# THE IMPACT OF MONETARY POLICY ON POVERTY IN NIGERIA, 1981-2023

**BY**

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**FACULTY OF SOCIAL SCIENCES**

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**BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF ECONOMICS, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF BENIN, BENIN CITY, IN PARTIAL FULFILLMENT FOR THE AWARD OF A BACHELOR OF SCIENCE (B.Sc) DEGREE IN ECONOMICS, UNIVERSITY OF BENIN, BENIN CITY.**

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## CERTIFICATION

This is to certify that, this work titled "The Impact of Monetary Policy on Poverty in Nigeria, 1980-2023" was carried out by Osarumese Mercy Osagueme for the award of A Bachelor of Science (B.Sc) Degree in the Department of Economics, Faculty of Social Science, University of Benin, Benin City, under the supervision of ;

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(Head of Department)

# DEDICATION

This project is proudly dedicated, first and foremost, to the Almighty God, for His mercy, love, favour, guidance, and grace that have helped me come this far, and I know He is taking me to greater heights. This would not have been possible if not for God.

I also dedicate this work to my family, Great 7 family, who have always been supportive spiritually, financially, and physically.

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**ABSTRACT**

This study evaluates the impact of monetary policy on poverty in Nigeria over a 42-year period (1981–2023), using time series data and the Autoregressive Distributed Lag (ARDL) model. It investigates the relationship between inflation rate, total Gross Domestic Product (GDP), money supply, interest rate or monetary policy rate, and poverty—measured by the poverty rate. Both short-run and long-run dynamics among these variables are explored.

The empirical findings reveal an insignificant long-run relationship between monetary policy and poverty in Nigeria. However, short-run results indicate that persistent inflation worsens poverty by eroding individuals' purchasing power. Increases in money supply and interest rates are also associated with rising poverty levels in the short term. Diagnostic tests confirm the robustness and reliability of the model, with no evidence of serial correlation or heteroskedasticity.

The study concludes that monetary policy can aid poverty reduction and recommends reforms to stabilize inflation, promote inclusive and sustainable growth, and implement long-term structural policies.

**CHAPTER ONE**

# INTRODUCTION

## 1.1 BACKGROUND OF THE STUDY

Nigeria has one of the world's highest economic growth rates , averaging 7.4% according to the Nigeria economic report that was released in July 2019 by the world bank. Following the oil prices collapse in 2014-2016 combined with the negative production shocks, the GDP growth rate dropped to 2.7% in 2015. In 2016, during it's first recession in 25 years, the economy contracted by 1.6%. This recession has now continued since then. According to the Nigerian Bureau of Statistics (NBS) 63% of persons living within Nigeria (133 million people) are multidimensionally poor. The National Multidimensional Poverty Index (MPI) is 0.257, indicating that poor people in Nigeria experience just over one-quarter of all possible deprivations.65% of the poor (86 million people) live in the North, while 35% (nearly 47 million) live in the South. Poverty levels across States vary significantly, with the incidence of multidimensional poverty ranging from a low of 27% in Ondo to a high of 91% in Sokoto.Over half of the population of Nigeria are multidimensionally poor and cook with dung, wood or charcoal, rather than cleaner energy ( NBS,2024). High deprivations are also apparent nationally in sanitation, time to healthcare, food insecurity, and housing. The main reason for this persistent poverty in Nigeria is income inequality, ethnic conflict, and political instability with corruption. Other factors also contribute like limited financial opportunities, severe lack of access to information, high unemployment, inadequate availability of information technology resources, and other uniquely challenging environmental conditions (Akanbi et al. 2023). This has therefore resulted in the increased level of poverty in Nigeria. Since time coming there had been programmes put in place by government in order to alleviate poverty in Nigeria. Firstly we have the 1976 Operation Feed the Nation,this programme evolved under the military regime of General Olusegun Obasanjo. The programme was launched in order to bring about increased food production in the entire nation through the active involvement and participation of everybody in every discipline thereby making every person capable of partly or wholly feeding him or herself. The program also seek to teach the rural farmers how to use modern farming tools. We also have the 1980 Green Revolution Programme, it was inaugurated by Shehu Shagari in April 1980. The programme was aimed at increasing the production of food and raw materials in order to ensure food security and self-sufficiency in basic staples. Secondly, it aspired to boost production of livestock and fish in order to meet home and export needs and to expand and diversify the nation's foreign exchange earnings through production and processing of export crops. In 2002,National Special Programme on Food Security (NSPFS) was launched in all the 36 states of the federation during the Olusegun Obasanjo's regime. The broad objective of the programme was to increase food production and eliminate rural poverty. In 2011, Agricultural Transformation Agenda (ATA) was launched with the aim of changing the perception about agriculture as a development issue instead of pure business. The aim of the agenda is to attract private investors in agriculture, increase value for locally produced goods, improve general conception about agriculture and also create jobs for its teaming youths and women in Nigeria (FMARD, 2011). The present government introduced the Renewed Hope Infrastructure Development Fund. A N20 trillion ($22 billion) fund dedicated to investing in critical infrastructure like roads, education, power and railways, aiming to stimulate job creation which would in the long run help to alleviate poverty. Despite

these programmes and effort by the government to alleviate poverty we realize that poverty in Nigeria seems to be increasing.

Central banks use monetary policy to manage economic fluctuations and achieve price stability.Central banks conduct monetary policy by adjusting the supply of money, usually through buying or selling securities in the open market. Open-market operation, any of the purchases and sales of government securities and sometimes commercial paper by the central banking authority for the purpose of regulating the money supply and credit conditions on a continuous basis. These operations are customarily carried out with short-term government securities. Open market operations affect short-term interest rates, which in turn influence longer-term rates and economic activity (Ucha, 2010). When central bank lowers the cost of borrowing (interest rate), it makes borrowing cheaper for households, encourages investment and consumer spending, increases the money supply in the economy there by serving as an expansionary monetary policy. This can help to boost economic growth, reduce unemployment and increase overall demand. When central bank increases interest rate, it makes borrowing more expensive, discourages excessive spending and investment, slow down the money supply growth in the economy. Hence can be regarded as a contractionary monetary policy. This can help to reduce inflation and stabilize prices. According to the Central Bank of Nigeria "In the Nigeria the major objectives of monetary policy are the attainment of price stability objectives necessitating at some point some sort of trade-offs" (CBN, 2024).. The targets of broad money supply (M2) comprises narrow money (M1) and quasi money while intermediate target and the ultimate targets. The Bank manipulates the operating intermediate target (broad money supply, M2) which in turn impacts on the the operating targets, reserve money is made up of currency in circulation and employment and stable long-term interest rates and real exchange rates. In pursuing these objectives, the CBN recognises the existence of conflicts among ultimately or final objective of monetary policy, i.e., inflation and output. The and sustainable economic growth. Associated objectives are those full monetary policy are in the case of the CBN are the operational target, the target (reserve money) over which it has substantial direct control to influence the bank deposits with the central bank".

Historically, Nigeria's monetary policy has aimed to reduce inflation and maintain financial system stability. However in Nigeria where poor household are more vulnerable to and more affected by inflationary pressures-by reducing their real income and restricting access to primary goods- strict monetary policies can lead to unforseen negative outcomes. For instance higher interest rate rate which was intended to stabilize the exchange rate and attract foreign investors can ensure the Nigeria naira is stronger which is good for Nigeria's economy but this stronger naira can make Nigeria exports more expensive in the global market causing a reduction in international demand thereby making local manufacturers especially agricultural and manufacturing exporters experience reduced revenues. Reduction in international demand which would lead to reduction in export revenues can lead to reduced production, unemployment in export driven sectors of the economy and increased economic hardship. At the same time foreign investors may leave at the occurrence of any form of political and economic instability. Similarly, a reduction in interest rates tends to encourage borrowing by making credit more affordable, which in turn increases the money supply and stimulates consumer spending. As households and businesses spend more, overall demand for goods and services rises. However, if the

economy’s supply cannot expand quickly enough to meet this increase in demand, it creates demand-pull inflation—a situation where too much money chases too few goods, causing prices to rise. This would have more effect on low income earners as this would reduce their purchasing power.

## 1.2 STATEMENT OF THE PROBLEM

Despite Nigeria's status as one of Africa's largest economies she still struggles with high poverty rate as a considerable amount of Nigeria citizens are living below the poverty line and according to NBS over 40% of Nigeria population are living below the poverty line. Persistent concern has emerged regarding the effectiveness of prevailing macroeconomic strategies particularly monetary policy in adequately addressing the persistent challenge of poverty in Nigeria. While the Central Bank of Nigeria (CBN) has played a significant role in the formulation and implementation of various monetary policies to stabilize macroeconomic variables such as inflation, interest rate, and money supply, boosting investment and fostering economic growth and expansion. However it's effectiveness in ensuring a reduction in poverty have been unclear as the poverty level in Nigeria still remains worryingly high.

In Nigeria, monetary policy instruments such as changes in interest rates, discount rate, liquidity ratio, Cash Reserve Ratio (CRR), credit supply regulations, and inflation targeting are frequently implemented without adequately taking into account the policy's distributive consequences i.e how the benefit and burden of the policy are shared ore spread accross different groups in society such as income levels. Although these policies are often effective in promoting macroeconomic stability and growth, their benefits do not always extend to the most vulnerable segments of the population which are the low income earners. As a result, these policies may unintentionally widen the gap between the rich and the poor—thereby intensifying income inequality, which refers to the unequal distribution of income across various segments of the population. At the same time, they may contribute to social marginalization, a condition where disadvantaged groups are excluded from meaningful participation in economic, social, and political life, often due to limited access to resources, opportunities, and decision-making processes. On one hand, contractionary monetary measures implemented to control inflation may produce unintended negative outcomes, such as a decline in employment opportunities, limited access to credit facilities, and a rise in the general cost of living all of these are conditions that can lead to an increase in poverty levels. On the other hand, expansionary monetary policy aimed at ensuring increased economic growth can trigger inflationary pressures that affect low-income households more severely than other groups since a larger share of their limited income is spent on essential goods and services. As prices rise, their purchasing power declines more rapidly, making it harder for them to meet basic needs.

The gap between monetary policy outcomes and poverty reduction efforts has prompted critical inquiries into the effectiveness of Nigeria’s monetary transmission mechanism and the accuracy of its policy targeting. This gap is due to various factors.First, monetary policy primarily operates through financial institutions and formal markets, which often exclude a large portion of the poor who lack access to banking services or credit facilities. As a result, the transmission of monetary policy rarely reaches the informal sector where most low-income individuals are employed. Second, monetary policy is typically geared toward controlling inflation and stabilizing the economy, without explicitly targeting

employment or income redistribution. This means that even when inflation is reduced, it does not necessarily lead to job creation or higher incomes for the poor. Third, contractionary measures, such as raising interest rates to curb inflation, may slow economic activity and reduce employment opportunities, thereby worsening poverty conditions. Lastly, weak institutional capacity, policy lags, and poor coordination with fiscal policy can further limit the ability of monetary policy to address poverty in a direct and inclusive manner.

However the importance of monetary policy in poverty reduction cannot be overemphasized because increase in money supply and decrease in interest rate could reduce poverty rate. This is because expansionary monetary policy directed towards productive sectors of the economy stimulates investment which leads to increased output, create more employment, more income, hence poverty reduction. (Abdulrahm, Akanbi, &Onyide, 2023) Monetary policy is a tool that can be used to reduce poverty. Through expansionary monetary policy, the economy can experience steady growth, and the condition of the poor may improve in the short run as more money is injected into the economy. However, this increase in money supply can lead to inflation. While expansionary policy may help in the short term, it may not be effective in the long run. If inflation is kept low and aggregate demand increases sustainably, the well-being of the poor can improve over time.(Romer and Romer, 1998). Hence it is the objective of this to examine the impact of monetary policy on poverty in Nigeria.

## 1.3 RESEARCH QUESTION

Q1 What is the relationship between money supply growth and poverty rates in Nigeria?

Q2 Does Nigeria Gross Domestic Product (GDP) have an impact on poverty levels?

Q3 What is the relationship between interest rate change and household income in Nigeria?

Q4 How is inflation rates and poverty incidence in Nigeria related and how does monetary policy affect this relationship?

## 1.4 RESEARCH OBJECTIVES

The major objective of this study is to examine the impact of monetary policy on poverty in Nigeria 1981-2023. Specifically, this study seeks to

1) Investigate the relationship between money supply changes and poverty rates in Nigeria.

2) Examine the impact Nigeria Gross Domestic Product (GDP) has on poverty.

3) Access the relationship between interest rate and household income in Nigeria.

4) Explain how inflation rate and poverty incidence is related and how monetary policy affect their relationship.

## 1.5 RESEARCH HYPOTHESIS

H0: Inflation rate has no significant impact on poverty rate in Nigeria.

H0: Nigeria Gross Domestic Product (GDP) has no significant impact on poverty rate in Nigeria.

H0: Money supply has no significant impact on poverty rate in Nigeria.

H0: Interest rate has no significant impact on poverty rate in Nigeria.

## 1.6 SIGNIFICANCE OF THE STUDY

Poverty is seen as one of the most demanding and social difficulties confronting Nigeria and this research hopes to help understand how monetary policy can help in poverty reduction and it is important for effective intervention. By examining key macroeconomic variables such as interest rate, money supply, inflation and Nigeria Gross Domestic Product (GDP) and their impact on poverty rates. This study helps in having a better understanding of how these macroeconomic tools affect the wellbeing of low income earners or poor people. Focus has mostly been on how fiscal policy has an impact on poverty levels but this study will focus on how monetary policies can also impact poverty levels. The observation of this study is expected to provide fact based conclusions for policy makers particularly Central Bank of Nigeria (CBN) to formulate and implement monetary policies that address poverty as it main aim. Additionally this study hopes to serve as a practical and theoretical insights for students, researchers, development agencies etc who are interested in how monetary policies can impact poverty in Nigeria.

## 1.7 SCOPE OF THE STUDY

This study examines the impact of monetary policy on poverty in Nigeria. It covers a period of time spanning from 1981-2023 (a 42-year period), applying annual time series data to assess long term trends. This study analyze the relationship between key macroeconomic variables such as interest rate, inflation rate, money supply, Gross Domestic Product (GDP) and poverty in Nigeria . This study is dependent on data from Central Bank of Nigeria (CBN), Nigeria Bureau of Statistics (NBS) and World Bank reports.

## 1.8 LIMITATIONS OF THE STUDY

Despite this study importance in providing valuable insights into the relationship between monetary policy and poverty in Nigeria. It's is still subject to certain limitations. Firstly,bthis study focuses on monetary policy variables like interest rate, money supply, inflation without taking into account other factors that influence poverty like fiscal policy, political instability, global economic conditions. This limitation can be solved by including fiscal policy indicators like government spending and also adding global economic indicators like exchange rate These factors are therefore not included in the model. Additionally, estimation errors can also limit this study, since we are going to use econometric model there is the possibility of misspecification of models, autocorrelation etc. This can be solved by using unit root tes. It is a statistical test used in time series analysis to determine whether a series is stationary or non-stationary. A stationary time series has a constant mean, variance, and autocovariance over time.

A non-stationary series has time-dependent structures (e.g., trends or changing variances), which can lead to spurious regression if not properly addressed.

## 1.9 ORGANIZATION OF THE STUDY

This research work is structured into five chapters

Chapter One presents the introduction to the study. It includes the background to the study, statement of the problem, research questions, objectives of the study, research hypotheses, significance of the study, scope of the study and limitations of the study.

Chapter Two provides a comprehensive review of relevant literature. It covers the conceptual framework, theoretical underpinnings, and empirical studies related to monetary policy, poverty, and their interrelationship, with emphasis on the Nigerian context.

Chapter Three outlines the research methodology. It discusses the theoretical framework, methods used to analyze the data, and the empirical model used to evaluate the relationship between monetary policy and poverty.

Chapter Four focuses on data presentation, analysis, and interpretation of results. It includes statistical and econometric analysis of the relationship between the selected monetary policy variables (e.g., interest rate, inflation, money supply) and poverty rates in Nigeria 1981-2023

Chapter Five summarizes the major findings, draws conclusions based on the analysis, and offers policy recommendations.

# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 CONCEPTUAL LITERATURE

### 2.1.1 CONCEPT OF MONETARY POLICY

Monetary policy is the policy adopted by the monetary authority of a nation to affect monetary and other financial conditions to accomplish broader objectives like high employment and price stability (normally interpreted as a low and stable rate of inflation). According to Central Bank of Nigeria (CBN), Monetary policy department, Monetary Policy refers to the specific actions taken by the Central Bank to regulate the value, supply and cost of money in the economy with a view to achieving Government's

macroeconomic objectives. Monetary policy is a set of tools used by a nation's central bank to control the overall money supply and promote economic growth. It involves strategies such as adjusting interest rates and changing bank reserve requirements. Akatu (1993) defines monetary policy as the actions of the CBN that influence the availability and cost of commercial and merchant bank reserves, as well as overall credit conditions in the economy. The primary aim is to ensure that money and credit expansion are sufficient to meet the long-term needs of a growing economy without causing inflation. According to Nwakwo (1991), monetary policy encompasses measures that influence the volume and price of money, while Adesoye (2010) sees it as a combination of actions used to regulate the supply and cost of money in line with the desired level of economic activity. Monetary policy is an essential instrument for economic management, comprising strategies aimed at regulating the supply, cost, and accessibility of credit to attain fundamental macroeconomic objectives. Monetary policy consists of a Government's formal efforts to manage the money in its economy in order to realize specific economic goals. Monetary policy decisions can be made about (1) the amount of money in circulation (2) the level of interest rate; and (3) the functions of credit markets and the banking system. [Ogunjimi, 1997].

In Nigeria, monetary policy has been based on a medium-term perspective from the problem of time inconsistency and minimize over-reaction due to temporary shocks. Policies have ranged from targeting monetary aggregates to monitoring and manipulating policy rates to steer the interbank rates and by extension other market strategies have helped to stabilize the economic and engender growth is of immense rates in the desired direction [Okoro, 2005; Uchendu, 2009]. In recent times, the extent of monetary policy frameworks has become a major concern for both policymakers and academics. Nigeria has experienced various monetary policy regimes, with the implementation shifting towards a more liberal approach. At certain periods, monetary policy has been tight, while at other times, it has been loose—primarily aimed at stabilizing prices. Although there have been instances of economic expansion and contraction, the growth recorded has often lacked sustainability, as poverty remains widespread among the population.

### 2 1.2. TYPES OF MONETARY POLICY

There are two major types of monetary policy:

1) CONTRACTIONARY MONETARY POLICY:- A contractionary monetary policy is a type of monetary policy that is intended to reduce the rate of monetary expansion to fight inflation. It can also be defined as the central bank in order to close an inflationary gap in an economy. An inflationary gap occurs when the economy is overheated, performing at an unsustainable level above the country's potential causing inflation. A rise in inflation is considered the primary indicator of an overheated economy, which can be the result of extended periods of economic growth. The policy reduces the money supply in the economy to prevent excessive speculation and unsustainable capital investment. (Friedman and Schwartz,1963) Contractionary monetary policy can help to control inflation by reducing money supply but (Bernanke, 1983) warned that though it can help to control inflation it can also worsen economic downturns if mistimed. So Central Bank has to very cautious about the timing when implementing contractionary monetary policy.

2) EXPANSIONARY MONETARY POLICY:- Expansionary monetary policy is one of the two major types of monetary policy. It is a type of macroeconomic monetary policy that aims to increase the rate of monetary expansion to stimulate the growth of a domestic economy. The economic growth must be supported by additional money supply. The money injection boosts consumer spending, as well as increases capital investments by businesses.The goal of expansionary monetary policy is to correct an economy that is experiencing a recessionary gap. A recessionary gap means that the economy is performing below its potential, producing fewer goods and services than expected, and prices are experiencing deflation. Through several different means, expansionary monetary policy injects money into the economy in the hopes of spurring it out of a recession. (Keynes, 1936) advocated for expansionary monetary policy during recessions to boost demand and reduce unemployment. Supported government intervention when private sector demand is weak. (Svensson, 2000) supports expansionary monetary policy through inflation targeting and interest rate cuts when economies are below potential. He introduced the concept of the "reversal interest rate" and supported negative interest rates in deep recessions.

### 2.1.3 OBJECTIVES OF MONETARY POLICY

1) PRICE STABILITY:- Price stability refers to a state of the economy in which money maintains its purchasing power and in which economic agents such as households and businesses need not account for changes in the general level of prices when making decisions on consumption and investment.With monetary policy committed to price stability, inflation would not be allowed to creep up and subsequent disinflationary recessions would be avoided suggesting that ex post the variance of both output and inflation could be lower. Where there is price stability, inflation is moderate and predictable.

2) FULL EMPLOYMENT:- Full employment refers to an economic situation where all productive resources in an economy (labour resources, capital resources, natural resources) are full utililized and there is no significant surplus of unemployed resources. True employment is probably unachievable as there will always be resources which are not fully utilized. Even if a country achieved full employment at time t, at time t-2 some resources can be unused. It is a theoretical objective for policy makers. So even if it's unattainable they still hope to achieve it. Monetary policy can be used to achieve full employment. If monetary policy is expansionary, than an increase in the money available to be borrowed can be encouraged. It could help in creating more jobs in different sectors of the economy.

3) INTEREST RATE STABILITY:- Interest rate is the amount charged on borrowed money, expressed as a percentage of the principal, by a ender to a borrower for the use of money It is often expressed as a percentage of the amount borrowed for one year or any other time period month, week , day etc. as agreed by the lender and borrower at the time of contracting the loan. Central banks use tools such as interest rates to adjust the supply of money to keep the economy booming. So fluctuations in interest rate needs to be avoided. As this can help to combat economic uncertainty, ensure investment confidence and stabilize financial markets.

4) EQUITABLE INCOME DISTRIBUTION:- This refers to a fair and just allocation of income among all members of a society ensuring that everyone receives a reasonable share of the nation's wealth

especially in relation to their contribution, needs and efforts. It doesn't necessarily mean equal income but that the gap between the rich and poor is minimized. Many developing countries, including Nigeria, are experiencing income inequality due to the uneven distribution of productive resources such as labor, capital, land, and entrepreneurship. These resources are not equally available to everyone, and those who possess more of them—especially labor that is naturally more productive—tend to generate more wealth and income. Without government intervention, this unequal distribution often becomes self-perpetuating, as those with higher incomes can invest in more productive assets, further increasing their earnings. In recent years, economists have argued that monetary policy can play a supportive role in promoting income equality. For example, the Central Bank of Nigeria (CBN) can implement targeted interventions in neglected sectors such as agriculture and small-scale industries by providing affordable, long-term credit. Such measures can enhance productivity and income generation in these sectors, thereby helping to reduce income disparities.

5) FAVOURABLE BALANCE OF PAYMENT:- Balance of payment is the method used to monitor all international monetary transaction in a specific period. This is the difference between all the money flowing into the country at a particular period is more than the outflow of money to the rest of the world, then that particular county is said to have favourable balance of payment. An imbalance in a nation’s balance of payments (BOP) occurs when the payments made by the country are less than the payments it receives. This situation can lead to a decline in the country's exchange rate relative to other currencies, with implications for inflation, unemployment, production, and other sectors of the domestic economy. The Central Bank of Nigeria (CBN), through its monetary policy, seeks to maintain balance in the balance of payment. If monetary policy successfully maintains monetary stability equilibrium in the balance of payment is said to have been achieved.

### 2.1.4. INSTRUMENTS OF MONETARY POLICY

Monetary policy instruments are the tools used by a country’s central bank to regulate the money supply, control inflation, manage interest rates, stabilize the financial system, ensure price stability, achieved full employment and equitable income distribution . These instruments are broadly classified into two types:

A) QUALITATIVE INSTRUMENT OF MONETARY POLICY

Quantitative instruments, also referred to as general tools, are macroeconomic tools employed by the Central Bank of Nigeria (CBN)nto regulate the overall volume of money and credit in an economy. These instruments are primarily concerned with the quantity of credit available, rather than its specific direction or use. As their name implies, quantitative tools focus on controlling the total liquidity in the financial system, thereby influencing aggregate demand, inflation, and economic growth. They are typically indirect in nature, working through the financial markets to alter money supply conditions and cost of borrowing. The main goal of using these tools is to maintain monetary stability, moderate inflationary pressures, and support sustained economic expansion. Quantitative tools of monetary policy aim to regulate the overall supply of credit in the economy, primarily by influencing interest rates and reserve requirements (Mishkin, F.S. 2016). These instruments are employed to expand or contract

the availability of money, depending on prevailing economic conditions (World Bank 2022). These quantitative Instruments include:

I) OPEN MARKET OPERATIONS (OMO):- Open Market Operations are instruments used by the Central Banks to manage the country's money supply. It refers to the Central Bank's buying and selling of government securities like bonds to regulate cash availability. When the Central Bank buys these bonds, it puts more money into the banking system. This gives banks more cash to lend, encouraging spending and investment—useful when the economy needs a boost. When the Central Bank sells bonds, it takes money out of the banking system. This reduces the amount banks can lend, helping control inflation or cool down an overheating economy and also stabilize short term interest rates. In short, Open Market Operations helps the Central Bank keep the economy balanced by managing how much money flows through the system. Government bonds are primarily purchased by commercial banks, financial institutions, high-net-worth individuals, and large corporations. These entities typically hold accounts with the central bank, and when they buy bonds, the corresponding funds are transferred to the central bank. As a result, open market operations influence the banks' deposits and reserves, thereby affecting their capacity to extend credit.

II) INTEREST RATE:- An interest rate is the price an entity pays for borrowing money or the fee they charge for lending it, expressed as a percentage. It is the cost of asking for a loan or saving money. It is calculated as a percentage of the amount that was delivered by a bank, financial institution, or individual. It is measured in percentage values (%), added to the total balance due, predetermined and is charged according to what is established by the Central Bank.Interest rate reflects the tme vaue of money, or the principle that people generaly woud rather have money today than tomorrow whch will also depend on the genera price evel or inflation (CBN 2016). In lending, interest is a charge to the borrower for the use of an asset. Assets borrowed can include cash, consumer goods, vehicles, and property. Because of this, an interest rate can be thought of as the cost of money. By adjusting interest rates, central banks can either stimulate or slow down the economy depending on the prevailing conditions (IMF 2023). Higher interest rates make borrowing the same amount of money more expensive. Interest is charged as compensation for the loss caused to the asset due to use. In the case of lending money, the lender could've invested the money in some other venture instead of giving it as a loan. In the case of lending assets, the lender could've generated income by making use of the asset themselves. Thus, in return for these lost opportunities, interest rates are applied as compensation. Interest rates are influenced by the demand for, and supply of, credit in an economy. An increase in demand for credit eventually leads to a rise in interest rates, or the price of borrowing. Conversely, a rise in the supply of credit leads to a decline in interest rates. The credit supply increases when the total amount of money that's borrowed goes up. For example, when money is deposited in banks, it is in turn used by banks for investment activities or to lend it elsewhere. As banks lend more money, there is more credit available, and thus borrowing increases. When this occurs, the cost of borrowing decreases. Nigeria's current benchmark interest rate is 27.50% as set by the Central Bank of Nigeria. This is a relatively high interest rate thereby showing that the Central Bank of Nigeria is trying to reduce the money in circulation as the cost of borrowing is high. This would therefore help in reducing inflationary pressure in the economy.

III) CASH RESERVE RATIO (CRR):- The cash reserve Ratio is a particular minimum amount of the total deposits of customer that needs to be maintained by the commercial bank as a reserve either is cash or as deposits with Central Bank. The cash reserve ratio will be fixed as per the guidelines of the Central Bank.The cash flow of the entire economy is constantly worked and monitored by Central Bank in the case of Nigeria the Central Bank of Nigeria (CBN). Every commercial bank is mandated by Central Bank of Nigeria to abide by the specified cash reserve ratio rules provided to each bank. However, when the cash reserve ratio rate for the amount maintained with Central Bank of Nigeria is high, the liquidity in the economy will be low. The cash reserve ratio works vice versa, the lower the cash reserve ratio reserved with the Central Bank of Nigeria, the higher will be the economy's overall cash availability Maintaining the specified Cash Reserve ratio helps banks hold the right amount of funds with them and never fall short of it when needed by their depositors for personal needcountry has exactly the same income. Nigeria's current cash reserve ratio is 50% for deposit banks and 16% for merchant banks. This 50% of deposits required to be held by Central Bank of Nigeria which earns no interest reduces the amount of money available for lending. This is done in order to fight inflation and ensure currency stability.

IV) LIQUIDITY RATIO:- Liquidity ratios are a class of financial metrics used to determine a debtor's ability to pay off current debt obligations without raising external capital. It's a ratio that tells one's ability to pay off its debt as and when they become due. In other words, we can say this ratio tells how quickly a company can convert its current assets into cash so that it can pay off its liability on a timely basis It is used to assess a debtor's capacity to settle current debt commitments without the need for outside funding. Current ratio, quick ratio, and days sales outstanding enables us to calculate liquidity ratios, which assess a company's capacity to satisfy debt obligations as well as its margin of safety.The current ratio evaluates a company's capacity to cover its entire current obligations with current assets, which include cash, accounts receivable, and inventory. The better the ratio, the more liquid the firm. It can be calculated as Current Assets / Current Liabilities = Current ratio.The quick ratio removes inventory from current assets since it evaluates a company's capacity to pay short-term commitments with its most liquid assets. The acid-test ratio is another name for the quick ratio. It can be calculated as Quick Ratio = (C + MS + AR) / CL. Days sales outstanding (DSO) refers to the average number of days it takes a company to collect payment after it makes a sale. A high DSO means that a company is taking unduly long to collect payment and is tying up capital in receivables. Days sales outstandings are generally calculated on a quarterly or annual basis. It can be calculated as : DSO =Average accounts receivable/Revenue per day

When Central Bank increases liquidity ratio, banks are required to hold more if their assets in cash or near cash form. This would cause banks to reduce their lending thereby decreasing the amount of money in circulation. This could therefore help in reducing inflationary pressure in the economy. When Central Bank reduces liquidity ratio, banks hold less assets in liquid form and lend more thereby increasing the amount of money in circulation. This could help to increase investment and faster economic growth but if not monitored well can cause inflation. Nigeria's current liquidity ratio is 30% as set by the Central Bank of Nigeria. This high level of liquidity indicates a reduction in the money to be borrowed to the public which as expected to reduce inflationary pressure in the economy.

B) QUALITATIVE INSTRUMENT OF MONETARY POLICY

Qualitative instruments, also referred to as selective credit controls, are monetary policy tools aimed at guiding the allocation and direction of credit within the economy. Unlike quantitative tools, which manage the overall volume of money and credit, qualitative instruments focus on how credit is used, ensuring it supports specific sectors or national economic priorities. These tools empowers the Central Bank of Nigeria (CBN) to influence lending behavior by promoting credit to productive and priority sectors (like agriculture or exports), while restricting it for non-essential or speculative activities (such as luxury goods or real estate speculation). As a result, they affect both lenders and borrowers by shaping the structure and direction of credit flows. Selective credit controls help ensure that credit is directed towards activities that are in the best interest of the economy while discouraging excessive lending for speculative or non-essential purposes (Mishkin, F.S. 2016). These qualitative instruments include:

I) MORAL SUASION:- Moral suasion is a technique used by the central bank to influence the credit decisions of commercial banks by appealing to their sense of responsibility and patriotism. It means that the central bank requests or advises commercial banks to follow its general monetary policy and act in the best interest of the economy. For example, the central bank may ask commercial banks to limit their lending to the public or to certain sectors that are not considered a priority. It involves the central bank's efforts to influence the decisions of commercial banks through verbal appeals, public statements, and meetings rather than binding regulations or changes in monetary instruments ( International Monetary Fund (IMF), 2022). It is usually applied along with other quantitative and selective methods of credit control, especially when they are not very effective. The central bank may use this method more frequently when there are many commercial banks in the economy in order to achieve its objectives. The central bank may communicate with commercial banks through letters or meetings and try to persuade them to comply with its directives on money and credit matters. It is a soft approach wherein the central bank uses communication and policy signaling to shape expectations and guide market behavior, especially when traditional tools may be less effective or politically constrained ( World Bank, 2021)

II) CREDIT RATIONING:- Credit rationing refers to the deliberate restriction of credit by central banks or financial institutions, even when borrowers are willing to pay the prevailing interest rate. According to Jaffee and Modigliani (1969) credit rationing is a situation in which there is an excess demand for commercial loans at the prevailing commercial loan rate then central bank restrict commercial banks from giving out this loan. It is a monetary policy measure aimed at regulating credit supply, not by adjusting interest rates, but by limiting access to loans based on borrowers' creditworthiness or broader macroeconomic goals such as curbing inflation or directing funds to priority sectors like agriculture or manufacturing. Rather than allowing market forces to freely allocate credit, policymakers use rationing to prevent over-borrowing, avoid financial instability, and ensure strategic sectors receive adequate funding. Jaffee & Modigliani (1969) credit rationing can persist even in competitive markets and is used as a non-price mechanism to allocate scarce credit efficiently.

III) MARGIN REQUIREMENTS:- Margin requirement refers to the proportion of collateral or security that a borrower must provide to secure a loan. Specifically, it is the difference between the market value of the asset pledged such as stocks or real estate and the loan amount granted by the lender. This tool is commonly used by central banks as a selective credit control measure to influence the availability of credit in the economy. (Mishkin, F.S. 2019) explains that margin requirements serve as a credit allocation tool. A lower margin increases borrowers' capacity to raise funds against a given value of collateral, thereby stimulating investment and consumption. Margin requirements are especially useful in managing speculative lending and credit flow to particular sectors. They are often applied in sectors prone to price bubbles, like housing or the stock market. In monetary policy, the central bank reduces the margin requirement to encourage borrowing and expand the money supply. Conversely, it raises the margin requirement to restrict credit and reduce the money supply, particularly during inflationary periods. If a borrower offers securities worth ₦1,000,000 and the margin requirement is 30%, the bank will provide only ₦700,000 as the loan, keeping a margin of ₦300,000.

### 2.1.5. MONETARY POLICY STRATEGIES

Central banks typically employ specific strategies or techniques to achieve the overall objectives of monetary policy. This process involves selecting a particular goal—such as inflation control, price stability, or interest rate management—or an intermediate variable like the money supply or market interest rate. The bank then sets a desired value, or target, for the chosen variable. Once a variable and its target value are identified, they become the focus of monetary policy actions. A monetary policy strategy includes the choice of policy goals, target variable and instrument as well as the procedures for decision making and communication (Svensson, 1997)For example, if inflation is selected and the target is set at 2.0 percent, the central bank will aim to prevent inflation from rising above that level by using various monetary policy instruments. Since inflation is an intermediate variable, achieving this target is expected to help meet the broader goal—such as maintaining a low money supply. The central bank can choose different goals or intermediate variables as targets depending on the economic context and policy priorities. These strategies include:

I) MONETARY TARGETING:- The central bank controls monetary aggregates, using them as either operating or intermediate targets, to influence its ultimate goal—price stability. Under a monetary targeting framework, the inflation target is not publicly disclosed, and the central bank focuses its interventions solely on the money market. Typically, it adjusts interest rates to regulate the supply of money, based on the assumption that monetary aggregates are the primary drivers of inflation over the long term. Therefore, by managing these aggregates, the central bank aims to stabilize inflation around an implicit target level (Croce, Khan 2000). Under this framework, appropriate level of growth in money supply is determined from a pre-determined level of inflation and output growth. This flows form the assumptions that there is a stable relationshp between money output and inflation Thus, the money supply level is consistent with the leve of economic actvities (CBN 2016)

II) INFLATION TARGETING:- Inflation targeting is a monetary policy framework in which the central bank sets and aims to maintain a specific annual inflation rate, typically between 2% and 3%. The policy involves adjusting monetary tools, such as interest rates, to steer inflation toward the predetermined

target. Infation targeting is a monetary poicy strategy in which a central bank forecasts and makes public a target inflation rate and then, attempts to steer actualinflation towards the target through the use of key monetary policy instruments, such as interest rate (CBN 2016). Interest rates often serve as intermediate targets in the implementation of inflation targeting frameworks by central banks. When inflation deviates from the desired threshold, central banks adjust policy rates accordingly. If inflation is perceived to be rising above the target, the central bank may increase interest rates to reduce spending and investment, thereby cooling inflationary pressures. Conversely, when inflation falls below the target, a reduction in interest rates is typically employed to stimulate borrowing, investment, and overall economic activity (Mishkin, 2007; Bernanke et al., 1999). This monetary policy approach helps guide inflation expectations and supports macroeconomic stability. The principle of inflation targeting is based on the belief that long-term economic growth is best achieved by maintaining price stability, and price stability is achieved by controlling inflation. Currently Central Bank of Nigeria is using the inflation targeting strategy and hopes to make Nigeria's inflation rate a single unit number like 8%.

III) EXCHANGE RATE TARGETING:- Exchange rate targeting or exchange rate peg is a monetary policy strategy whereby the central bank commits to maintaining the domestic currency's value within a predetermined band relative to a specific foreign currency or a basket of currencies. This framework is designed to reduce exchange rate volatility, thereby fostering macroeconomic stability and enhancing the predictability of cross-border trade and investment flows. By anchoring expectations, it can also serve as a nominal anchor to help control inflation and guide monetary policy credibility. Thus a nation that adopts exchange rate targeting as a monetary policy strategy smply pegs its currency to be responsive to the rate of inflation of the identified mirror country. This is so under the assumption that ceteris paribus if a fixed exchange rate is sustained, the gap between the Inflation rates of the two countres should evenout (CBN 2016).

IV) PRICE LEVEL TARGETING:- Price level targeting is a monetary policy approach in which central banks aim to keep the overall price level stable or maintain a predetermined level of a price index, such as the Consumer Price Index (CPI), over time. In this strategy the long term objective is to achieve a given rate of change in Consumer Price Index (CPI) (CBN 2016). It also accounts for past deviations from the target, requiring policymakers to correct for them in subsequent periods. This strategy can be particularly effective in low interest rate environments when nominal rates are near the zero lower bound as it allows for more aggressive expansionary measures compared to conventional inflation targeting, thereby supporting economic recovery and long-term price stability. It focuses on achieving a specific price level over time rather than targeting a constant inflation rate. This approach can strengthen the anchoring of inflation expectations and reduce the risk of deflationary spirals.

### 2.1.6 MONETARY POLICY TRANSMISSION MECHANISM

The monetary transmission mechanism refers to the process through which monetary policy decisions affect economic growth, prices, and other aspects of the economy.These monetary policy decisions affect the economy in general and the price level in particular. The transmission mechanism is characterised by long, variable and uncertain time lags. Thus it is difficult to predict the precise effect of monetary policy actions on the economy and price level. For instance, when the central bank adjusts

interest rates, it must first wait for financial markets such as banks and stock exchanges to respond and adapt. Following this, investors modify their borrowing, saving, and spending behaviors. Changes in output and employment will occur before any noticeable shift in price levels. This entire chain of events can take anywhere from several months to a few years for the central bank's objectives to be met. These delays are not fixed; sometimes policy effects are felt more quickly, while at other times they take longer. In a strong economy, households and businesses may promptly increase borrowing when interest rates fall, whereas in a recession, responses tend to be slower, even with cheaper credit, due to low confidence. A good understanding of the various channels of monetary policy transmission helps us know the linkage between the financial and real sectors of the economy. It also helps policy makers to explain movements in financial aggregates. Furthermore, adequate information about the transmission mechanism would lead to a better choice of policy tools. It helps us to know how the various policies transmit into the economy and through which channel (CBN 2016).These transmission mechanism can therefore be used to achieve monetary policy goals. The monetary policy transmission mechanism operates through multiple distinct channels, each influencing the economy in different ways. These channels include:-

I) INTEREST RATE CHANNEL: Interest rate channel is considered the main channel of monetary policy transmission. Monetary transmission through the interest rate channel occurs when a shift in monetary policy leads to changes in the general level of interest rates in the economy, which in turn influence overall spending (absorption) by affecting both the demand for credit and the disposable income of borrowers and lenders (IMF 1998). It's mostly through this interest rate adjustment that Central Bank cause an effect on the economy. The interest rate channel is one of the main ways monetary policy affects the economy. The Central Bank of Nigeria changes its policy rate which influences commercial interest rates such as lending rates, deposit rates, mortgage rates, and even rates on foreign exchange related transactions. When interest rates rise, borrowing becomes more expensive and saving becomes more attractive, leading to lower consumer spending and investment. When interest rates fall, borrowing becomes cheaper, encouraging more spending and investment. These shifts in spending and investment affect aggregate demand, output, and eventually inflation. So, the interest rate channel explains how a single policy rate adjustment can ripple through the entire economy, including the forex market, because interest rate changes affect capital flows and the exchange rate. Changes in the Central Bank's policy rate are directly reflected in short term market rates , when the Central Bank changes the monetary policy rate it is expected that other rates in the short end of the money market market would be affected because monetary policy rate is the rate at which Central Bank lends money to deposit banks or commercial banks (CBN Research Department, 2016).

II) EXCHANGE RATE CHANNEL:- Monetary transmission through the exchange rate channel occurs when a change in monetary policy leads to changes in the exchange rate. This is one of the ways monetary policy affects the economy. This channel influences the competitiveness of domestically produced goods and services in relation to foreign products. When domestic goods become relatively cheaper or offer superior quality compared to their foreign counterparts, they secure a competitive advantage in both domestic and international market. When foreign goods become more competitive, the demand for domestically produced goods may decline, leading to negative effects on trade balances, foreign

exchange flows, and overall economic performance. Such shifts in relative competitiveness are often influenced by exchange rate fluctuations, production costs, and global market dynamics (Krugman & Obstfeld, 2018). In response, central banks can adopt various policy measures to restore competitiveness. For example, they may adjust interest rates to influence capital flows and exchange rates, intervene directly in the foreign exchange market to stabilise the domestic currency, or implement targeted credit policies to support export-oriented sectors (Mishkin, 2019). By employing these tools, the central bank can make domestic goods more price-attractive in international markets, thereby improving trade performance and supporting sustainable economic growth (Blanchard, 2021). A key factor influencing exchange rates is the interest rate differential between countries. When the domestic interest rate falls below the foreign interest rate often as a result of expansionary monetary policy ,capital tends to flow out of the domestic economy toward countries offering higher returns. This capital outflow increases the supply of the domestic currency in the foreign exchange market, leading to a depreciation of the exchange rate. A weaker domestic currency makes locally produced goods and services cheaper relative to imported goods, thereby boosting demand for domestic products in both local and international markets. As a result, aggregate output and employment may expand. However, the increase in demand can also exert upward pressure on the general price level, potentially leading to inflation (CBN Research Department,2016)

III) ASSET PRICE CHANNEL:- The asset price channel of monetary transmission occurs when shifts in the monetary policy stance lead to changes in asset prices such as equities or the value of collateral. These price changes affect household wealth and the cost of financing investments. Rising asset values can increase household wealth, encouraging greater consumption and investment, whereas falling asset prices can dampen spending and investment activity. The effectiveness of the asset price channel depends largely on the development and significance of bond, equity, and real estate markets in the economy. In well-developed financial markets, changes in monetary policy such as a rise in short-term interest rates can have a pronounced impact on asset prices. For instance, higher interest rates often lead to a decline in long-term bond prices, reducing the wealth of investors and, in turn, lowering aggregate demand. The more advanced and influential these markets are, the more effectively the asset price channel can transmit monetary policy signals.

IV) CREDIT CHANNEL:- The credit channel of monetary transmission operates when changes in the monetary policy stance affect the quantity of credit available in the economy, regardless of, or in addition to, changes in interest rates. This channel emphasizes the role of monetary policy in influencing banks' willingness and capacity to extend loans, thereby affecting spending and investment decisions (IMF, 1998). The credit channel functions as a complement to the traditional money channel of monetary policy transmission, amplifying its effects rather than replacing it (Bernanke & Gertler, 1995). In the traditional money channel, policy changes influence aggregate demand mainly through adjustments in interest rates, which alter the cost of borrowing. The credit channel adds a reinforcing dimension by affecting the availability of credit itself. When the central bank tightens policy, borrowing costs rise and banks may also reduce lending due to lower reserves or stricter credit standards. This combination of higher borrowing costs and restricted credit access magnifies the overall impact of monetary policy on consumption, investment, and economic activity.

### 2.1.7 MONETARY POLICY IMPLEMENTATION IN NIGERIA

In Nigeria, monetary policy has evolved over the years encompassing both direct and indirect approach. Monetary policy in Nigeria has undergone significant transformation, evolving from a reliance on direct controls to the adoption of indirect, market-driven instruments. In the period between 1960 and the mid-1980s, the Central Bank of Nigeria (CBN) employed direct tools such as credit ceilings, interest rate regulation, special deposit requirements, moral suasion, stabilization securities, and exchange controls. From 1959 to 1973, policy implementation was guided by exchange rate targeting, aimed at preserving the stability of the naira against major foreign currencies. This was later replaced in 1973 by a monetary targeting framework, which sought to regulate the growth of monetary aggregates to curb inflation and steer economic activity.

A major shift occurred in 1986 with the introduction of the Structural Adjustment Programme (SAP), which ushered in financial liberalization and reforms designed to remove distortions in the banking system, enhance competition, and promote market-oriented monetary management. By 1993, the CBN had fully transitioned to the indirect approach, employing market-based tools such as Open Market Operations (OMO), reserve requirements, and policy interest rates to manage liquidity and influence economic conditions.Despite the shift in methodology over the decades, the fundamental objectives of monetary policy in Nigeria have largely remained unchanged. These include ensuring domestic price stability, safeguarding the value of the naira through stable exchange rates, maintaining a favorable balance of payments, fostering a robust and resilient financial system, and promoting rapid, sustainable economic growth. In addition, monetary policy has consistently aimed at enhancing financial market efficiency, stimulating productive investment, and creating a macroeconomic environment conducive to employment generation and poverty reduction. By aligning these goals with evolving policy instruments whether direct controls in the early years or market-based tools in more recent decades, the Central Bank of Nigeria (CBN) has sought to balance short-term stabilization needs with long-term economic development. By 2016, the operational framework for monetary policy management in Nigeria relied primarily on market-based (indirect) instruments to regulate the growth of major monetary aggregates and manage the exchange rate.

In November 2023, Mr Olayemi Cardoso the current governor of the Central Bank of Nigeria (CBN) announced the adoption of an Inflation Targeting Framework, marking a pivotal change in Nigeria's monetary policy direction. The move is aimed at tackling the country's persistent inflationary pressures, which have steadily weakened consumer purchasing power and threatened economic stability. His new targeting framework, inflation targeting is a framework in which the central bank sets a specific inflation goal and uses interest rate adjustments alongside other monetary tools to achieve it. In this case he hopes to implement monetary policies that would make Nigeria's inflation rate a single number like 5%or highest 9%. This approach provides a clear and disciplined method for maintaining price stability, strengthening policy credibility, and guiding market expectations. In a country like Nigeria, where inflation has been a recurring barrier to sustainable growth, the framework is expected to help anchor inflation expectations, restore investor confidence, and create a more stable economic environment.

### 2.1.8 CONCEPT OF POVERTY

The word "poverty" originates from the Old French word "poverté," which itself comes from the Latin word "paupertas." This Latin term, in turn, is derived from "pauper," meaning "poor." Poverty is a socio-economic state in which individuals, households, or communities are unable to attain a minimum standard of living because of inadequate financial resources and essential assets. It is characterized by the inability to meet fundamental human needs such as shelter, clean water, nutritious food, and access to healthcare. According to Amartya Sen 1981, being poor does not mean living below an imaginary poverty line, such as an income of two dollars a day or less. It means having an income level that does not allow an individual to cover certain basic necessities, taking into account the circumstances and social requirements of the environment. Amartya Sen's idea centers on the concept of capability deprivation, which highlights the freedoms and opportunities people have to achieve what they value in life. He broadens the definition of poverty beyond just a lack of income or material possessions. Instead, Sen emphasizes the actual freedoms individuals possess to live the life they find meaningful. He argues that true poverty is the absence of fundamental capabilities—such as good health, education, and social participation—that are crucial for living with dignity and well-being (Sen, 1999). For instance, someone might have sufficient money but still be unable to access healthcare or fully engage in society due to factors like discrimination or disability. Capability deprivation, therefore, refers to limitations on what a person can do or become, not merely what they own. Sen's perspective stresses the importance of individual agency and choice, suggesting that development should be assessed not just by economic growth but by how much people's capabilities expand, enabling them to lead fulfilling lives (Sen, 1999). According to the World Bank, poverty is a severe deprivation of well-being, where individuals lack sufficient income or consumption to rise above a minimum acceptable standard (World Bank, 2000).

Poverty can be understood in terms of an individual's capability to participate fully in society. Poor individuals often lack essential capabilities, which may include insufficient income, limited education, poor health, feelings of powerlessness, or restricted political freedoms. From a different angle, Karl Marx analyzed poverty through the lens of capitalism. He argued that capitalism is structured around a class system in which a small elite, the bourgeoisie, controls the means of production, while the majority, the proletariat, are compelled to sell their labor to survive. Marx maintained that poverty is an inherent result of this system, driven by powerful structural forces. Wealth and power concentrate at the top, and the working class typically earns just enough to survive rather than to prosper. This structural imbalance makes poverty an inevitable consequence of the capitalist framework. Thus, for Marx, poverty is not merely a lack of material resources but is deeply rooted in the power dynamics and economic arrangements that perpetuate inequality. This perspective aligns with the views of contemporary economists like Amartya Sen, who emphasized poverty as a multidimensional phenomenon shaped by economic, social, and political factors (Sen, 1999). Similarly, Joseph Stiglitz highlights the role of systemic inequalities and market failures in sustaining poverty (Stiglitz, 2012). Therefore, poverty should be seen as a complex, layered issue, influenced by the interaction of economic structures, social conditions, and political power.

### 2.1.9 MEASUREMENTS OF POVERTY

Poverty is a multifaceted socio-economic challenge that extends beyond insufficient income to encompass deprivation in areas such as health, education, and overall living standards. Accurate measurement of poverty is essential for formulating effective policies and tracking developmental progress. The measurement of poverty not only identifies the poor but also highlights the depth and severity of their deprivation, guiding governments and development partners in resource allocation and poverty reduction strategies (World Bank, 2018; UNDP, 2020). The measurement of poverty is crucial as it provides insights into the scale and characteristics of deprivation in society, forming the basis for sound policy design and implementation. It helps to determine who the poor are, their geographical distribution, and the specific areas in which they are deprived, ensuring that anti-poverty programs are effectively targeted (World Bank, 2018). In addition, measuring poverty allows governments and development agencies to monitor progress toward global objectives such as the Sustainable Development Goals (SDGs) and to allocate resources more equitably (UNDP, 2020). It also supports comparisons across countries and over time, revealing patterns and inequalities that guide strategies for inclusive development and improved welfare (Alkire & Foster, 2011).

I) ABSOLUTE POVERTY:- Absolute poverty, also referred to as extreme poverty. This is a financial condition where an individual or a family does not make enough money to meet their fundamental human needs. Those needs are: food, clothing, shelter, education and basic medical care, safe drinking water, sanitation facilities and information. It depends not only on income but also on access to services (UN, 1995). It is a condition of severe deprivation where individuals or households lack the minimum resources necessary for physical survival and basic well-being. It is usually assessed against a fixed income threshold, below which survival becomes threatened. For instance, in 2005 the global poverty line was set at $1.25 per day, later revised to $1.90 per day in 2011, and further adjusted to $2.15 per day in 2022 by the World Bank. This benchmark is particularly relevant in regions with widespread extreme poverty, such as Sub-Saharan Africa. However, the poverty line is not uniform across all regions; environmental and living conditions may necessitate higher thresholds. For example, in colder climates, individuals may require more than $2.15 per day to afford essential resources such as heating or warm clothing, making the absolute poverty line context-dependent.

II) RELATIVE POVERTY:- Relative poverty is often described as relative deprivation. It is a situation where individuals or households earn an income insufficient to maintain the average standard of living within their society. Relative poverty is a situation where individuals, families, or groups lack the resources to obtain the types of diet, participate in the activities & have the living conditions and amenities which are customary or at least widely encouraged or approved in the societies to which they belong. Townsend (1979).In this case, households may have some income, but it falls significantly below the median income level, leaving them unable to afford more than basic necessities. According to Townsend (1979), poverty should be seen in relation to the standards and customs of a society.This condition is often described as relative deprivation, as people are excluded from enjoying the normal lifestyle and opportunities available to others in their community. Relative poverty can also become a long-term condition, with affected families having little or no chance of attaining the standard of living enjoyed by the majority. As measured in the United kingdom a person is considered to be living in relative income poverty if they belong to a household whose total income from all sources falls below 60 percent of the

national median household income. Relative poverty is considered a dynamic concept since the standard of living within societies evolves over time. It shifts upward as living standards improve. For example, years ago having a gas cooker or an android phone might have been considered a luxury but today it's a necessity. As nations become more prosperous, the baseline for what is viewed as an acceptable living standard increases, causing poverty thresholds to shift accordingly. This implies that poverty is defined not in absolute terms but in relation to prevailing social and economic conditions (Atkinson, 2019).

III) HEAD COUNT RATIO(HCR):- The Head Count Ratio (HCR) which is mathematical represented as Po, is the population proportion that exists or lives below the poverty line. This poverty line is based on national (country specific) poverty lines. National poverty lines serve as benchmarks for measuring poverty in line with each country's economic and social realities. A country may adopt a single national poverty line or set different poverty lines for rural and urban areas, or across various regions, to account for variations in living costs, dietary needs, and consumption patterns (World Bank, 2024). The simplest and most common measure of poverty is head count ratio, which is the ratio of the number of poor to total population (Ajakaiye, Adeyeye 2011). In Nigeria 40.1 percent of total population were classified as poor. In other words, on average 4 out of 10 individuals in Nigeria has real per capita expenditures below 137,430 Naira per year. This translates to over 82.9 million Nigerians who are considered poor by national standards (NBS, 2019). Head count ratio is calculated as number of poor people (Np) divided by total population (N).

However, this measure also has some limitations. First, it does not fully capture the severity of poverty among individuals below the poverty line. Second, the headcount ratio fails to reflect changes when the poor become poorer, as it only considers whether they are above or below the line. Third, poverty is often estimated based on household living standards rather than individual living standards, which may be less useful for policy analysis, since policies are more effective when targeted at individuals (poverty manual, 2005).

IV) POVERTY GAP INDEX:- The poverty gap index which is mathematical represented as P1, is a measure of the extent and intensity of poverty within a country. It indicates how far, on average, individuals fall below the poverty line, expressed as a percentage of that line. Unlike the headcount ratio, which merely counts the number of people living below the poverty line and treats them equally poor, the poverty gap index captures the depth of poverty by showing the average shortfall of the poor from the poverty threshold. The poverty gap is measured for the total population, as well as for people aged 18-65 and people over 65 (OECD, 2024). The poverty gap, developed by the World Bank's Development Research Group, measures poverty by comparing household per capita income and consumption to a uniform international poverty line that is periodically updated to reflect global costs of basic needs such as food, clothing, and shelter ( World Bank, 2025). . It is calculated as the share of population in poverty multipliedby the average shortfall from the poverty line (expressed as a % of the poverty line).The poverty gap index measures the average shortfall between the living standards of the poor and the poverty line, expressed as a proportion of that line, and a lower index suggests greater potential for directing resources toward identifying the poor and tailoring programs to meet their needs (Suresh C. Babu, Shailendra N. Gajanan, 2022).

V) MULTIDIMENSIONAL POVERTY INDEX:- The Multidimensional Poverty Index (MPI) captures the percentage of households in a country that face deprivations in three areas: income, education, and access to basic infrastructure services. It provides a more complete picture of poverty by going beyond income measures to include other aspects of well-being. Unlike the traditional monetary headcount ratio, which considers only income poverty at the $3.00 international poverty line, the MPI also reflects access to education and essential services (World Bank, 2021). It was developed by the United Nations Development Programme (UNDP) in collaboration with Oxford University, the index shows both the incidence of poverty (the proportion of people who are multidimensionally poor) and the intensity of poverty (the average number of deprivations experienced by each poor person).

Recent evidence shows that approximately 63 percent of Nigeria's population, representing about 133 million people, are multidimensionally poor, with the national Multidimensional Poverty Index (MPI) estimated at 0.257, indicating that the poor experience slightly more than one-quarter of all possible deprivations. Major deprivations are evident in access to clean cooking energy—where most households rely on wood, dung, or charcoal—as well as in sanitation, healthcare, food security, and housing. Overall, multidimensional poverty is more prevalent than monetary poverty across most states, as reflected in the contrast between the 2018/19 national monetary poverty line, which classified 40.1 percent of the population as poor, and the 2022 National MPI, which identified 63 percent as multidimensionally poor. Moreover, disparities exist between rural and urban areas, with multidimensional poverty affecting 72 percent of the rural population compared to 42 percent in urban areas (Nigeria Bureau of Statistics, 2022)

**2.1.10 CAUSES OF POVERTY**

I) UNEMPLOYMENT AND UNDEREMPLOYMENT:- Unemployment refers to numbers of the economically active population who are without work, but available for and seeking work, including people who have lost their jobs and those who have voluntarily left work (International Labour Organization (ILO) (1982)). Underemployment refers to the situation where individuals are forced to work in low-paying, low-skill jobs or part-time positions because they are unable to secure full-time employment that matches their qualifications and skills. Employment plays a crucial role in determining poverty levels. Productive employment provides individuals with income, which can be used by them, their households, and organizations to meet basic needs and other wants, thereby reducing poverty. However, when unemployment or underemployment exists in a country, it disrupts and reduces income, limiting access to essential needs and resulting in poverty. This income instability also restricts investment in important areas such as education, since households struggling to meet basic needs are often unable to afford educational expenses. Underemployment leads to low wages and limited opportunities for skill development, which in turn restricts income growth. For example, imagine an economics graduate working as a Point of Sale (POS) agent—his or her expertise is not being fully utilized. In such a case, the individual settles for the job due to a lack of better employment opportunities. This insufficient earning not only limits personal advancement but also reduces purchasing power, leading to lower demand for goods and services, which can slow down economic activity, decrease overall GDP, and ultimately contribute to rising poverty in the country.

II) LIMITED ACCESS TO QUALITY EDUCATION:- Education is the best way out of poverty in part because it is strongly linked to economic growth and increase in economic growth means there is improvement in the economy indicating a reduced loss in poverty rates in the country.Different studies have been able to prove that the relationship between the knowledge capital of a nation and the long term economic growth rate is extraordinarily strong. In a country where there is limited access to high-quality formal education, it deprives the citizens the opportunity to gain knowledge and skills which would in the long run be needed to secure a well-paying job and improve their standard of living. Education is a fundamental right and a crucial driver for socio-economic development. Without education, individuals are left with no choice than to accept low-skilled and low-paying employment which reduces their earning potential thereby making it difficult to escape from the shackles of poverty. Government should therefore invest more in education and ensure there is free access to high quality education.

III) INEFFECTIVE GOVERNMENT POLICIES:- Several policies have been introduced in Nigeria with the aim of reducing poverty. These include the Poverty Alleviation Programme (PAP) launched in 2000 to urgently address rising youth unemployment by creating jobs, with the expectation that beneficiaries would stimulate economic activities and improve living standards. Similarly, the National Agriculture Land Development Authority (NALDA), established in 1993, was designed to maximize the potential of Nigeria's vast fertile land, strengthen the agricultural sector, diversify the economy, and boost household income (Nnamdi, Amount, Emeka, 2013). Other initiatives such as the National Poverty Eradication Programme (NAPEP) and the Structural Adjustment Programme (SAP) were also implemented to tackle poverty in different ways. However, these policies have largely been ineffective, as their outcomes do not match the large financial allocations made to them. Challenges such as inadequate funding, poor implementation, corruption, and mismanagement of resources have further undermined their impact, making it difficult to achieve meaningful poverty reduction in Nigeria.

IV) ARMED CONFLICTS:- Armed conflict is a major driver of poverty because it destroys lives, property, and institutions. It undermines national productivity in the long term by disrupting education, causing malnutrition and stunted growth, and leaving people with injuries or psychological trauma. Conflict creates a form of debt that accumulates during periods of violence and must be repaid once peace is restored (Hannes,Chanon, 2020). Resources that could have been directed toward development goals are diverted to financing war efforts, leaving limited funds for education, healthcare, job creation, and other essential sectors. In addition, insecurity discourages business owners and investors. Instead of expanding their businesses, they are compelled to channel resources into security measures. These funds, which could have been invested productively, are consumed by th bye costs of insecurity. As a result, production declines, supply chains weaken, and companies may struggle to pay salaries or even resort to laying off workers. This situation fuels unemployment and underemployment, thereby worsening poverty. Furthermore, governments face reduced revenues, making it more difficult to implement effective poverty-reduction policies.

V) CLIMATE CHANGE:- Climate change is a major driver of poverty because it creates both environmental and economic vulnerabilities, particularly in developing countries with low GDP and limited resources. Nations already struggling with poverty and inequality tend to suffer the most severe consequences. Extreme weather events such as flooding, rising temperatures, and irregular rainfall

reduce agricultural productivity, which is a primary source of income for many households in these regions. Since agriculture plays a central role in their economies, these disruptions can trigger serious economic downturns, pushing more people into poverty. In addition, climate change causes significant damage to infrastructure. Hurricanes, floods, and other disasters can destroy schools, roads, homes, and hospitals, thereby restricting access to healthcare, education, and essential services. Funds that could have been directed toward long-term developmental goals are instead diverted to repairing the destruction caused by climate events. This slows economic progress and leaves fewer resources available for poverty-reduction programs.

**2.1.11 POVERTY IN NIGERIA**

The World Bank (1996) described Nigeria as a paradox, a view that has continued to be validated by official statistics and unfolding events in the country. The paradox lies in the contradiction between Nigeria's high level of poverty and its vast wealth. The nation is richly endowed with human capital, fertile agricultural land, petroleum, natural gas, and various solid minerals (Obadan, 2001). Despite these abundant resources, including crude oil, arable land, and a large population capable of driving commerce, Nigeria remains one of the poorest countries in the world. The incidence of poverty is still unacceptably high, becoming increasingly widespread and severe. Poverty in Nigeria is reflected in the lack of access to adequate food, clothing, shelter, education, healthcare, and other essential social amenities. Its consequences and adverse effects continue to weigh heavily on the nation. One of the major consequences of poverty in Nigeria is poor health and malnutrition, which are reflected in low life expectancy and high infant mortality rates. Nigeria continues to record a relatively low life expectancy compared to global averages, largely because poor people face multiple health challenges. Limited access to quality healthcare facilities and services exacerbates these conditions. Children are among the most affected. Many are not immunized, which exposes them to preventable diseases. This often results in physical deformities, stunted growth, or even death. Immunization is vital, as it equips children with the ability to resist harmful diseases and other dangerous substances that threaten their health (Ucha, 2010).

Official statistics highlight the severity of the situation. In 2019, 40.1 percent of Nigeria's population were classified as poor, meaning that, on average, 4 out of every 10 individuals had a real per capita expenditure below ₦137,430 per year. This translated to over 82 million Nigerians living below the national poverty line (Nigeria Bureau of Statistics, 2019). By 2024, the situation had worsened, with more than 46 percent of the population classified as poor—equivalent to over 135 million Nigerians living in poverty (NBS, 2024). This persistent increase in poverty levels, despite Nigeria's abundant natural and human resources, raises serious concerns and calls into question the effectiveness of policies and strategies aimed at poverty reduction put in place by the government. Government has implemented different policies that would help to eradicate poverty. Some of these policies include:-

I)POVERTY ALLEVIATION PROGRAMME (PAP):- The Poverty Alleviation Programme (PAP) was introduced in 2000 under President Olusegun Obasanjo's civilian administration as a short-term measure to address the challenges of rising unemployment and increasing criminal activities, especially among youths. The overarching goal of the programme was to improve the living standards of Nigerians by providing

temporary employment opportunities. Beneficiaries of the programme were engaged in direct labour activities such as patching potholes, clearing vegetation along highways, maintaining public buildings, and carrying out environmental sanitation (Oyemoni, 2003). The main objectives of PAP were threefold:

to reduce unemployment and stimulate effective demand in the economy.

to enhance overall productivity and economic performance.

to significantly curb the rising crime rate in society (Obadan, 2001).

Despite these intentions, PAP recorded limited success. Its shortcomings were attributed to inadequate funding, weak monitoring and evaluation mechanisms, and high levels of corruption (Oyemoni, 2003). Furthermore, most of the jobs created under the programme were temporary and failed to provide sustainable sources of income for participants, thereby limiting its long-term impact on poverty reduction.

II) NATIONAL POVERTY ERADICATION PROGRAMME (NAPEP):- The National Poverty Eradication Programme (NAPEP) was established in 2001 under President Olusegun Obasanjo's civilian administration. It replaced the Poverty Alleviation Programme (PAP), which was decentralized and restructured into NAPEP as a more holistic approach to addressing poverty. The primary objective of this programme was to reduce poverty, particularly absolute poverty. Its mandate focused on monitoring and coordinating all poverty eradication efforts in order to harmonize projects, ensure efficient implementation, maximize overall impact, and promote the effective use of available resources.

NAPEP was organized into four major schemes:

Youth Empowerment Scheme (YES): Designed to provide young people with access to resources such as funding and technological support to enable them to establish sustainable livelihoods.

Rural Infrastructure Development Scheme (RIDS): Focused on providing essential amenities for rural communities, including potable water, motorable roads, and electricity.

Social Welfare Services Scheme (SOWESS): Aimed at delivering social support through special education programmes, primary healthcare, public awareness campaigns, and mass transit services.

Natural Resource Development and Conservation Scheme (NRDCS): Concerned with promoting the effective and sustainable use of Nigeria's natural resources, particularly by small-scale operators and local communities (Aliu, 2001).

III) AGRICULTURAL TRANSFORMATION AGENDA (ATA):- The Agricultural Transformation Agenda (ATA) was launched in 2001 during President Umaru Yar'Adua's administration with the aim of attracting private sector investment into agriculture, reducing post-harvest losses, adding value to local produce, improving rural infrastructure, and enhancing farmers' and value chain actors' access to finance and markets. Agriculture has always been a vital sector of Nigeria's economy, with immense potential for job creation, food security, and poverty reduction. For instance, in 1961, Nigeria dominated global

agricultural exports—accounting for 42% of groundnuts, 27% of palm oil, 18% of cocoa, and 14% of cotton, making it the leading exporter in West Africa (Timi, Asiegbu, Okafor, 2024). However, following the discovery of crude oil, the agricultural sector was largely neglected, losing its former prominence. The Agricultural Transformation Agenda (ATA) was therefore introduced to revive agriculture and reposition it as not just a commercial activity but a key driver of national development and poverty reduction (FMAED, 2011). Despite its objectives, the programme faced several challenges that hindered its success. Mismanagement of funds, persistent farmer–herder conflicts in the North, and the government's continued overreliance on oil revenues reflected a lack of genuine commitment to agriculture. Consequently, the Agricultural Transformation Agenda (ATA) achieved limited results.

IV) THE SUBSIDY REINVESTMENT AND EMPOWERMENT PROGRAMME(SURE-P):- The Subsidy Reinvestment and Empowerment Programme (SURE-P) was launched in 2012 by the Federal Government under President Goodluck Jonathan. The scheme was created to utilize savings from the removal of fuel subsidy to fund essential infrastructure and social intervention projects. Its primary goal was to lessen the hardship caused by subsidy removal by investing in infrastructure, creating jobs, empowering youths through skill acquisition, providing social safety nets for unemployed graduates and vulnerable citizens, and ultimately reducing poverty and promoting economic growth. However, the programme fell short of expectations. The sharp hike in fuel prices from ₦65 to ₦140 per litre led to nationwide protests, forcing the government to partially restore the subsidy. This reduced the funds available for SURE-P projects. In addition, problems such as corruption, mismanagement of resources, lack of accountability, and discontinuity under successive governments further weakened its implementation and limited its impact.

Other policies have been implemented to reduce poverty like The National Directorate of Employment (NDE), established in October 1986, was designed to tackle mass unemployment by formulating policies that encourage skill acquisition, self-employment, and the promotion of labour-intensive activities. Similarly, the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) was created to support the growth of micro, small, and medium enterprises (MSMEs) in the Nigerian economy. Its mandate is to reduce poverty arising from limited access to opportunities and inadequate capacity to exploit available prospects in the country [Umar, 2010]. In addition, the Market Moni initiative which was introduced by the current president of Nigeria President Bola Tinubu Ahmed in 2023 to promote the development of grassroots businesses by providing financial support to petty traders, market women, and other micro-enterprises nationwide, thereby empowering them economically (Timi, Asiegbu, Okafor 2024).

Even with these policies implemented by Nigerian government poverty rate in Nigeria is still hight and rising year after year. This is to show that government still has thier work cut out for them. Then ineffectiveness of these policies has been due to factors like embezzlement and mismanagement of funds which were supposed to be used for the implemented of these policies, lack of monitoring and evaluation of these policies. Government should monitor and check the progress if these policies if there is impact on the citizens standard of living.

### 2.1.12 NEXUS RELATIONSHIP BETWEEN MONETARY POLICY AND POVERTY

The link between monetary policy and poverty can be seen in the way central bank decisions influence people's living conditions. Through tools such as interest rate adjustments, credit control, and regulation of money supply, monetary policy affects prices, job opportunities, and income distribution—all of which determine the welfare of households, particularly the poor. When inflation rises because of poor monetary management, the poor are hit hardest since their limited income loses value and the cost of basic goods increases (Friedman, 1970). Stable and well-managed monetary policies, however, help protect purchasing power and reduce hardship. Keynes (1936) argued that expansionary monetary policies can stimulate economic activity by boosting investment and job creation, which improves the livelihoods of low-income groups. In developing countries, structural barriers such as limited access to affordable credit and financial exclusion often prevent the poor from fully benefitting from monetary measures (Chenery & Syrquin, 1975). In essence, monetary policy and poverty are closely connected. Sound policies can promote inclusive growth by ensuring price stability, increasing employment, and widening access to finance. Conversely, poorly designed or weakly implemented policies may worsen poverty by fueling inflation, raising unemployment, and deepening inequality.

## 2.2 THEORETICAL LITERATURE

### 2.2.1 SOCIAL EXCLUSION THEORY

Social exclusion has been defined as the process through which individuals or groups are wholly or partially excluded from full participation in the society within which they live (Francis, 2002). Social exclusion is a broad idea that goes beyond just lacking money. It describes the processes through which certain individuals or groups are denied access to opportunities, resources, and rights that allow people to fully participate in society. This exclusion can occur in many areas like economic, social, cultural, or political and often results in people being shut out from things like education, jobs, healthcare, housing, or even having a voice in decision-making. When this happens, it becomes much harder for them to escape poverty. Social exclusion is often used to capture the impact of material hardship/deprivation that is demonstrated by limited opportunities to participate in broad social and cultural activities (Levitas, 2006). Social exclusion is often described as multi-dimensional because it is not limited to material deprivation. It can also involve limited access to social rights, weak social connections, lack of educational and cultural opportunities, or having little influence and power. In other words, it reflects barriers that prevent people from fully engaging in community life, not just a shortage of income. For example, someone may be excluded because of their ethnic background, minority status, or disability, which leads to discrimination and unequal treatment. This makes it difficult for them to access the same opportunities as others, keeping them at the margins of society. Similarly a child from a disadvantaged home maybe denied education due to discrimination or lack of support from the society. This lack of education often means fewer job opportunities for the child and a higher risk of lifelong poverty. In essence, this theory suggests that people are poor not because of their own weaknesses, but because society creates barriers that limit their opportunities.

### 2.2.2 THE STRUCTURAL THEORY OF POVERTY

The structuralist theory of poverty argues that poverty is not primarily the result of personal failure, but rather the outcome of how the broader socio-economic system is organized. Within this system, individuals often find themselves in positions that provide very limited income and opportunities (Daas, 2003). The political, social, and economic structures each operate with particular values and ideologies that determine how resources and opportunities are shared. From this perspective, poverty is a product of the macro-level structure of society, which creates inequality and sustains it over time. A clear example is the global capitalist system, where wealth and resources are distributed unevenly — benefiting some countries and groups, while disadvantaging others. In the political structure, when leaders concentrate development projects in their own ethnic or regional base, those areas gain better infrastructure, services, and employment opportunities, while other regions are left underdeveloped. This unequal distribution fosters long-term inequality and poverty. In the social structure, when men are prioritized in areas such as education and women are excluded, women's ability to secure well-paid employment is limited. This not only reduces their individual welfare but also contributes to higher poverty levels overall, since poverty statistics include both men and women. In essence, the theory highlights that poverty is rooted in systemic inequality built into political, social, and economic structures, both nationally and globally.

### 2.2.3 HUMAN CAPITAL THEORY OF POVERTY

Human capital refers to the economic worth of an individual's knowledge, skills, and experiences. It is strengthened through factors such as education, training, intelligence, health, and workplace qualities like commitment and reliability. According to the human capital theory, investing in education and skill acquisition is essential for improving productivity and ultimately raising personal income (Blundell, 1999). The theory emphasizes that poverty often stems from insufficient investment in people—particularly in their education, training, abilities, and health. To break out of poverty, individuals require adequate schooling, vocational training, good health, and work experience, as these attributes enhance their competitiveness in the labour market, enabling them to secure better-paying and more sustainable employment (Gide & Showalter, 2010).

### 2.2.4 MONETARIST THEORY

The monetarist theory is an economic concept that considers the control of a nation's money supply as the most significant determinant of the rate of economic growth. According to monetarist theory, if a nation's supply of money increases, economic activity will increase. Similarly, if a nation's supply of money decreases, economic activity will decrease. A nation's interest rate determines this as one of the determinants. Changes in money supply affect interest rates. If interest rate is high, loan becomes more expensive making it hard to borrow money from banks. So individuals borrow less money causing a reduction in money in circulation/money supply. If a nation's interest rate is low, loan becomes less expensive making it cheaper to borrow money. So individuals will borrow more money as the interest charged on borrowing money is less. Thereby causing an increase in money in circulation in the economy. According to monetarist theory, this change in money supply is the most significant determinant of economic growth.

### 2.2.5 KEYNESIAN THEORY

The Keynesian theory was propounded by a British economist John Maynard Keynes (1883–1946), who is regarded as the father of modern macroeconomics. This is an economic school of thought that broadly states that government intervention is needed to help economies emerge out of recession. This theory is rooted in the concept of business cycles, where capitalist economies experience expansion followed by contraction; left unchecked, these cycles can cause fluctuations in the economy, in employment, output thereby leading to instability in the economy. To reduce the consequences of these fluctuations, the Keynesian school of thought suggests government intervention using policies like fiscal measures (taxes and government expenditure) to stabilize the economy. The Keynesian theory suggests that during economic downturns, the government should increase spending and cut taxes to boost aggregate demand and stimulate the economy. Then during economic expansion, government should increase tax in order to earn more income for the government. They also highlight the multiplier effect whereby an initial increase in government spending or a decrease in taxes can bring about a larger increase in overall economic output.

## 2.3. EMPIRICAL REVIEW OF LITERATURE

The effect of monetary policy on poverty has generated considerable debate among economists. While some scholars argue that monetary policy contributes positively to poverty reduction, others contend that it hinders the fight against poverty. Conversely, a different strand of literature suggests that monetary policy exerts no significant influence on poverty alleviation. In most of these studies, both monetary policy and poverty are analyzed using different measurement indicators.

Damkor, Peter and Abah (2025) investigated the impact of monetary policy on poverty reduction, using time series data from 1981 to 2023. The study adopted the use of co-integration, Auto-Regressive Distributed Lag (ARDL) and unit root test for analysis. The result of the research demonstrated that a 1% increase in money supply reduces poverty by 0.31% in the short-run while in the long run, it reduces poverty by 0.017%. In the long run. Additionally, it was demonstrated that a 1% depreciation of the exchange rate reduces poverty by 0.97%. The study recommends that the Central Bank of Nigeria should adopt a balanced monetary policy that ensures adequate money supply to support economic growth while keeping inflation in check. Targeted liquidity injections into productive sectors including agriculture and education can enhance poverty reduction.

Adegbite and Alabi (2013) examined the impact of monetary policy on economic growth in Nigeria using secondary data from Central Bank of Nigeria statistical bulletin covering the period of 1970 to 2010. Multiple regressions were employed to analyze data on variables like inflation, exchange rate, interest rate, and gross domestic product were all found to have significant effects on the economic growth in the study. It adjusted R2 of 58%. Following the outcome of this study, it is therefore concluded that exchange rate stability has played a key role in keeping inflation low, which increases the purchasing power of individuals thereby reducing poverty for most of the transition period and that the

range of monetary policy instruments available to the authorities has widened in recent years and this has been associated with more stable and predictable changes in money supply and the price level.

Didigu et al. (2022) research on the topic: monetary policy and banking sector stability in Nigeria. This study adopted the use of auto-regressive distributed lag (ARDL) bounds testing approach to co-integration for analysis. The empirical findings of this study showed that monetary policy enhanced banking stability in Nigeria during the period of evaluation. A stable banking sector fosters economic growth through increased investment, job creation which reduces poverty. The study recommended that the monetary authority should keep monetary policy rate at a moderate level that would not generate instability in the banking system.

Ufoeze, Odimgbe, Ezeabasili, Alajekwu (2018) theoretically based their research on Keynesian IS-LM framework; investigated the impact of monetary policy on economic growth. This study adopted an Ordinary Least Squared technique and also conducted the unit root and co-integration tests for analysis over the period of 1986 to 2018. The results of the study depict that monetary policy rate, interest rate, and investment have a significant positive effect on economic growth in Nigeria. Money supply however has no significant positive effect on growth in Nigeria. Exchange rate has significant negative effect on GDP in Nigeria. Generally, they concluded that monetary policy explains 98% of the changes in economic growth in Nigeria. This research recommended that Central Bank should eliminate the price uncertainties associated with inflation using its main instrument in order to make the nation's economic health better. And if Central Bank does not do this, it can result to sharp fluctuations in the market.

Maku, Tella, Fagbohun (2020) made research on alleviating poverty in Nigeria: Keynesian vs Monetary theory of poverty Evidence from Nigeria. Time series data from 1986 to 2018 and ordinary least square or Beta coefficient approach were used for analysis. The result of the research shows that monetary measures like exchange rate and interest rate are more significant in alleviating poverty than any other monetary policy measures. This study recommended that government through the Central Bank of Nigeria, to shift their attention towards key monetary policy measures like interest rate and exchange rate compared to other monetary measures.

Omekehor Idris et al. (2023) examined the impact of monetary policy on poverty reduction in Nigeria. This study adopted the use of Error Correction Model (ECM) technique for the estimation and a time series data from 1985 to 2019. The results show that there is a strong link between monetary policy and poverty reduction. Through monetary policy measures like money supply, inflation rate can reduce which would help to increase the purchasing power of individuals thereby reducing poverty. The study recommended that monetary authority should implement low inflationary monetary policy that will not only encourage investment, raise employment opportunities and economic growth but also improves wellbeing of the people in the country.

Nwankwoezue Ikechukwu (2021) made a research on the topic: the impact of money supply on economic growth in Nigeria. Time series data from 1981 to 2010 and ordinary least square approach was used for analysis. The results of the research shows that broad money supply (M2) is statistically significant to the growth of the Nigerian economy. The result also shows that the adoption of credit

supply (nominal money) would promote economic growth in Nigeria, but the combination of monetary variables like: Real Interest Rate (RIR) and Real Exchange Rate (RER) may not be effective for the purpose of promoting economic growth for the period under study as the regression result shows that they are not statistically significant. This study recommended that the Nigerian financial system should be made more effective in its monetary management by making all financial markets organized so as to accentuate the effects of monetary policy variables like Broad Money Supply, Real Interest Rate. This promotes real GDP in Nigeria.

Anwor, Oladuchukwu F. and Okerie, George Chisom (2016) conducted a study on how monetary policy influences economic growth in Nigeria. The analysis utilized data sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, various editions of Annual Reports and Statements of Accounts, along with supplementary data from the National Bureau of Statistics and the Federal Ministry of Finance, covering the period from 1982 to 2013. Applying the rule of thumb and assuming ceteris paribus, the study employed the Ordinary Least Squares (OLS) method to test its hypotheses. Findings from the study revealed that the Cash Reserve Ratio (CRR) had a statistically significant impact on economic growth, whereas both the interest rate and monetary policy rate did not show statistical significance. Specifically, the study indicated that a one-unit increase in CRR could lead to an approximate seven-unit increase in economic growth in Nigeria. Based on these results, the study advised monetary policymakers to focus more on the Cash Reserve Ratio (CRR) as a strategic tool for achieving economic stability.

Andabai et al. (2019) investigated the relationship between monetary policy and economic growth in Nigeria during the period from 1990 to 2017. The study relied on secondary data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin. Utilizing the Ordinary Least Squares (OLS) method for hypothesis testing, the findings indicated that Treasury Bills, Liquidity Ratio, and the Monetary Policy Rate significantly influenced the country's Gross Domestic Product (GDP). The $R^2$ value revealed that approximately 62% of the variation in economic growth could be attributed to changes in these monetary policy indicators. Based on these insights, the study recommended that the Central Bank of Nigeria implement strict prudential measures to stabilize and reinforce a private sector-driven economy.

Simon, Elias (2021) conducted a study focusing on the effects of monetary policy tools on Nigeria's economic growth using time series data from 1985 to 2015. Data sources included the Central Bank of Nigeria (CBN) Statistical Bulletin and the National Bureau of Statistics (NBS). The analysis employed the Ordinary Least Squares (OLS) method alongside a unit root test. The findings showed that while money supply had a significant positive impact on economic growth, the influence of interest rate and deposit loan rate was positive but statistically insignificant. The study advocated for the government to prioritize money supply management as an effective tool for promoting price stability and accelerating economic growth.

Olakanmi, Olagunju (2020) undertook research to assess how monetary policy affects inclusive growth in Nigeria. The data used spanned from 1991 to 2018 and were extracted from the CBN Statistical Bulletin. Results from the OLS estimation indicated that money supply has a positive and significant effect on per capita income, suggesting that a 1% rise in money supply enhances individual welfare by approximately 12%. On the other hand, both exchange rate and interest rate exhibit negative but

statistically insignificant effects on per capita income. The study concludes that, when properly managed, money supply can serve as a powerful tool to drive inclusive economic growth.

Sunday, Garba et al. (2016) investigated the relationship between unemployment and monetary policy in Nigeria over the period 1983 to 2014, utilizing data from the Central Bank of Nigeria (CBN) Statistical Bulletin and the National Bureau of Statistics (NBS). Employing a Vector Auto-Regressive (VAR) model, the study uncovered notable structural breaks in the unemployment data in 1994Q1, 2006Q2, and 2009Q3. The breaks in 1994Q1 and 2009Q3 were associated with the abolition of the maximum lending rate in 1993, the reinstatement of interest rate controls in 1994, and the 2007–2008 global financial crisis. The break in 2006Q2 was deemed statistically insignificant. The researchers recommended that monetary policy decisions in Nigeria should incorporate unemployment considerations, particularly in the context of interest rate management.

Vera Fiador (2015) assessed how monetary policy impacts economic performance in Sub-Saharan Africa from 1991 to 2011. The research utilized data from the International Financial Statistics (IFS) and the World Bank. The study employed the System Generalized Method of Moments (GMM) estimation approach within a dynamic panel framework. Findings showed no evidence of a positive link between contractionary monetary policy and economic growth, challenging the traditional view that such policies hamper growth. The analysis further indicated that private capital formation is largely unresponsive to changes in monetary policy. However, the stock market emerged as a significant factor influencing both private capital formation and economic growth. Additionally, while the share of foreign trade in GDP positively affects private capital, it has a negative association with growth. Based on these findings, the study suggests that Sub-Saharan African countries should adopt policies aimed at improving their trade balances, as many currently function as net importers.

Orgi (2006) assessed the effectiveness of monetary policy in maintaining price stability in Nigeria, using inflation rate and consumer price index as key indicators. The study analyzed data spanning from 1980 to 2004, applying the Ordinary Least Squares (OLS) estimation method. Results indicated that money supply and domestic credit significantly influence the consumer price index. Consequently, the study recommended that for the monetary authorities to achieve sustainable price stability, policy efforts should focus on managing the consumer price index, which serves as a dependable indicator of price levels in the Nigerian economy.

Keyra Primus (2016) investigated how effective indirect and direct monetary policy instruments are in small open economies, focusing on Barbados, Jamaica, Trinidad, and Tobago. The study employed a restricted Vector Autoregressive model with exogenous variables (VARX) for analysis. Findings showed that while a positive policy interest rate shock directly influences commercial banks' lending rates, the transmission to real economic variables is relatively weak. Furthermore, the research observed that an increase in the required reserve ratio effectively curtails private sector credit and excess reserves, thereby easing pressure on the exchange rate. Based on these results, the study recommended that central banks in small open economies should use reserve requirements alongside interest rate adjustments to achieve their macroeconomic goals.

Yannick Ekobena (2014) carried out a study to determine whether monetary policy significantly affects poverty levels. Using Cameroon as a case study, the research analyzed data from 1980 to 2011 obtained from the Central African Economic and Monetary Community (CEMAC), the International Monetary Fund (IMF), the World Bank, and the Consumer Expenditure Survey (CEx). The study applied a panel system Generalized Method of Moments (GMM) estimation for household income and consumption data in both the United States and Central Africa Economic and Monetary Commission (CEMAC) member countries. Results indicated a positive correlation between interest rates and poverty in the United States, suggesting that higher interest rates contribute to increased poverty levels. Consequently, monetary policies designed to lower inflation were found to positively influence poverty reduction. However, in the CEMAC region, conventional monetary policy showed little to no impact on income distribution and poverty, while non-traditional policy measures had more noticeable effects.

Ahmed (2025) examined the relationship between monetary policy and poverty in a study titled "Monetary Policy and Poverty: An Empirical Study Using Iran as a Model." The analysis covered the period from 1988 to 2025 and employed unit root tests to check variable stationarity at different levels before applying the Autoregressive Distributed Lag (ARDL) model. The findings revealed that a 1% increase in broad money supply led to a 0.0359% reduction in poverty levels, while a 1% rise in interest rate decreased poverty by 0.0182%. Additionally, exchange rate elasticity was measured at 0.4167. These results imply that monetary policy plays a modest yet significant role in reducing Iran's poverty rate, both presently and in the long run. The study concluded by emphasizing the importance of maintaining a balanced monetary policy to promote sustainable economic growth, which in turn helps reduce unemployment and poverty.

# CHAPTER THREE

# THEORETICAL FRAMEWORK AND METHODOLOGY

## 3.1 THEORETICAL FRAMEWORK

### 3.1.1 Monetarist Theory

This research is anchored in the Monetarist Theory. The monetarist theory is an economic concept that considers the control of a nation's money supply as the most significant determinant of the rate of economic growth. According to monetarist theory, if a nation's supply of money increases, economic activity will increase. Similarly, if a nation's supply of money decreases, economic activity will decrease. A nation's interest rate determines this as one of the determinants. Changes in money supply affect interest rates. If interest rate is high, loan becomes more expensive making it hard to borrow money from banks. So individuals borrow less money causing a reduction in money in circulation/money supply. If a nation's interest rate is low, loan becomes less expensive making it cheaper to borrow money. So

individuals will borrow more money as the interest charged on borrowing money is less. Thereby causing an increase in money in circulation in the economy. According to monetarist theory, this change in money supply is the most significant determinant of economic growth. Economic growth is an increase in the production of economic goods & services in one period compared to a previous period. When an economy grows, new and existing businesses expand and new businesses emerge. This leads to increase in demand for labour, more employment opportunities as more hands are needed to drive this expansion and new businesses emerging. This increase in income thereby lifting many out of poverty (Jahan, Papageorgiou, 2014).

Monetarism is majorly associated with the work of Milton Friedman. The monetarist theory suggests that variations in the money supply have major influences on national output in the short run and on price level over longer periods. Milton Friedman is regarded as the father of monetarist theory. Other notable proponents include Anna Schwartz, Karl Brunner, David Laidler, Steve Hanke. Monetarist theory is governed by a simple formula:

MV = PQ
Where:
M is the money supply
V is the velocity (number of times per year the average dollar is spent)
P is the price of goods & services
Q is the quantity of goods & services

Assuming constant velocity, when money supply is increased, either price, quantity or both price and quantity rise. General price level tends to rise more than the production of goods and services when the economy is close to full employment. When there is slack in the economy, quantity will increase at a faster rate than price under monetarist theory. This means that the effect of an increase in money supply depends on whether the economy is operating below or near full employment. If there is a slack in the economy (that is, idle resources like unemployed labour or unused resources (land)), an increase in aggregate demand will lead to increase in production and more employment opportunities. In this situation, quantity of goods and services (Q) is rising faster than price of goods and services (P), since firms can expand production without necessarily increasing cost. However, as the economy gets closer to full employment, resources become scarce, capital becomes nearly utilized, and any further increase in money supply will increase prices. This will cause inflation as prices will be rising faster than quantity/output.

### 3.2 MODEL SPECIFICATION

This model comprises variables that explain the objectives of the study. The economic relationships, however, are assumed to be based theory, the introduction of the error term to capture all kinds of disturbance that might distort the structure of the model.

The functional expression of the model is:
POV = f(INF, GDP, MS, INT)
The econometric expression of the model is:

$POV_t = \alpha_o + \alpha_1 INF_t + \alpha_2 TGDP_t + \alpha_3 MS_t + \alpha_4 INTR_t + \varepsilon_t$

Where:

POV = Poverty Rate

INF = Inflation Rate

TGDP = Total Gross Domestic Product

MS = Money Supply (M2/M3)

INT = Interest Rate or Monetary Policy Rate

$\varepsilon_t$= Error Term

$\alpha_o$= Intercept of the model

$\alpha_1, \alpha_2, \alpha_3, \alpha_4$= Partial slopes of the model

A priori expectation

The a priori expectation assesses the parameters based on their alignment with established economic theory. Economic theory outlines the characteristics of the variables in use and their interconnections. In particular, the expected nature of the relationship is as follows:

$\alpha_1 < 0$,

$\alpha_2 > 0$,

$\alpha_3 > 0$,

$\alpha_4 < 0$.

$\alpha_1$– According to theoretical expectation, $\alpha_1$ is negative. Increase in inflation rate reduces the purchasing power of money, making money less valuable thereby increasing poverty.

$\alpha_2$– The partial slope coefficient $\alpha_2$ of the Gross Domestic Product (GDP) is positive. This follows theoretical expectation as an increase in GDP leads to higher business revenue which leads to increased employment opportunities and reduced poverty.

$\alpha_3$– The partial slope coefficient $\alpha_3$ is also positive as a increase in money supply expands economic activity, increases aggregate demand and boosts production but should be monitored carefully as too much money in circulation can lead to an increase in inflation

$\alpha_4$ – According to theoretical expectation, the partial slope coefficient of the interest rate is negative. Reduction in interest rate reduced the cost of borrowing for businesses and households and this encourages investment, increase production and ensure job creation.

### 3.3 METHOD OF DATA ANALYSIS

This study employs the Autoregressive Distributed Lag (ARDL) Bounds Testing approach. This model is suitable for time series data with variables of mixed integration orders (I(0) and I(1)), and allows for estimation of both short-run and long-run dynamics. Studies on macroeconomic variables often find mixed integration orders. This approach offers a comprehensive examination of the dynamic relationships, contrasting with simpler methods like Ordinary Least Squares (OLS) which may lead to spurious regressions if variables are non-stationary. The numerical estimates of the model's parameters are determined through ARDL facilitated by Econometric-views (EView) software. Its robust statistical algorithms and graphical capabilities make it an ideal tool for conducting rigorous empirical research on

macroeconomic and financial data. The ARDL approach thus provides a flexible and appropriate framework for analyzing the complex relationships under investigation.

The econometric analysis will proceed through several stages, encompassing tests for stationarity, cointegration, and short-run and long-run dynamics.

UNIT ROOT TESTS: The presence of unit roots in time series data can lead to spurious regression results, where a significant relationship might appear between unrelated variables, even if no genuine economic relationship exists (Granger & Newbold, 1974). Therefore, before proceeding with model estimation, it is imperative to test the stationarity of all variables. This study will employ the Augmented Dickey-Fuller (ADF) test. The ADF test examines the null hypothesis that a unit root is present in a time series (i.e., the series is non-stationary) against the alternative of stationarity. It accounts for autocorrelation in the error term by including lagged differenced terms of the dependent variable.

COINTEGRATION TESTS: Cointegration analysis investigates whether a long-run equilibrium relationship exists among non-stationary variables. If variables are cointegrated, they tend to move together in the long run, even if they diverge in the short run. This study will primarily use the ARDL Bounds Testing approach for cointegration. This test involves an F-statistic or Wald test to determine if there is a long-run relationship between the dependent variable (poverty) and the independent variables (TGDP in billions, Inflation, Money supply and the Monetary Policy Rate). The critical values for the F-statistic depend on whether the variables are I(0), I(1), or a mixture.

DIAGNOSTIC TESTS: After estimating the econometric models, a series of diagnostic tests will be conducted to assess the statistical validity and reliability of the model. These tests ensure that the assumptions underlying the chosen models are met, thereby validating the inferences drawn from the results. These tests includes;

**(I) Autocorrelation (or serial correlation):** This occurs when the error terms in a regression model are correlated with each other over time. This study will employ tests such as the Breusch-Godfrey (BG) LM test or the Durbin-Watson statistic to detect the presence of autocorrelation in the residuals.

**(ii) Heteroscedasticity Test:** Heteroscedasticity refers to the non-constant variance of the error terms across observations. Its presence does not bias coefficient estimates but leads to inefficient estimates and incorrect standard errors, affecting the validity of t-statistics and F-statistics. The Breusch-Pagan-Godfrey test and the White test will be used to check for heteroscedasticity in the model residuals. Okoebor (2022) explicitly included "Heterocedasticity" in their diagnostic checks to ensure model integrity, demonstrating the standard practice of addressing this issue in empirical financial research.

**(iii) Normality Test:** The normality assumption states that the residuals of the regression model are normally distributed. Although large sample sizes can mitigate the impact of non-normality on coefficient estimates (due to the Central Limit Theorem), significant deviations from normality can affect the efficiency of estimates and the validity of hypothesis tests, particularly in smaller samples. The Jarque-Bera test will be applied to assess the normality of the residuals. This test evaluates skewness

and kurtosis of the residuals against those of a normal distribution. Ezenduka and Joseph (2020) also conducted "normality and descriptive statistics tests" (p. 1), indicating a standard practice in such analyses to ensure that the assumptions for statistical inference are reasonably met.

### 3.4 SOURCES OF DATA

The data for the study are secondary in nature and cover the period from 1981-2023. Data on Total Gross Domestic Product (TGDP), money supply and interest rate was sourced from Central Bank of Nigeria (CBN) statistical bulletin, poverty rate and inflation rate was obtain from National Bureau of Statistics (NBS).

## CHAPTER FOUR

## PRESENTATION AND ANALYSIS OF RESULT

### 4.1. DESCRIPTIVE ANALYSIS

Descriptive statistics summarize datasets and can be categorized into central tendency (e.g., mean and median), variability (e.g., standard deviation), and normality (e.g., skewness and kurtosis) measures. They provide insights into variables such as average values, data spread, symmetry, and distribution shape. Mean represents typical values, median is the middle value, maximum shows the highest point, and standard deviation indicates data variation around the mean. Skewness measures symmetry, with positive skewness indicating a longer right tail and negative skewness a longer left tail. Kurtosis assesses distribution shape, with 3 being standard, higher values suggesting more peakedness, and lower values indicating flatter distributions. The Jarque-Bera statistic is another normality indicator.

Table 4.1 Descriptive Statistics

| | POV | INT | INF | MS | GDP |
|---|---|---|---|---|---|
| Mean | 56.09465 | 0.482534 | 19.07941 | 1.24E+13 | 4.54E+11 |
| Median | 54.5 | 3.023542 | 13.00697 | 1.51E+12 | 2.57E+11 |
| Maximum | 88 | 18.18 | 72.8355 | 1.51E+13 | 5.09E+12 |
| Minimum | 32 | -65.857 | 5.38808 | 1.45E+10 | 1.15E+11 |
| Std. Dev. | 14.83034 | 13.9162 | 16.28127 | 2.04E+13 | 7.89E+11 |
| Skewness | 0.242026 | -2.7889 | 1.867401 | 2.276034 | 5.016077 |
| Kurtosis | 1.942111 | 13.56168 | 5.472937 | 8.679828 | 29.42903 |
| Jarque-Bera | 2.425038 | 255.6 | 35.94829 | 94.92567 | 1431.788 |
| Probability | 0.297447 | 0 | 0 | 0 | 0 |
| Sum | 2412.07 | 20.74898 | 820.4147 | 5.32E+14 | 1.95E+13 |
| Sum Sq. Dev. | 9237.434 | 8133.748 | 11133.35 | 1.74E+28 | 2.61E+25 |
| Observations | 43 | 43 | 43 | 43 | 43 |

Source: Author's Computation using Eviews 10

Table 4.1 presents the summary of the descriptive statistics for the variables used in the study, namely: Gross Domestic Product (GDP), Poverty Rate, Interest Rate, Inflation Rate, and Money Supply. The descriptive results provide insight into the central tendency, dispersion, and distributional characteristics of the data over the study period. From the table, the mean value of GDP is ₦454 billion, indicating the average level of output during the study period. The minimum and maximum values of ₦115 billion and ₦5,090 billion. The data suggests that Nigeria's economic output has experienced notable fluctuations over time. The median GDP value of ₦257 billion implies that half of the GDP

observations lie above this figure, while the standard deviation of ₦789 billion points to a significant level of dispersion, indicating alternating periods of economic growth and decline. The statistical indicators of skewness and kurtosis help describe the distribution pattern. A skewness value of 5.016077 shows a right-skewed distribution, meaning that most GDP values are on the lower end, with a few extremely high values stretching the distribution's tail. The high kurtosis value of 29.42903 suggests that the GDP data is sharply peaked with heavy tails—characteristics of a leptokurtic distribution. Moreover, the Jarque-Bera test for normality yields a probability value of 0.0000, leading to the rejection of the null hypothesis that the data follows a normal distribution. Altogether, these descriptive statistics indicate that while Nigeria has recorded substantial economic growth, the growth path has been inconsistent, underlining the need for more stable and inclusive developm

ent strategies.

The average poverty rate during the study period is 56.09465%, while the median value of 54.5% shows that half of the observed poverty rates fall below this level. Poverty rates ranged from 32% to 88% across the period. The skewness of 0.242064 indicates a slight positive skew, suggesting a minor tendency toward higher values. With a kurtosis of 1.942111, the distribution is relatively flat compared to a normal distribution (platykurtic). The Jarque-Bera test p-value of 0.297447 is greater than the 0.05 significance level, indicating that the poverty data can be considered normally distributed. These findings imply that poverty remains a persistent and significant challenge in Nigeria. The standard deviation of 14.83034 points to considerable variability in poverty levels, meaning some regions or periods experience relatively low deprivation, while others face severe poverty. Consequently, strategies aimed at poverty reduction should prioritize interventions in the most affected areas and among the most vulnerable groups.

The mean interest rate of 0.482534% indicates that interest rates were generally low on average, but the wide range from –65.857% to 18.18% and a high standard deviation of 13.9162 highlight considerable instability. The negative minimum value points to periods of financial disruption and policy adjustments. The skewness of –2.7889 shows a strong negative skew, meaning most interest rate observations are above the mean, yet a few very low or negative values pull the mean down. A kurtosis of 13.56168 suggests a highly peaked distribution with extreme values, indicating occasional sharp policy changes. The Jarque-Bera statistic of 255.6, with a probability of 0.000, confirms that the interest rate data are not normally distributed, likely due to volatility and structural breaks. Overall, this evidence points to highly unstable interest rates in Nigeria, shaped by policy shifts and financial shocks.

The mean inflation rate of 19.07941% reveals that Nigeria experienced persistent inflationary pressures throughout the study period. The wide gap between the maximum value of 72.8355% and the minimum of 5.38808% suggests that the economy went through phases of both severe inflation and relative price stability. The positive skewness value of 1.86 7401 indicates that inflation tended to rise sharply in certain years but rarely declined significantly. Meanwhile, a kurtosis of 5.472937 points to a leptokurtic distribution, implying that extreme inflation episodes occurred more often than in a normal distribution. Furthermore, the Jarque-Bera statistic of 35.94829 with a probability of 0.000 confirms that the inflation series is not normally distributed, which is consistent with the characteristics of developing economies prone to price instability. Overall, these findings suggest that Nigeria's inflation rate was high, volatile, and subject to sudden increases, reflecting persistent macroeconomic instability over the years.

The average money supply of ₦12,400 billion and a standard deviation of ₦20,400 billion suggest that Nigeria's money supply grew considerably and fluctuated widely over the study period. The rise from ₦145 billion to ₦96,900 billion reflects a sustained expansion in monetary circulation and overall liquidity in the economy. The positive skewness value of 2.276034 indicates that money supply was

relatively low in the early years but rose sharply in later periods. A kurtosis of 8.679828 points to a leptokurtic distribution, showing that there were several instances of exceptionally high monetary growth. Additionally, the Jarque–Bera value of 94.92567 with a probability of 0.000 reveals that the distribution of money supply is non-normal, which can be attributed to abrupt monetary increases and policy adjustments. Overall, the findings demonstrate that Nigeria's money supply expanded rapidly over time, reflecting consistent monetary growth and the deepening of financial sector activities.

**4.2 UNIT ROOT TEST**

A unit root test is conducted on the time series data to assess whether the series is stationary. Stationarity implies that the mean, variance, and covariance of the series remain constant over time, making the series time-invariant. This study employed the Augmented Dickey-Fuller (ADF) Unit Root Test to examine the presence of unit roots in the regression models. The results of the ADF test are presented in Table 4.2.

Table 4.2

| VARIABLES | AT LEVEL | | AT FIRST DIFFERENCE | | REMARK |
|---|---|---|---|---|---|
| | ADF STATISTICS | 5% STATISTICS | ADF STATISTICS | 5% STATISTICS | |
| INPOV | -2.781997 | -2.9332 | -6.2508 | -2.93769 | I(1) |
| ININF | -3.5209 | -2.9332 | - | - | I(0) |
| INT | -7.6706 | -2.9332 | - | - | I(0) |
| MS | -2.9966 | -2.9332 | - | - | I(0) |
| INTGDP | -3.2169 | -2.9332 | - | - | I(0) |

Source: Author's computation EViews10

Based on Table 4.2, the poverty rate has an ADF statistic of –2.781997 at its level, which is less negative than the 5% critical value of –2.9832, indicating that the series is non-stationary in its original

form. However, after applying first differencing, the ADF statistic becomes –6.2508, exceeding the critical value in absolute terms and a p-value of 0.0000 which is significant at 5% level confirms that the poverty rate becomes stationary after first differencing and is thus integrated of order one, I(1). For the inflation rate, the ADF statistic at its level is –3.5209, which is more negative than the critical value of –2.9332 at the 5% significance level. P-value is 0.0122 which is significant at 5% level, therefore we reject the null hypothesis of non-stationarity. This suggests that inflation rate is stationary at level, meaning it is integrated of order zero, I(0). Similarly, the interest rate has an ADF statistic of –7.9832 at level, which is also more negative than the critical value. P-value 0.0000 is significant at 5% level of significance confirming that it is stationary at level and integrated of order zero, I(0).

The money supply is stationary at its level, as shown by an ADF statistic of –2.9966 and a p-value of 0.0434, which is significant at the 5% threshold. This allows us to reject the null hypothesis of non-stationarity, indicating that the money supply is integrated of order zero, I(0). For total GDP, the ADF test produces a statistic of –3.2169 with a p-value of 0.0254, also significant at the 5% level, suggesting that the series is stationary at level, I(0). The unit root analysis further reveals that the poverty rate becomes stationary only after first differencing I(1), whereas interest rate, inflation rate, money supply, and total GDP are stationary at their levels, I(0). The coexistence of I(0) and I(1) variables satisfies an essential condition for applying the ARDL Bounds Testing method proposed by Pesaran, Shin, and Smith (2001), which allows for estimation when variables have mixed integration orders, as long as none are I(2). Therefore, the ADF test results provide a solid econometric justification for using the ARDL model to examine both the short-term dynamics and long-term relationships between poverty and monetary policy in Nigeria.

**4.3 ARDL ESTIMATION**

The Augmented Dickey-Fuller (ADF) test was employed to examine the stationarity properties of the time series variables used in this study. As shown in Table 4.2, the results reveal that the variables display mixed integration orders. Specifically, the Inflation Rate (INF), Interest Rate (INT), Money Supply (MS), and Total Gross Domestic Product (TGDP) were stationary at their levels, indicating they are integrated of order zero, I(0). In contrast,Poverty Rate (PR) were non-stationary at level but became stationary after first differencing, showing they are integrated of order one, I(1). This mixture of I(0) and I(1) variables justifies the application of the Autoregressive Distributed Lag (ARDL) model for this research. According to Pesaran, Shin, and Smith (2001), the ARDL method is suitable for estimating both short- and long-run relationships when variables are of different integration orders, provided none are integrated of order two, I(2).

The ARDL estimation was conducted in two main stages. The first stage involved applying the Bounds test for cointegration to examine whether a long-term equilibrium relationship exists among the variables. The results of the test showed that the calculated F-statistic (4.562118) exceeded the upper bound critical value at the 5% significance level, leading to the rejection of the null hypothesis of no cointegration and confirming the presence of a long-run relationship. The second stage focused on estimating both the long-term coefficients and the short-term dynamics of the ARDL model. The long-term results explain the sustained or equilibrium effects of the explanatory variables on poverty, while the short-term adjustments, captured through the Error Correction Model (ECM), reveal how deviations from the long-run equilibrium are corrected over time.

### 4.3.1 ARDL BOUNDS TEST

The bound testing approach was used in this study to determine the existence of a long-run relationship among the variables in the model. The results of the bound test are presented in Table 4.3

| F-Bounds Test | | Null Hypothesis: No levels of relationship | | |
|---|---|---|---|---|
| Test Statistic | Value | Significance | I(0) | I(1) |
| F-statistic | 4.562118 | 10% | 2.2 | 3.09 |
| K | 4 | 5% | 2.56 | 3.49 |
| | | 2.5% | 2.88 | 3.87 |
| | | 1% | 3.29 | 4.37 |

Source: Author's computation EViews

The ARDL Bounds test was utilized to investigate the long-term relationship among poverty rate, interest rate, inflation rate, money supply, and total GDP. The calculated F-statistic [4.562418] exceeds both the lower [2.562] and upper [3.49] critical values at the 5% significance level. Based on the framework proposed by Pesaran et al. (2001), if the calculated F-statistic exceeds the upper bound critical value, the null hypothesis of no long-term relationship is rejected, thereby supporting the alternative hypothesis. This suggests the presence of a strong and statistically significant long-term cointegrating relationship between Nigeria's fiscal sustainability, as measured by the Debt-to-GDP ratio, and key macroeconomic variables such as oil revenue, interest rates, inflation, and real GDP growth. In other words, these variables tend to move together over the long run, and any short-term deviations from their equilibrium levels are temporary rather than lasting.

**4.3.2 ARDL LONG RUN ESTIMATION**

Table 4.4 ARDL Long run result.

| Levels Equation | | | | |
|---|---|---|---|---|
| Case 2: Restricted Constant and No Trend | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| ININF | -0.7459 | 0.4150 | -1.7971 | 0.0882 |
| INT | -0.043 | 0.0343 | -1.2542 | 0.225 |

| | | | | |
|---|---|---|---|---|
| MS | -3.63E-14 | 1.76E-14 | -2.0645 | 0.0529 |
| INTGDP | 0.6504 | 0.3698 | 1.7586 | 0.0947 |
| C | -10.6657 | 8.8939 | -1.1992 | 0.2452 |

Source: Author's computation EViews

According to Table 4.3.2, the coefficient for inflation is –0.7459 with a probability value of 0.0882, which is not statistically significant at the 5% level but shows marginal significance at 10%. This implies that, holding other factors constant, a 1% increase in inflation is associated with a 0.746% decrease in the poverty levels. The negative sign suggests that higher inflation may slightly reduce poverty, although the weak significance indicates that this effect is not robust. These results are in line with Isiaka and Olaniyi (2022), who found that the impact of inflation on poverty in Nigeria is ambiguous and largely influenced by factors such as income distribution and lending rates. Economically, this highlights that inflation alone is not a strong determinant of changes in the poverty rate, and its effects are highly context-dependent, emphasizing the need to consider other macroeconomic policies when addressing its consequences.

The interest rate has a coefficient of –0.043 with a p-value of 0.225, indicating a negative but statistically insignificant effect on poverty at the 5% level. This means that a unit rise in interest rates is associated with a slight decrease in poverty, but the relationship is not strong enough to be considered statistically meaningful. From an economic perspective, this suggests that interest rate changes alone do not have a substantial impact on poverty levels, as other factors like income distribution, employment, and social programs likely play a larger role. This finding aligns with Okoro and Ukoha (2019), who observed that interest rate variations in Nigeria have limited influence on poverty reduction due to structural and access-related constraints.

The coefficient for money supply is –3.63E–14, with a p-value of 0.0529, which is just above the 5% significance level. This indicates a slight negative relationship, suggesting that an increase in money supply may somewhat reduce poverty, possibly by improving access to credit and liquidity for households and businesses. However, since the result is not statistically significant, the effect of money supply on poverty is weak and not reliable on its own. This aligns with the findings of Akpan and Akpan (2015), who observed that monetary expansion had a limited and context-dependent impact on poverty in Nigeria.

The coefficient for total GDP is 0.6504 with a p-value of 0.0947, indicating it is not statistically significant at the 5% level but shows some significance at the 10% level. This means that a 1% increase in GDP is linked to a 0.65% rise in the poverty rate. Although this relationship isn't strong, the positive coefficient suggests that economic growth may not be effectively reducing poverty in this setting. This could result from uneven income distribution or growth concentrated in sectors that don't benefit poorer populations. Ajakaiye and Olomola (2008) found similar results, stating that GDP growth can reduce poverty, but the effect depends on how growth benefits are shared across society.

The intercept term (C = –10.6657, p = 0.2452) is negative but not statistically significant. This means that, holding all other variables constant, the baseline value of the dependent variable is negative, but this result is not dependable due to its insignificance. From an economic perspective, it suggests there is no strong proof of a fixed underlying effect on the dependent variable when excluding the explanatory factors, indicating that the key influences come from the variables included in the model rather than a constant baseline.

**4.3.3 SHORT RUN ECM RESULT**

**ECM RESULT**

Table 4..5

| ECM Regression | | | | |
|---|---|---|---|---|
| Case 2: Restricted Constant and No Trend | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| D(INPOV(-1)) | 0.003372 | 0.106438 | 0.031683 | 0.9751 |
| D(POV(-2)) | -0.234919 | 0.107492 | -2.185449 | 0.0416 |
| D(ININF) | -0.054775 | 0.039519 | -1.38605 | 0.1818 |
| D(ININF(-1)) | 0.141727 | 0.047672 | 2.972966 | 0.0078 |
| D(INT) | 0.003666 | 0.002573 | 1.425001 | 0.1704 |
| D(INT(-1)) | 0.008583 | 0.002966 | 2.893663 | 0.0093 |
| D(INT(-2)) | 0.008001 | 0.002394 | 3.342153 | 0.0034 |
| D(MS) | -2.17E-15 | 1.31E-15 | -1.651446 | 0.1151 |
| D(MS(-1)) | 7.79E-15 | 1.74E-15 | 4.48657 | 0.0003 |
| D(MS(-2)) | 8.72E-15 | 1.55E-15 | 5.610046 | 0 |
| D(MS(-3)) | 9.21E-15 | 1.24E-15 | 7.447633 | 0 |
| D(INTGDP) | 0.023285 | 0.031931 | 0.729236 | 0.4748 |
| D(INTGDP(-1)) | -0.191162 | 0.032394 | -5.901141 | 0 |
| D(INTGDP(-2)) | -0.069929 | 0.030028 | -2.328786 | 0.0311 |
| ECM(-1) | -0.262464 | 0.044636 | -5.88014 | 0 |
| R-squared | 0.810234 | Mean dependent var | | -0.002569 |
| Adjusted R- | 0.699537 | S.D. dependent var | | 0.199487 |

| | | | | |
|---|---|---|---|---|
| squared | | | | |
| S.E. of regression | 0.109348 | Akaike info criterion | | -1.30484 |
| Sum squared resid | 0.286967 | Schwarz criterion | | -0.665009 |
| Log likelihood | 40.44439 | Hannan-Quinn criter. | | -1.075274 |
| Durbin-Watson stat | 1.924125 | | | |

Source: Author's computation EViews

The short-run estimates indicate that the first lag of poverty, D(INPOV(-1)), carries a coefficient of +0.003372 but is not statistically significant (p = 0.9751). This shows that recent past poverty levels do not have an immediate effect on current poverty outcomes. However, the second lag of poverty, D(INPOV(-2)), has a negative and statistically significant coefficient of –0.2349 (p = 0.0416). This result suggests that increases in poverty two periods earlier lead to reductions in current poverty levels, implying a delayed self-adjustment effect. This behavior is consistent with Ravallion (1997), who argued that households often adapt gradually to income and welfare shocks through coping mechanisms and informal support systems, resulting in lagged poverty responses.

The inflation variable, D(ININF), is negative (–0.0548) but statistically insignificant (p = 0.1818), indicating that immediate changes in inflation do not significantly influence poverty. Meanwhile, the lagged inflation variable, D(CININF(-1)), is positive and statistically significant (+0.1417, p = 0.0078), suggesting that persistent inflation worsens poverty by gradually reducing purchasing power. This aligns with Fischer (1993) and Ogun (2010), who noted that prolonged inflation disproportionately harms poorer households due to rising living costs and reduced real incomes.

For interest rates, both lagged coefficients (D(INT(-1)) = +0.008583, p = 0.0093 and D(INT(-2)) = +0.008001, p = 0.0034) are positive and significant. These results show that increases in interest rates lead to higher poverty levels over time. High interest rates increase borrowing costs, weaken credit access for households and firms, reduce business investment, and lower employment opportunities. These findings are in line with Blanchard and Leigh (2013) and Omidokun (2019), who observed that contractionary monetary policy tends to worsen poverty, particularly in developing economies.

The immediate effect of money supply (D(MS) = –2.17E-15, p = 0.1151) is statistically insignificant, indicating no short-run influence on poverty. However, the lagged money supply coefficients (D(MS(-1)) = 7.79E-15, p = 0.0003; D(MS(-2)) = 8.726E-15, p = 0.0000; and D(MS(-3)) = 9.216E-15, p = 0.0000) are positive and significant. This suggests that increases in money supply eventually raise poverty levels, likely due to inflationary pressures that diminish real incomes. Similar results were reported by Ajisafe and Folorunso (2002) and Egbetunde (2012), who found that monetary expansion in Nigeria tends to increase inflation and reduce welfare.

The contemporaneous GDP interaction term, D(INTGDP) = +0.0233 (p = 0.4748), is statistically insignificant, suggesting that economic growth does not immediately alleviate poverty. However, the

lagged terms, D(INTGDP(-1)) = –0.1912 (p = 0.0000) and D(INTGDP(-2)) = –0.0699 (p = 0.0311), are both negative and significant. This indicates that economic growth reduces poverty gradually over time. This finding supports the pro-poor growth framework described by Dollar and Kraay (2002), Bourguignon (2004), and Ravallion and Chen (2007), which emphasizes that economic expansion reduces poverty through rising income opportunities and welfare improvements, although these effects are not instantaneous.

The Error Correction Term (C(1)) has a coefficient of –0.2625 and is highly significant (p = 0.0000). This confirms the presence of a stable long-run equilibrium relationship among the variables. The adjustment coefficient implies that approximately 26.25% of deviations from the long-run equilibrium are corrected each period. This outcome supports the conclusions of Engle and Granger (1987) and Narayan and Smyth (2006), who assert that a negative and significant error correction term indicates long-run stability and convergence toward equilibrium.

The model demonstrates strong explanatory power, with an R-squared of 0.810234 and an adjusted R-squared of 0.6995, indicating that approximately 69.95 percent of the short-term variations in the poverty rate are explained by the included variables. The Durbin-Watson statistic is 1.924125, which is close to 2, suggesting there is no evidence of autocorrelation or serial correlation in the residuals, thus confirming the reliability of the results.

**4.4 POST-DIAGNOSTIC TESTS**

4.4.1 SERIAL CORRELATION

Additionally, diagnostic evaluations were performed on the results of the specified model, which are presented in Table 4.8 below. The outcomes of these post-estimation tests affirm the adequacy of the ARDL model. The Breusch-Godfrey LM test shows no signs of serial correlation, with probability values for both the F-statistic and the Chi-square statistic exceeding 0.05. Likewise, the Breusch-Pagan-Godfrey test for heteroskedasticity suggests that the residuals exhibit homoskedasticity, as all test statistics remain insignificant at conventional significance levels. These findings indicate that the model is properly specified, free from significant econometric issues, and appropriate for making reliable inferences

Table 4.6

| Breusch-Godfrey Serial Correlation LM Test: | | | |
|---|---|---|---|
| F-statistic | 0.36204 | Prob. F(2, 17) | 0.7015 |
| Obs*R-squared | 1.593264 | Prob. Chi-Square(1) | 0.4508 |

Source: Author's computation EViews

The Breusch Godfrey Serial Correlation LM test investigates whether there is a correlation among the residuals (error terms) over time in the model. The presence of serial correlation suggests that the

model's errors are not independent, which could lead to biased standard errors and unreliable statistical inference. The result presented in Table 4.6 indicated that the F-statistic for the Breusch-Godfrey test is 0.36204 and the p-value is 0.7015, exceeding the 5% significance level. Since the p-value (0.7015 > 0.05) we do not reject the null hypothesis of no serial correlation. This indicates that the residuals are independent across time, suggesting that the model is free from issues of autocorrelation. Thus, the explanatory variables in the ARDL-ECM successfully account for the time-series dynamics of poverty in Nigeria. The residuals show no systematic patterns, enhancing the credibility of the model's estimates and predictions. This aligns with the views of Gujarati and Porter (2009) and Wooldridge (2012), who note that the lack of serial correlation in time-series models ensures that OLS estimators are efficient and that the associated t-statistics are reliable.

4.4.2 HETEROSKEDASTICITY TEST

Table 4.7

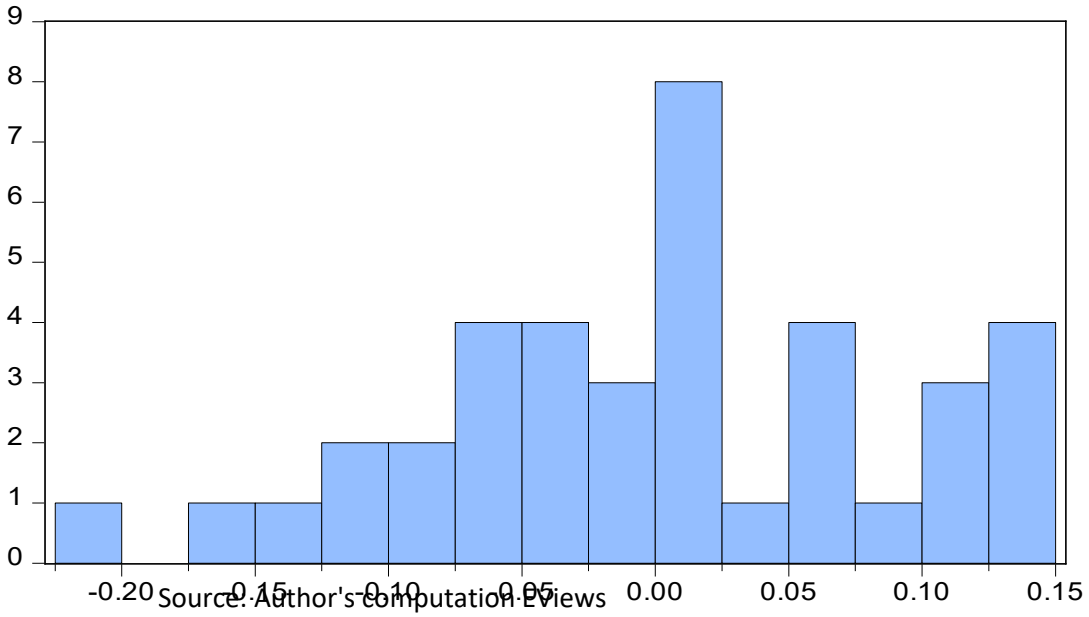
| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | |
|---|---|---|---|
| F-statistic | 0.41543 | Prob. F(19,19) | 0.9686 |
| Obs*R-squared | 11.44653 | Prob. Chi-Square(19) | 0.9079 |
| Scaled explained SS | 2.215159 | Prob. Chi-Square(19) | 1 |

Source: Author's computation EViews

The Breusch–Pagan–Godfrey test was conducted to examine whether the residuals have constant variance across observations. The test yielded an F-statistic of 0.41543 with a p-value of 0.9686 which exceeds the 5% significance level. Since the p-value (0.9686 > 0.05) is greater than 0.05, we fail to reject the null hypothesis of homoskedasticity, indicating that the residuals exhibit constant variance. This means the model is free from heteroskedasticity, and the standard errors of the coefficients are reliable and consistent. As a result, the t-statistics and F-statistics from the model can be considered valid for hypothesis testing. It also suggests that the error terms remain stable across different levels of poverty rate, so both large and small values of money supply, interest rate, or inflation produce residuals with similar dispersion. This finding aligns with Greene (2012) and Kennedy (2008), who note that homoskedastic residuals enhance the credibility of regression results.

4.4.3 JARQUE BERA NORMALITY TEST

NORMALITY TEST




Series: Residuals
Sample 1985 2023
Observations 39

| | |
|---|---|
| Mean | 2.12e-16 |
| Median | 0.001196 |
| Maximum | 0.149414 |
| Minimum | -0.209932 |
| Std. Dev. | 0.086901 |
| Skewness | -0.271919 |
| Kurtosis | 2.630734 |
| Jarque-Bera | 0.702189 |
| Probability | 0.703917 |

Source: Author's computation EViews

The Jarque–Bera (JB) test was performed to determine whether the residuals of the model follow a normal distribution by examining their skewness and kurtosis relative to a normal distribution. The test produced a JB statistic of 0.702189 with a p-value of 0.703917, which is greater than the 5% significance level. Since the p-value (0.703917 > 0.05) exceeds 0.05, we fail to reject the null hypothesis, indicating that the residuals are normally distributed. This means the error terms conform to a normal distribution, satisfying an important assumption of OLS. In practical terms, it suggests that the model's prediction errors are randomly scattered without systematic bias, making the model suitable for forecasting and policy analysis.

4.4.4 OMITTED VARIABLE TEST

Table 4.8

| Omitted Variable Test: Ramsey Reset Test | | | |
|---|---|---|---|
| F-statistic | 0.835354 | Prob. F(1,18) | 0.3728 |

The Ramsey RESET test results shows an F-statistic of 0.835 with a p-value of 0.3728. Since the p-values 0.3728 exceeds the 5% significance level, we do not reject the null hypothesis. This suggests that the model is correctly specified, with no evidence of omitted variables or incorrect functional form. In other words, the chosen explanatory variables adequately explain the behavior of the dependent variable.

**4.5. POLICY IMPLICATION**

The analysis of how monetary policy affects poverty in Nigeria highlights several key policy implications. The results show that inflation, interest rates, money supply, and total GDP interact in complex ways that impact efforts to reduce poverty. Although the link between inflation and poverty is weak and statistically insignificant, there is a slight indication that moderate inflation could marginally lower poverty levels. However, this effect lacks strength and consistency, suggesting that shifts in overall price levels alone are insufficient to significantly enhance the well-being of impoverished populations. To achieve meaningful reductions in poverty, policymakers should adopt comprehensive approaches that pair inflation control with targeted social initiatives—such as food subsidies, conditional cash assistance, and support for small-scale farmers and low-income groups—ensuring that economic stability leads to tangible improvements in living standards.

While the inverse link between interest rates and poverty lacks statistical significance, it suggests that lowering interest rates may indirectly contribute to poverty reduction. More affordable borrowing enables households and businesses to invest in ventures that generate income, such as small enterprises and microfinance projects. To promote inclusive growth, policymakers should design monetary strategies that uphold economic stability while advancing poverty alleviation goals. A portion of the credit made accessible through reduced rates could be channeled into initiatives aimed at supporting low-income families, small-scale entrepreneurs, and rural development, ensuring that financial resources reach those most in need.

Although the inverse relationship between money supply and poverty is not statistically significant, it indicates that expanding the money supply might help lower poverty levels. Greater liquidity in the economy can improve access to credit for both households and businesses, especially in sectors that support job creation and income generation for disadvantaged groups. To maximize the impact, policymakers should craft monetary policies that channel increased money supply into productive and inclusive economic ventures. For example, directing part of the additional funds toward microfinance, small and medium-sized enterprises, and rural development projects can help ensure that monetary growth leads to real progress in reducing poverty.

Although the positive correlation between total GDP and poverty is statistically insignificant, it suggests that economic growth has not effectively translated into reduced poverty in this case. This implies that while the economy is growing, the gains may be unevenly distributed, with much of the expansion occurring in areas that do not directly benefit the poor. To address this, policymakers should prioritize inclusive growth strategies that connect rising GDP with poverty reduction. This could involve channeling investments into labor-intensive industries, empowering small and medium-sized enterprises, and expanding social protection programs to ensure that economic progress leads to real improvements in the lives of low-income communities.

The significantly negative error correction term (ECM) coefficient of –0.262464, with a probability value of 0.000, confirms that short-term fluctuations in poverty tend to move back toward a long-run equilibrium, indicating the model's stability. This means that well-structured and consistent policy actions can lead to lasting reductions in poverty over time. The findings emphasize the importance of a holistic macroeconomic approach that aligns monetary policy with targeted poverty alleviation efforts.

Policymakers should focus on promoting inclusive growth, expanding access to credit for low-income groups, supporting small businesses, and strengthening social safety nets. These measures can help ensure that economic progress translates into meaningful improvements in the lives of the poor, advancing Sustainable Development Goal 1: No Poverty.

# CHAPTER FIVE

# SUMMARY, CONCLUSION, AND RECOMMENDATIONS

## 5.1. SUMMARY OF RESULTS

This study explored the influence of monetary policy on poverty in Nigeria over the period 1981–2023, utilizing the Autoregressive Distributed Lag (ARDL) model to assess both short-term and long-term relationships among total GDP, inflation, interest rates, money supply, and poverty levels. The model demonstrated strong explanatory capability, with an R-squared of 0.810234 and an adjusted R-squared of 0.6995. Diagnostic checks confirmed the model's reliability: the Durbin-Watson statistic (1.924125) indicated no serial correlation, while the Breusch-Pagan-Godfrey and Ramsey RESET tests affirmed homoscedasticity and correct model specification.

In the long run, inflation showed a negative but statistically insignificant effect on poverty, suggesting it does not play a decisive role in poverty outcomes. This points to the greater importance of factors such as income distribution and government interventions. Interest rates also had a negative and insignificant long-term impact, implying that changes in borrowing costs alone are unlikely to drive substantial poverty reduction. Money supply had a negative effect on poverty, with its significance level just above the conventional 5% threshold—indicating a potential, though modest, role in alleviating poverty. Total GDP exhibited a positive but statistically insignificant relationship with poverty, suggesting that economic growth has not been inclusive or sufficiently broad-based to benefit the poor.

In the short run, current inflation had a negative but insignificant effect, while its first lag showed a positive and statistically significant impact—indicating that prolonged inflation tends to exacerbate poverty. Interest rates at both the first and second lags were positively and significantly associated with poverty, suggesting that rising interest rates contribute to worsening poverty over time. Money supply showed positive and significant effects across its first three lags, implying that increased liquidity may eventually help reduce poverty, possibly due to inflationary dynamics and insufficient oversight. For total GDP, the immediate effect was positive and insignificant, but the first and second lags were negative and significant, indicating that economic growth contributes to poverty reduction over time.

The error correction term (ECM) was negative and statistically significant, confirming the presence of a stable long-term relationship among the variables. This means that short-term fluctuations in poverty gradually adjust back toward the long-run equilibrium. Overall, the findings underscore the interconnected roles of inflation, interest rates, money supply, and GDP in influencing poverty trends in Nigeria.

**5.2. POLICY RECOMMENDATION**

1. INFLATION STABILIZATION

Since inflation has a delayed but significant effect on increasing poverty, the Central Bank should enhance its inflation-targeting measures and ensure stable prices, particularly for essential commodities such as food and energy.

2. REDUCTION OF INTEREST RATES

Given that higher interest rates contribute to rising poverty levels, monetary authorities should maintain reasonably low interest rates to encourage borrowing, stimulate investment, and promote job creation.

3. CONTROLLED GROWTH OF MONEY SUPPLY

Because expansion in money supply eventually heightens poverty through inflationary effects, the Central Bank should implement disciplined monetary expansion aligned with real economic productivity rather than financing government deficits.

4. PROMOTION OF INCLUSIVE AND SUSTAINABLE GROWTH

As economic growth reduces poverty gradually, government efforts should focus on stimulating growth in labor-intensive sectors and increasing infrastructure investments to broaden employment prospects.

5. IMPLEMENTATION OF LONG-TERM STRUCTURAL POLICIES

Since poverty responds slowly to economic adjustments, government should reinforce long-term interventions such as improving education quality, enhancing skill acquisition programs, supporting rural development, and expanding social protection schemes.

**5.3. NEED FOR FURTHER RESEARCH**

1. This research relied on national time-series data. Future studies should employ household or panel datasets to better capture variations in poverty across different population groups.

2. Key determinants such as public welfare spending, income inequality, exchange rate movements, and governance quality were not included. Subsequent studies should add these variables for a more comprehensive assessment.

3. The present study concentrated on income-based poverty measures. Further research should adopt multidimensional poverty frameworks that consider education, health services, housing conditions, and access to basic amenities.

4. National estimates may conceal disparities across regions. Future research should analyze poverty trends within states or regions to identify localized drivers and solutions.

5. Further studies may compare Nigeria's experience with that of other African countries to evaluate how different economic structures and policy strategies influence poverty outcomes.

**5.4. CONCLUSION**

This study assessed the impact of monetary policy variables—namely inflation, interest rate, money supply, and total GDP—on poverty in Nigeria 1981-2023 using the ARDL framework. The results show that both inflation and interest rate have negative but statistically insignificant effects on poverty, suggesting that while these variables may influence economic conditions, their direct impact on poverty reduction is weak. Money supply exhibited a marginally significant negative effect, indicating its potential role in alleviating poverty if effectively managed. Conversely, total GDP showed a positive but insignificant relationship with poverty, implying that economic growth in Nigeria has not translated into

meaningful poverty reduction—likely due to structural issues like inequality and growth concentrated in non-inclusive sectors.

These findings highlight the need for a more coordinated approach that goes beyond conventional monetary policy. To effectively reduce poverty, macroeconomic stability must be paired with targeted pro-poor interventions such as financial inclusion, social protection, and investments in health, education, and rural infrastructure. Policymakers should design monetary frameworks that promote equitable access to credit and support sectors that directly impact the livelihoods of the poor. Further research is recommended to explore the role of fiscal policy, employment trends, and regional disparities in shaping poverty outcomes in Nigeria.

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**APPENDIX**

| Year | Poverty Rate | Inflation Rate | TGDP | Money Supply | Interest Rate |
|---|---|---|---|---|---|
| 1981 | 32 | 20.81282291 | 1.40E+11 | 1.45E+10 | -65.8571487. |
| 1982 | 35.5 | 7.697747247 | 1.30E+11 | 1.58E+10 | -4.586180209. |
| 1983 | 39 | 23.21233155 | 1.16E+11 | 1.77E+10 | -8.02238644. |
| 1984 | 43 | 17.82053329 | 1.15E+11 | 2.01E+10 | 4.342492629. |
| 1985 | 46.3 | 7.435344828 | 1.21E+11 | 2.23E+10 | 2.343230572. |
| 1986 | 46 | 5.717151454 | 1.21E+11 | 2.38E+10 | 4.31029225. |
| 1987 | 45.4 | 11.29032258 | 1.25E+11 | 2.76E+10 | -4.769644807. |
| 1988 | 45 | 54.51122478 | 1.34E+11 | 3.84E+10 | -2.962676479. |
| 1989 | 44.5 | 50.46668812 | 1.37E+11 | 4.59E+10 | -6.612412436. |
| 1990 | 44 | 7.36440036 | 1.53E+11 | 4.74E+10 | 17.46624444. |
| 1991 | 43.5 | 13.0069731 | 1.54E+12 | 7.54E+10 | 0.990847348. |
| 1992 | 42.7 | 44.58884272 | 1.61E+12 | 1.11E+11 | -14.98716799. |
| 1993 | 49 | 57.16525288 | 1.58E+11 | 1.65E+11 | -7.052474656. |
| 1994 | 54.7 | 57.03170891 | 1.55E+11 | 2.30E+11 | -15.92023298. |
| 1995 | 60 | 72.8355028 | 1.55E+11 | 2.89E+11 | -31.4525655. |
| 1996 | 65.6 | 29.26829268 | 1.61E+11 | | |

3.46E+11 -5.260784134. 1997 65.5 8.529874214 1.66E+11
4.13E+11 12.12661189. 1998 69.5 9.996378124 1.70E+11 4.88E+11
11.48466906. 1999 72 6.615373395 1.71E+11 6.29E+11 6.047248344.
2000 74 6.933292156 1.80E+11 8.78E+11 -1.140888637. 2001 83.1
18.87364621 1.90E+11 1.27E+12 12.13870249. 2002 88 12.8765792
2.19E+11 1.51E+12 3.023542276. 2003 78.6 14.03178361 2.36E+11
1.95E+12 9.93571338. 2004 54.4 14.99803382 2.57E+11 2.13E+12
-2.60484706. 2005 62.2 17.86349337 2.74E+11 2.64E+12 -1.593680485.
2006 65.3 8.22522152 2.91E+11 3.80E+12 -5.627968051. 2007 67.5
5.388007969 3.10E+11 5.13E+12 9.187171233. 2008 71.3 11.58107517
3.31E+11 8.64E+12 6.684908631. 2009 76.45 12.53782773 3.57E+11
9.69E+13 18.18000167. 2010 69 13.74005214 3.86E+11 1.11E+13
1.067736065. 2011 76 10.82613719 4.06E+11 1.26E+13
5.685579859. 2012 70 12.2242413 4.24E+11 1.55E+13
6.224808617. 2013 33.1 8.495518383 4.52E+11 1.87E+13 11.20162222.
2014 43 8.04741088 4.80E+11 2.04E+13 11.35621302. 2015 61.33
9.00943498 4.93E+11 2.09E+13 13.59615325. 2016 54.5 15.69681264
4.85E+11 2.43E+13 6.68623362. 2017 53.7 16.50226621 4.89E+11
2.86E+13 5.790566862. 2018 40.1 12.09510652 4.98E+11 2.98E+13
6.055977153. 2019 40.09 11.39642234 5.09E+12 3.43E+13 4.522188495.
2020 42.9 13.24602343 5.00E+11 3.60E+13 5.371280209. 2021 62.5
16.95284572 5.18E+11 4.04E+13 1.227718526. 2022 62.9 18.84718778
5.35E+11 4.85E+13 0.9192319. 2023 38.9 24.6595502 5.51E+11
6.35E+13 1.233050483

Unit Root Tests

Null Hypothesis: INPOV has a unit root

Exogenous: Constant

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

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -2.781997 | 0.0695 |
| Test critical values: | 1% level | -3.596616 | |
| | 5% level | -2.933158 | |
| | 10% level | -2.604867 | |

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

Null Hypothesis: D(INPOV) has a unit root

Exogenous: Constant

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

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -6.250753 | O |
| Test critical values: | 1% level | -3.605593 | |
| | 5% level | -2.936942 | |
| | 10% level | -2.606857 | |

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

Null Hypothesis: ININF has a unit root

Exogenous: Constant

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

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -3.520871 | 0.0122 |
| Test critical values: | 1% level | -3.596616 | |
| | 5% level | -2.933158 | |
| | 10% level | -2.604867 | |

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

Null Hypothesis: INT has a unit root

Exogenous: Constant

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

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -7.670572 | 0 |
| Test critical values: | 1% level | -3.596616 | |
| | 5% level | -2.933158 | |
| | 10% level | -2.604867 | |

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

Null Hypothesis: LNEDEBT has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=5)

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -0.185185 | 0.9276 |
| Test critical values: | 1% level | -3.752946 | |
| | 5% level | -2.998064 | |
| | 10% level | -2.638752 | |

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

Null Hypothesis: MS has a unit root

Exogenous: Constant

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

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic. | | -2.996589 | 0.0434 |
| Test critical values: | 1% level | -3.596616 | |

| | | |
|---|---|---|
| | 5% level | -2.933158 |
| | 10% level | -2.604867 |

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

Null Hypothesis: INTGDP has a unit root

Exogenous: Constant

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

| | | t-Statistic | Prob.* |
|---|---|---|---|
| Augmented Dickey-Fuller test statistic | | -3.216936 | 0.0259 |
| Test critical values: | 1% level | -3.596616 | |
| | 5% level | -2.933158 | |
| | 10% level | -2.604867 | |

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

Estimation Results ARDL Error

Correction Regression Dependent Variable:

D(INPOVERTY_RATE) Selected Model: ARDL(3, 2, 3, 4, 3)

Case 2: Restricted Constant and No Trend

Date: 11/04/25 Time: 10:21 Sample: 1981 2023

Included observations: 39

| ECM Regression | | | | |
|---|---|---|---|---|
| Case 2: Restricted Constant and No Trend | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| D(INPOV(-1)) | 0.003372 | 0.106438 | 0.031683 | 0.9751 |
| D(POV(-2)) | -0.234919 | 0.107492 | -2.185449 | 0.0416 |
| D(ININF) | -0.054775 | 0.039519 | -1.38605 | 0.1818 |
| D(ININF(-1)) | 0.141727 | 0.047672 | 2.972966 | 0.0078 |

| | | | | |
|---|---|---|---|---|
| D(INT) | 0.003666 | 0.002573 | 1.425001 | 0.1704 |
| D(INT(-1)) | 0.008583 | 0.002966 | 2.893663 | 0.0093 |
| D(INT(-2)) | 0.008001 | 0.002394 | 3.342153 | 0.0034 |
| D(MS) | -2.17E-15 | 1.31E-15 | -1.651446 | 0.1151 |
| D(MS(-1)) | 7.79E-15 | 1.74E-15 | 4.48657 | 0.0003 |
| D(MS(-2)) | 8.72E-15 | 1.55E-15 | 5.610046 | 0 |
| D(MS(-3)) | 9.21E-15 | 1.24E-15 | 7.447633 | 0 |
| D(INTGDP) | 0.023285 | 0.031931 | 0.729236 | 0.4748 |
| D(INTGDP(-1)) | -0.191162 | 0.032394 | -5.901141 | 0 |
| D(INTGDP(-2)) | -0.069929 | 0.030028 | -2.328786 | 0.0311 |
| ECM(-1) | -0.262464 | 0.044636 | -5.88014 | 0 |
| R-squared | 0.810234 | Mean dependent var | | -0.002569 |
| Adjusted R-squared | 0.699537 | S.D. dependent var | | 0.199487 |
| S.E. of regression | 0.109348 | Akaike info criterion | | -1.30484 |
| Sum squared resid | 0.286967 | Schwarz criterion | | -0.665009 |
| Log likelihood | 40.44439 | Hannan-Quinn criter. | | -1.075274 |
| Durbin-Watson stat | 1.924125 | | | |

F-Bounds Test — Null Hypothesis: No levels relationship

| Test Statistic | Value | Signif. | I(0) | I(1) |
|---|---|---|---|---|
| | | | Asymptotic: n=1000 | |
| F-statistic | 4.562118 | 10% | 2.2 | 3.09 |
| k | 4 | 5% | 2.56 | 3.49 |
| | | 2.5% | 2.88 | 3.87 |
| | | 1% | 3.29 | 4.37 |

| | | | | |
|---|---|---|---|---|
| Actual Sample Size | 39 | Finite Sample: n=40 | | |
| | | 10% | 2.427 | 3.395 |
| | | 5% | 2.893 | 4 |
| | | 1% | 3.967 | 5.455 |
| | | Finite Sample: n=35 | | |
| | | 10% | 2.46 | 3.46 |
| | | 5% | 2.947 | 4.088 |
| | | 1% | 4.093 | 5.532 |

ARDL Long Run Form and Bounds Test Dependent Variable: D(INPOVERTY_RATE)
Selected Model: ARDL(3, 2, 3, 4, 3)
Case 2: Restricted Constant and No Trend
Date: 11/04/25 Time: 10:21 Sample: 1981 2023
Included observations: 39 Conditional Error Correction Regression

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| INPOVERTY_RATE(-1) | -0.262464 | 0.103656 | -2.532071 | 0.0203 |
| ININFLATION_RATE(-1) | -0.19576 | 0.086041 | -2.275184 | 0.0347 |
| INTEREST_RATE(-1) | -0.011291 | 0.007154 | -1.578227 | 0.131 |
| MONEY_SUPPLY(-1) | -9.53E-15 | 2.93E-15 | -3.256307. | 0.0042 |
| INTGDP(-1) | 0.17071 | 0.066425. | 2.569978 | 0.0187 |
| D(INPOVERTY_RATE(-1)) | 0.003372 | 0.128078 | 0.02633 | 0.9793. |
| D(INPOVERTY_RATE(-2)) | -0.234919. | 0.13341 | 1.760882. | 0.0943 |
| D(ININFLATION_RATE) | -0.054775 | 0.056386 | -0.971431. | 0.3435 |
| D(ININFLATION_RATE(-1) ) | 0.141727 | 0.068394 | 2.072201. | 0.0521. |
| D(INTEREST_RATE) | 0.003666 | 0.003721 | 0.985233 | 0.3369 |
| D(INTEREST_RATE(-1)) | 0.008583 | 0.004658 | 1.842644 | 0.081 |
| D(INTEREST_RATE(-2)) | 0.008001 | 0.003245 | 2.465521 | 0.0234 |
| D(MONEY_SUPPLY) | -2.17E-15 | 1.65E-15 | -1.313908 | 0.2045 |
| D(MONEY_SUPPLY(-1)) | 7.79E-15 | 2.43E-15 | 3.202793 | 0.0047 |
| D(MONEY_SUPPLY(-2)) | 8.72E-15 | 2.01E-15 | 4.336715. | 0.0004 |
| D(MONEY_SUPPLY(-3)) | 9.21E-15 | 1.47E-15 | 6.275695 | 0. |
| D(INTGDP) | 0.023285 | 0.040823 | 0.570396 | 0.5751. |
| D(INTGDP(-1)) | -0.191162 | 0.047794. | -3.999698 | 0.0008 |
| D(INTGDP(-2)) | -0.069929 | 0.041846. | -1.671122 | 0.1111 |

* p-value incompatible with t-Bounds distribution.

| Levels Equation | | | | |
|---|---|---|---|---|
| Case 2: Restricted Constant and No Trend | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| ININF | -0.7459 | 0.4150 | -1.7971 | 0.0882 |
| INT | -0.043 | 0.0343 | -1.2542 | 0.225 |
| MS | -3.63E-14 | 1.76E-14 | -2.0645 | 0.0529 |
| INTGDP | 0.6504 | 0.3698 | 1.7586 | 0.0947 |
| C | -10.6657 | 8.8939 | -1.1992 | 0.2452 |

| Breusch-Godfrey Serial Correlation LM Test: | | | |
|---|---|---|---|
| F-statistic | 0.36204 | Prob. F(2, 17) | 0.7015 |
| Obs*R-squared | 1.593264 | Prob. Chi-Square(1) | 0.4508 |

Test Equation:

Dependent Variable: RESID Method: ARDL
Date: 11/04/25 Time: 10:22

Sample: 1985 2023 Included observations: 39

Presample missing value lagged residuals set to zero.

Variable Coefficient. Std. Error t-Statistic. Prob.

INPOVERTY_RATE(-1) 0.005946 0.154183 0.038564 0.9697. INPOVERTY_RATE(-2)0.05867 0.191921 0.305696 0.7635. INPOVERTY_RATE(-3) -0.049433 0.149916 -0.329737 0.7456. ININFLATION_RATE 0.003901 0.058596 0.066569 0.9477. ININFLATION_RATE(-1) 0.00086. 0.061994 0.013877 0.9891. ININFLATION_RATE(-2) 0.001756 0.070844 0.024791 0.9805. INTEREST_RATE 0.000329 0.004049 0.081255. 0.9362. INTEREST_RATE(-1) 0.000931 0.003893 0.239036 0.8139. INTEREST_RATE(-2) -0.000246 0.003722 -0.06612. 0.9481. INTEREST_RATE(-3) 0.000114 0.003365. 0.033739

0.9735. MONEY_SUPPLY -2.44E-16 1.77E-15b. -0.138034 0.8918. MONEY_SUPPLY(-1) -2.88E-16 1.56E-15. -0.183943 0.8562. MONEY_SUPPLY(-2) 1.08E-16 1.55E-15 0.070068 0.945. MONEY_SUPPLY(-3) 4.66E-17 1.59E-15. 0.029345 0.9769. MONEY_SUPPLY(-4) -5.77E-17 1.52E-15 -0.037916 0.9702. INTGDP. 0.003415 0.042467 0.080423 0.9368. INTGDP(-1) 0.000202 0.041727 0.004831 0.9962. INTGDP(-2) 0.003415 0.040945 0.083394 0.9345. INTGDP(-3) 0.003136 0.0435 0.072099 0.9434. C -0.344404 1.871024 -0.184073 0.8561. RESID(-1) 0.012503 0.293499 0.0426 0.9665.

RESID(-2) -0.256134 0.301709 -0.848943 0.4077 R-squared 0.040853 . Mean dependent var 2.12E-16. Adjusted R-squared -1.143976 S.D. dependent var 0.086901. S.E. of regression. 0.127243 Akaike info criterion -0.987577. Sum squared resid 0.275244 Schwarz criterion -0.049157. Log likelihood 41.25775 Hannan-Quinn criter. -0.65088. F-statistic 0.03448 Durbin-Watson stat 2.121928. Prob(F-statistic) 1

| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | |
|---|---|---|---|
| F-statistic | 0.41543 | Prob. F(19,19) | 0.9686 |
| Obs*R-squared | 11.44653 | Prob. Chi-Square(19) | 0.9079 |
| Scaled explained SS | 2.215159 | Prob. Chi-Square(19) | 1 |

Test Equation:

Dependent Variable: RESID^2 Method: Least Squares Date: 11/04/25 Time: 10:22 Sample: 1985 2023 Included observations: 39

Variable. Coefficient Std. Error t-Statistic Prob. C 0.003973 0.16066. 0.024732 0.9805

INPOVERTY_RATE(-1) 0.001312 0.012231 0.10727 0.9157

INPOVERTY_RATE(-2) 0.002654 0.015363 0.172734 0.8647

INPOVERTY_RATE(-3) 6.20E-05. 0.012283 0.005049 0.996

ININFLATION_RATE 0.002004 0.005192 0.385966 0.7038

ININFLATION_RATE(-1) -0.003866 0.005496 -0.703448. 0.4903

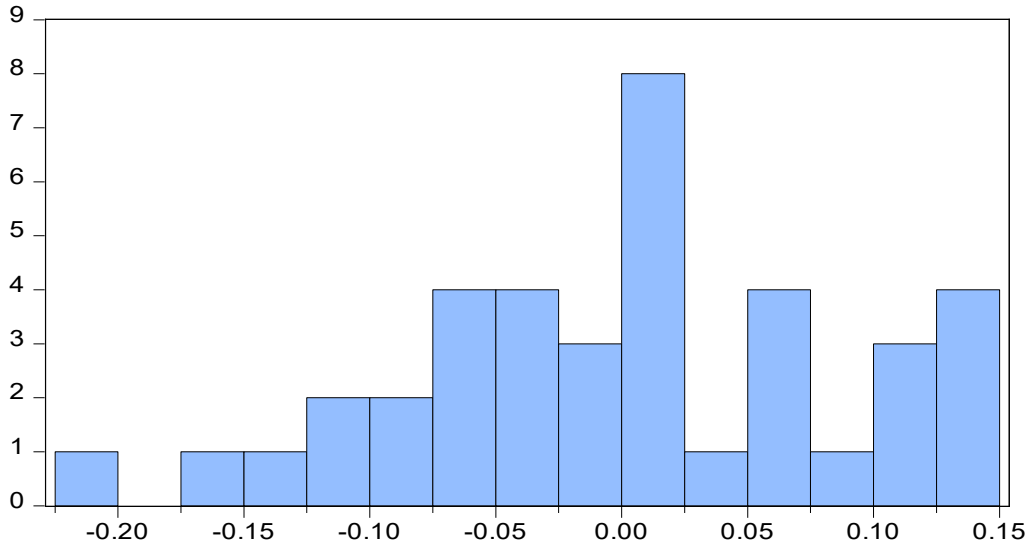
ININFLATION_RATE(-2) 0.008227 0.006297 1.306468 0.207

INTEREST_RATE -0.000297 0.000343 -0.866826 0.3969

INTEREST_RATE(-1) 0.000218 0.000332 0.656711 0.5192

| | | | | |
|---|---|---|---|---|
| INTEREST_RATE(-2) | 2.56E-05 | 0.000329 | 0.077733 | 0.9389 |
| INTEREST_RATE(-3) | 0.000507 | 0.000299 | 1.696194 | 0.1062 |
| MONEY_SUPPLY | 1.54E-16 | 1.52E-16 | 1.016518 | 0.3222 |
| MONEY_SUPPLY(-1) | -8.60E-17 | 1.35E-16 | -0.635296 | 0.5328 |
| MONEY_SUPPLY(-2) | -2.46E-17 | 1.37E-16 | -0.179769 | 0.8592 |
| MONEY_SUPPLY(-3) | -1.25E-16 | 1.41E-16 | -0.887101 | 0.3861 |
| MONEY_SUPPLY(-4) | 3.24E-17 | 1.35E-16 | 0.239792 | 0.8131 |
| INTGDP | -0.000634 | 0.003759 | -0.168786 | 0.8677 |
| INTGDP(-1) | -0.002388 | 0.003701 | -0.645415 | 0.5264 |
| INTGDP(-2) | 0.002861 | 0.003621 | 0.790297 | 0.4391 |
| INTGDP(-3) | -0.001002 | 0.003853 | -0.260035 | 0.7976 |

| | | | |
|---|---|---|---|
| R-squared | 0.293501 | Mean dependent var | 0.007358 |
| Adjusted R-squared | -0.412999 | S.D. dependent var | 0.009519 |
| S.E. of regression. | 0.011315 | Akaike info criterion | -5.818781 |
| Sum squared resid | 0.002433 | Schwarz criterion | -4.965673 |
| Log likelihood | 133.4662 | Hannan-Quinn criter. | -5.512693 |
| F-statistic. | 0.41543 | Durbin-Watson stat | 2.286969 |
| Prob(F-statistic) | 0.968612 | | |




Series: Residuals
Sample 1985 2023
Observations 39

| | |
|---|---|
| Mean | 2.12e-16 |
| Median | 0.001196 |
| Maximum | 0.149414 |
| Minimum | -0.209932 |
| Std. Dev. | 0.086901 |
| Skewness | -0.271919 |
| Kurtosis | 2.630734 |
| Jarque-Bera | 0.702189 |
| Probability | 0.703917 |

**RAMSEY RESET TEST**

Equation: UNTITLED

Specification:
INPOVERTY_RATE
INPOVERTY_RATE(-1)

INPOVERTY_RATE(-2)
INPOVERTY_RATE(-3)

ININFLATION_RATE

INPOVERTY_RATE(-2)
INPOVERTY_RATE(-3)
ININFLATION_RATE

ININFLATION_RATE(-1)
ININFLATION_RATE(-2) INTEREST_RATE

INTEREST_RATE(-1)
INTEREST_RATE(-2)
INTEREST_RATE(-3)

MONEY_SUPPLY
MONEY_SUPPLY(-1)
MONEY_SUPPLY(-2)

MONEY_SUPPLY(-3)
MONEY_SUPPLY(-4)
INTGDP INTGDP(-1)

INTGDP(-2)

INTGDP(-3) C

Omitted Variables:
Squares of fitted values

| | Value | df | Probability |
|---|---|---|---|
| t-statistic | 0.913977 | 18 | 0.3728 |
| F-statistic | 0.835354 | (1, 18) | 0.3728 |

F-test summary:

| | Sum of Sq. | df | Mean Squares |
|---|---|---|---|
| Test SSR | 0.012727 | 1 | 0.012727 |
| Restricted SSR | 0.286967 | 19 | 0.015104 |
| Unrestricted SSR | 0.27424 | 18 | 0.015236 |

Unrestricted Test Equation:

Dependent Variable:

INPOVERTY_RATE

Method: ARDL

Date: 11/04/25
Time:10:25

Sample: 1985 2023

Included observations: 39

Maximum dependent lags: 4 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (4 lags, automatic):

Fixed regressors: C

| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
|---|---|---|---|---|
| INPOVERTY_RATE(-1) | -2.856601 | 3.938364 | 0.725327 | 0.4776 |
| INPOVERTY_RATE(-2) | 0.886426 | 1.241933 | 0.713747 | 0.4845 |
| INPOVERTY_RATE(-3) | -0.917059 | 1.267503 | 0.723516 | 0.4787 |
| ININFLATION_RATE | 0.204778 | 0.289573 | 0.70717 | 0.4885 |
| ININFLATION_RATE(-1) | -0.002077 | 0.060034 | 0.034597 | 0.9728 |
| ININFLATION_RATE(-2) | 0.544631 | 0.754093 | 0.722234 | 0.4794 |
| INTEREST_RATE | -0.014622 | 0.020355 | 0.718332 | 0.4818 |
| INTEREST_RATE(-1) | 0.023489 | 0.032875 | 0.714507 | 0.4841 |
| INTEREST_RATE(-2) | 0.002917 | 0.005249 | 0.555764 | 0.5852 |
| INTEREST_RATE(-3) | 0.030998 | 0.042795 | 0.724351 | 0.4782 |
| MONEY_SUPPLY | 8.42E-15 | 1.17E-14 | 0.719528 | 0.4811 |
| MONEY_SUPPLY(-1) | -1.18E-15 | 2.29E-15 | 0.513327 | 0.614 |

| | | | | |
|---|---|---|---|---|
| MONEY_SUPPLY(-2) | -3.75E-15 | 5.33E-15 | 0.703133 | 0.491 |
| MONEY_SUPPLY(-3) | -1.59E-15 | 2.75E-15 | -0.57812 | 0.5703 |
| MONEY_SUPPLY(-4) | 3.43E-14 | 4.77E-14 | 0.720266 | 0.4806 |
| INTGDP | -0.094031 | 0.134748 | 0.697832 | 0.4942 |
| INTGDP(-1) | 0.160076 | 0.226621 | 0.706361 | 0.489 |
| INTGDP(-2) | -0.459345 | 0.636449 | 0.721732 | 0.4797 |
| INTGDP(-3) | -0.265253 | 0.369129 | 0.718591 | 0.4816 |
| C | 20.72843 | 25.80179 | 0.803371 | 0.4322 |
| FITTED^2 | 0.604097 | 0.660954 | 0.913977 | 0.3728 |
| R-squared | 0.884332 | Mean dependent var | | 4.030833 |
| Adjusted R-squared | 0.755813 | S.D. dependent var | | 0.249786 |
| S.E. of regression | 0.123432 | Akaike info criterion | | -1.042512 |
| Sum squared resid | 0.27424 | Schwarz criterion | | -0.146748 |
| Log likelihood | 41.32898 | Hannan-Quinn criter. | | -0.72112 |
| F-statistic | 6.88091 | Durbin-Watson stat | | 1.876941 |
| Prob(F-statistic) | 0.000067 | | | |

*Note: p-values and any subsequent tests do not account for model

selection.