1))	-0.889301	0.134080	-6.632637	0.0012
D(LGEXPE(-2))	-1.008028	0.133452	-7.553475	0.0006
D(LGEXPE(-3))	-0.237975	0.053988	-4.407882	0.0070
D(LTXR)	-0.013669	0.073734	-0.185384	0.8602
D(LTXR(-1))	-0.332513	0.083536	-3.980484	0.0105
D(LTXR(-2))	-0.080908	0.098353	-0.822626	0.4482

D(LTXR(-3))	-0.804432	0.126658	-6.351231	0.0014
D(LINF)	0.190350	0.040831	4.661905	0.0055
D(LINF(-1))	0.355237	0.047728	7.442901	0.0007
D(LINF(-2))	0.067143	0.039153	1.714907	0.1470
D(LINF(-3))	0.251993	0.041121	6.128059	0.0017
D(LEXR)	0.155075	0.048224	3.215694	0.0236
D(LEXR(-1))	0.350979	0.068140	5.150863	0.0036
D(LEXR(-2))	0.277812	0.064256	4.323489	0.0075
CointEq(-1)*	-0.211967	0.027645	-7.667522	0.0006

R-squared	0.916079	Mean dependent var	-0.002007
Adjusted R-squared	0.748236	S.D. dependent var	0.090812
S.E. of regression	0.045566	Akaike info criterion	-3.114840
Sum squared resid	0.022839	Schwarz criterion	-2.082302
Log likelihood	75.95228	Hannan-Quinn criter.	-2.762715
Durbin-Watson stat	2.329651		

* p-value incompatible with t-Bounds distribution.

ARDL Long-run model: Model 1

Levels Equation

Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGEXPH	-10.95796	13.81738	-0.793056	0.4637
LGEXPE	9.451023	11.82589	0.799181	0.4604
LTXR	2.527301	3.245877	0.778619	0.4714
LINF	-1.101934	1.670122	-0.659792	0.5386
LEXR	0.345357	0.775543	0.445310	0.6747
C	-12.50146	20.22522	-0.618113	0.5636

$$EC = LPOV - (-10.9580*LGEXPH + 9.4510*LGEXPE + 2.5273*LTXR - 1.1019 *LINF + 0.3454*LEXR - 12.5015)$$

F-Bounds Test Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
----------------	-------	---------	------	------

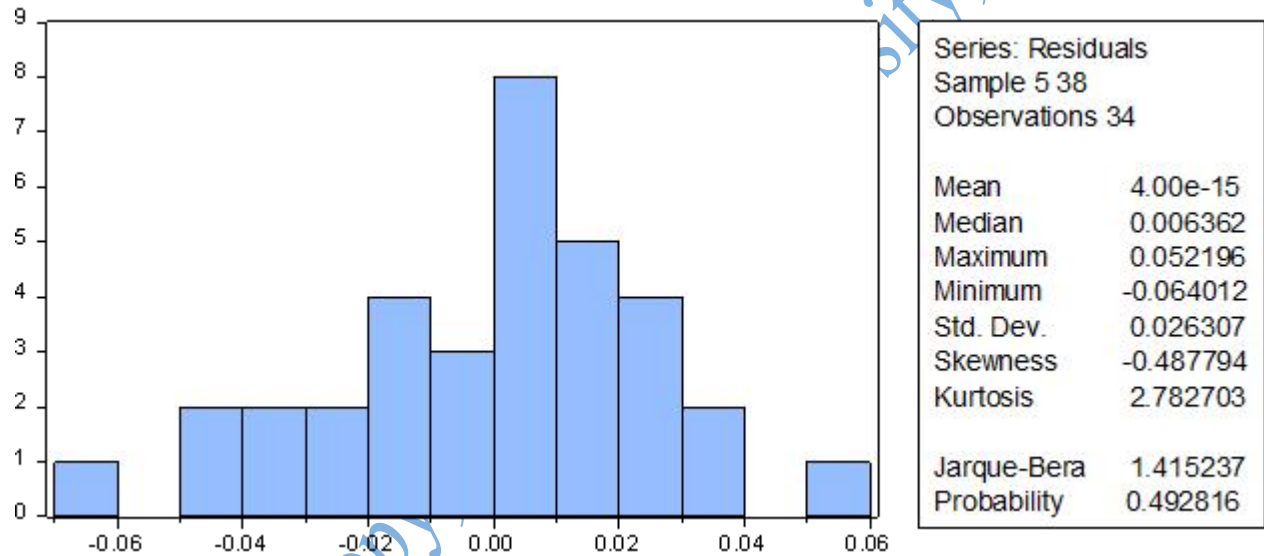
Asymptotic:				
n=1000				
F-statistic	3.817590	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15
Finite				
Sample:				
Actual Sample Size	34		n=35	
		10%	2.331	3.417
		5%	2.804	4.013
		1%	3.9	5.419
Finite				
Sample:				
			n=30	
		10%	2.407	3.517

Do Not Copy, Lead City University, Nigeria

5%	2.91	4.193
1%	4.134	5.761

Post estimation test

Normality Test



Serial Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.636927	Prob. F(2,3)	0.5881
Obs*R-squared	10.13396	Prob. Chi-Square(2)	0.0063

Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.995263	Prob. F(28,5)	0.5668
Obs*R-squared	28.82770	Prob. Chi-Square(28)	0.4213
Scaled explained SS	0.555701	Prob. Chi-Square(28)	1.0000

Ramsey RESET Test

Ramsey RESET Test

Equation: UNTITLED

Specification: LPOV LPOV(-1) LPOV(-2) LPOV(-3) LPOV(-4)

LGEXPH

LGEXPH(-1) LGEXPH(-2) LGEXPH(-3) LGEXPH(-4)

LGEXPE LGEXPE(

-1) LGEXPE(-2) LGEXPE(-3) LGEXPE(-4) LTXR LTXR(-

1) LTXR(-2)

LTXR(-3) LTXR(-4) LINF LINF(-1) LINF(-2) LINF(-3)

LINF(-4) LEXR

LEXR(-1) LEXR(-2) LEXR(-3) C

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.861343	4	0.1362
F-statistic	3.464600	(1, 4)	0.1362

F-test summary:

	Sum of	Mean
	Sq. df	Squares
Test SSR	0.010600 1	0.010600
Restricted SSR	0.022839 5	0.004568
Unrestricted SSR	0.012238 4	0.003060

MODEL 2: MONETARY POLICY ANALYSIS

Variable	Coefficient	Std. Error
----------	-------------	------------

D(MPR)	-0.004	0.004
D(MPR(-1))	0.063	0.005
D(MPR(-2))	-0.002	0.004
D(MPR(-3))	0.008**	0.004
CointEq(-1)*	-0.249**	0.08
Adjusted R-squared: 0.30		

Null hypothesis: no long-run relationship		
F-statistics	Value	K
T-statistics	1.33	4
Critical Value Bound		
Significance	I(0)	I(1)
10%	2.2	3.09
5%	2.56	3.49
2.50%	2.88	3.87
1%	3.29	4.37
Diagnostics Test	F-statistics	p-value
Serial Correlation LM Test	0.93	0.41
Heteroskedasticity Test	0.63	0.76

Ramsey RESET Test	0.01	0.99
-------------------	------	------

ARDL Short-run model: Monetary policy

ECM Regression

Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MPR)	-0.003512	0.003972	-0.884059	0.3854
D(MPR(-1))	0.006261	0.004681	1.337555	0.1936
D(MPR(-2))	-0.001647	0.004390	-0.375119	0.7109
D(MPR(-3))	0.008242	0.003913	2.106494	0.0458
CointEq(-1)*	-0.249193	0.080166	-3.108466	0.0048

R-squared	0.387207	Mean dependent var	-0.002007
Adjusted R-squared	0.302684	S.D. dependent var	0.090812
S.E. of regression	0.075833	Akaike info criterion	-2.185516
Sum squared resid	0.166768	Schwarz criterion	-1.961052

Log likelihood 42.15378 Hannan-Quinn criter. -2.108968
 Durbin-Watson stat 2.070128

* p-value incompatible with t-Bounds distribution.

F-Bounds Test Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	1.332767	10%	2.2	3.09
K	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.930972	Prob. F(2,22)	0.4092
Obs*R-squared	2.653014	Prob. Chi-Square(2)	0.2654

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.625459	Prob. F(9,24)	0.7640
Obs*R-squared	6.459534	Prob. Chi-Square(9)	0.6932
Scaled explained SS	19.47497	Prob. Chi-Square(9)	0.0214

Ramsey RESET Test

Equation: UNTITLED

Specification: LPOV LPOV(-1) LGP MPR MPR(-1) MPR(-2)

MPR(-3) MPR(

-4) INT LEXR C

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	0.012550	23	0.9901
F-statistic	0.000157	(1, 23)	0.9901

F-test summary:

	Sum	of	Mean
	Sq.	df	Squares
Test SSR	1.14E-06	1	1.14E-06
Restricted SSR	0.166768	24	0.006949
Unrestricted SSR	0.166767	23	0.007251

MODEL 3: Mixed Analysis

Short-run

ARDL Error Correction Regression

Dependent Variable: D(LPOV)

Selected Model: ARDL(1, 3, 3, 3, 2, 0, 3)

Case 2: Restricted Constant and No Trend

Date: 08/08/23 Time: 18:24

Sample: 1 38

Included observations: 35

ECM Regression

Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GEXPH)	-0.001257	0.000620	-2.027553	0.0636
D(GEXPH(-1))	0.005122	0.000862	5.942295	0.0000
D(GEXPH(-2))	0.004681	0.000646	7.243609	0.0000
D(GEXPE)	0.000439	0.000508	0.864652	0.4029
D(GEXPE(-1))	-0.003954	0.000617	-6.403638	0.0000
D(GEXPE(-2))	-0.003394	0.000509	-6.667914	0.0000
D(LTXR)	0.237867	0.061028	3.897683	0.0018
D(LTXR(-1))	0.148345	0.050932	2.912592	0.0121
D(LTXR(-2))	0.106079	0.050492	2.100926	0.0557

D(LMPR)	0.006516	0.042482	0.153386	0.8804
D(LMPR(-1))	0.236542	0.046508	5.086039	0.0002
D(LINF)	0.031981	0.019107	1.673829	0.1180
D(LINF(-1))	-0.073332	0.019607	-3.740150	0.0025
D(LINF(-2))	-0.103760	0.017954	-5.779160	0.0001
CointEq(-1)*	-0.390269	0.060007	-6.503750	0.0000

R-squared	0.819557	Mean dependent var	-0.001339
Adjusted R-squared	0.693247	S.D. dependent var	0.089554
S.E. of regression	0.049600	Akaike info criterion	-2.872143
Sum squared resid	0.049202	Schwarz criterion	-2.205566
Log likelihood	65.26251	Hannan-Quinn criter.	-2.642041
Durbin-Watson stat	2.237701		

* p-value incompatible with t-Bounds distribution.

Long run

Levels Equation

Case 2: Restricted Constant and No Trend

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GEXPH	-0.021696	0.014422	-1.504414	0.1564
GEXPE	0.014511	0.009900	1.465760	0.1665
LTXR	0.022762	0.037826	0.601753	0.5577
LMPR	-0.464182	0.416615	-1.114176	0.2854
LEXR	-0.096307	0.167678	-0.574357	0.5755
LINF	0.420560	0.279507	1.504649	0.1563
C	3.957308	0.959179	4.125723	0.0012

$$EC = LPOV - (-0.0217 * GEXPH + 0.0145 * GEXPE + 0.0228 * LTXR - 0.4642 + LMPR - 0.0963 * LEXR + 0.4206 * LINF + 3.9573)$$

F-Bounds Test Null Hypothesis: No levels relationship

Test Statistic	Value	Signif.	I(0)	I(1)
----------------	-------	---------	------	------

Asymptotic:

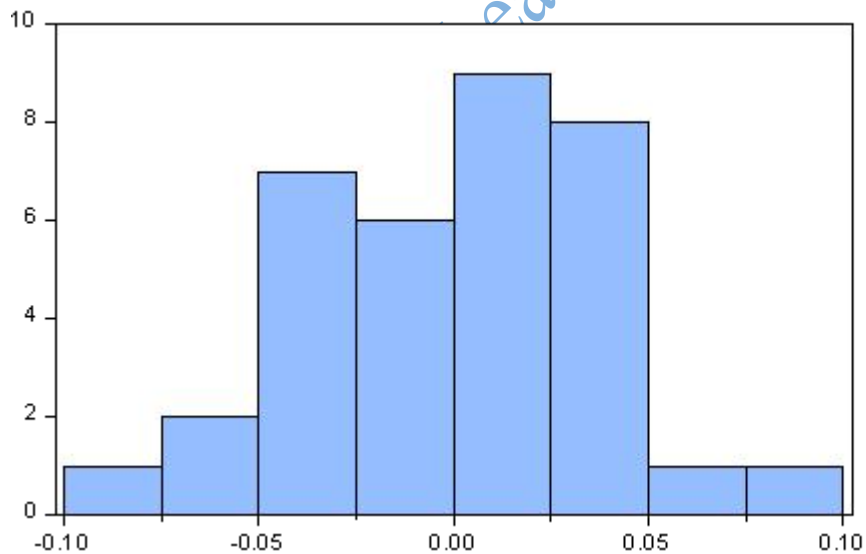
n=1000

F-statistic	3.436774	10%	1.99	2.94
K	6	5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

Histogram

Normally

Test



Series: Residuals	
Sample 4 38	
Observations 35	
Mean	5.03e-16
Median	0.002297
Maximum	0.082173
Minimum	-0.082077
Std. Dev.	0.038041
Skewness	-0.094214
Kurtosis	2.400731
Jarque-Bera	0.575500
Probability	0.749949

Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.436405	Prob. F(2,11)	0.6571
Obs*R-squared	2.572967	Prob. Chi-Square(2)	0.2762

Heteroskedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.805108	Prob. F(21,13)	0.6810
Obs*R-squared	19.78631	Prob. Chi-Square(21)	0.5348
Scaled explained SS	1.911790	Prob. Chi-Square(21)	1.0000

Ramsey RESET Test

Ramsey RESET Test

Equation: UNTITLED

Specification: LPOV LPOV(-1) GEXPH GEXPH(-1) GEXPH(-

2) GEXPH(-3)

GEXPE GEXPE(-1) GEXPE(-2) GEXPE(-3) LTXR LTXR(-

1) LTXR(-2)

LTXR(-3) LMPR LMPR(-1) LMPR(-2) LEXR LINF LINF(-

1) LINF(-2)

LINF(-3) C

Omitted Variables: Squares of fitted values

	Value	Df	Probability
t-statistic	0.956454	12	0.3577
F-statistic	0.914805	(1, 12)	0.3577

F-test summary:

Biodata

A. Personal Data

- Full Names: Akinnola Glory Funmilayo
- Address: Sir Remi Jacobs Street, Leme, Abeokuta, Ogun State, Nigeria
- Date and Place of Birth: 3rd Feb, 1996 Ibadan
- Nationality: Nigerian
- Name and Address of Next of Kin: Oladimeji Olayinka Akinkunmi, Sir Remi Jacobs Street, Leme, Abeokuta, Ogun State, Nigeria

B. Educational Background

Educational Institutions Attended with Dates and Qualifications

Lead City University Ibadan, Oyo State (M.Sc. Economics)	In-view
Federal University of Agriculture, Abeokuta	2014-2018
St. Louis Secondary School, Ondo, Ondo State	2008-2012
Ijebu Anglican Diocesan College	2006-2007
Amazing Grace International School, Oke-Ado Ibadan (First School Leaving Certificate)	1997-2006

C. Working Experience with Dates

Zenith Bank Plc, Isale Igbein, Abeokuta, Ogun State, Nigeria	2019-till Date
Adron Homes and Properties, Ibadan, Oyo State, Nigeria	2019
St Anthony Middle School, Okuku, Osun State, Nigeria	2018-2019

D. Award and Fellowships: NIL

E. Membership of Academic Professional Bodies:

Institute of Chartered Accountants of Nigeria (ACA) 2019

The Association of Accountancy Bodies in West Africa (AAT) 2015

F. Publication (if Any): Olubiyi, E., Olaifa, F., & Akinnola, G. (2019). Does Government Fiscal Expense affect Inflation and Crowds out Investment in the ECOWAS Region? *Fountain University Osogbo Journal of Management*, Vol. 4, No. 2, 1-21.

Signature

Date

University Compliance Certification

This is to certify that this Thesis written by: Akinnola, Glory Funmilayo with Matric No: LCU/PG/001599 in the Department of Economics, Faculty of: Environment Management and Social Sciences, Lead City University, Ibadan is in full compliance with the approved University format and style.

Name

Date

Do Not Copy, Lead City University, Nigeria