

**THE IMPACT OF INFLATIONARY PRESSURE ON HOUSEHOLD  
CONSUMPTION EXPENDITURE IN NIGERIA**

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BENIN CITY, NIGERIA**

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## CERTIFICATION

This is to certify that the project title “THE IMPACT OF INFLATIONARY PRESSURE ON HOUSEHOLD CONSUMPTION EXPENDITURE” was carried out by Favour Bienose with matriculation number SSC2105549 in the department of Economics, Faculty of Social Sciences, University of Benin.

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## **DEDICATION**

This project is dedicated to God Almighty for His grace, mercy and favour throughout my academic programme.

## **ACKNOWLEDGEMENTS**

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I wish to express my profound gratitude my parents Mr. and Mrs. Kennedy and my benefactor Mr. Francis Emapko for their unfailing support materially, mentally and spiritually. May God continue to bless you people and grant you good health and long life, Amen!

My sincere appreciation goes to my lovely siblings, Daniel and David Bienose for their care, support and prayers throughout my stay in this great institutions in forever gratefully. I want to specially thank them for always being there for me.

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## **ABSTRACT**

*This study examines the effect of inflationary pressures on household consumption expenditure in Nigeria between 1991 and 2024. Using descriptive statistics and the Auto Regressive Distributed Lag (ARDL) approach, the study investigates the roles of inflation, exchange rate volatility, and unemployment in shaping consumption dynamics. Unit root and diagnostic tests were applied to ensure robustness, while estimations were conducted with EViews.*

*The findings reveal that inflation significantly increases household consumption in the short run but exerts no meaningful long-run effect. Exchange rate volatility and unemployment were found to be insignificant in both the short and long run, reflecting the moderating influence of Nigeria's informal sector.*

*Overall, the results suggest that while households adjust nominal spending upward in response to short-run price shocks, long-run consumption remains resilient to inflationary, exchange rate, and unemployment pressures. The study highlights the transient nature of inflation's impact on household welfare in Nigeria.*

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of Study**

Consumption is seen as the act of using goods and services with the aim of satisfying innumerable needs of man (Ezeji & Ajudua, 2015) Consumption can be disaggregated among economic entities such as the government, firms and households. Consumption is divided into two, namely, The Public Consumption Expenditure also known as Government Final Consumption Expenditure (GFCE) and Private Consumption Expenditure also known as Final Households Consumption Expenditure (FHCE), (SNA, 2008).

The public consumption expenditure is the expenditure incurred by public authorities like federal, state or local government for public use or benefit of the people. This expenditure incurred includes government services (salaries of public employees), infrastructure (roads, bridges, etc), public goods (defence, law enforcement, etc).

On the other hand, private consumption expenditure is the market value of all products in the form of durable goods and the services which are purchased by the households, including imputed rent for owner occupied dwellings and payments of fees to government to obtain permits and licenses but excludes the purchase of dwellings (Osuji 2020).

This study focuses on Private Consumption Expenditure, which comprises spending on goods and services that are immediately consumed or utilized, regardless of durability (eg cars, furniture, computers). These expenditures are considered consumed at the time of purchase, even if the goods provide ongoing benefits (Lequiller, F & Blades, 2014).

Private Final Consumption Expenditure (PFCE) is different from Public Consumption Expenditure, as it excludes expenditure covered by social transfers in kind. In developing countries like Nigeria, the determinants of Private Final Consumption Expenditure includes; low per capita income - reflects households' poverty levels, changes in inventories - indicates investment levels, operating surplus - represents returns on investment, macroeconomic price - such as inflation, measures the cost of goods and services affordable by the households and government's influence - linked to minimum wage compensation paid to employees, etc.

Private consumption is a key component that accounts for the largest proportion of the aggregate output and the real economic growth of a country ( Sugiarto & Wibowo, 2020).

Inflation is caused by an increase in money supply, leading to a surge in demand for goods and services, driving up prices (Friedman, 1963). It significantly hinders the ability of private consumption expenditure by eroding households purchasing power. This happens due to higher prices making the same amount of money buy fewer goods and services.

Inflation rate defined as the percentage change in the general price level of goods and services in an economy, over a specific period, usually a year, limits households' productive capacity by increasing input costs, ultimately reducing output and consumption (Blanchard O, 2021).

Previous studies reveal that inflationary pressure negatively impacts private consumption expenditure, productive capacity and investment decisions. In Nigeria, persistent inflation rates affect households' purchasing power, requiring more money (naira) to acquire goods and services on the same level. With high inflation rates, investors find it difficult to invest due to fear of profit losses (Fischer, 1993).

(Osuji & Agbada, 2020) stated that inflation increases household consumption expenditure. They claimed that people tend to buy more during high inflationary periods than during times of lower inflation. This means that inflation leads to an increase in private consumption expenditure in Nigeria.

Over the years, the exact relationship between private final consumption expenditure and inflationary pressure in Nigeria has been a topic for debate in economic literature, as many economists think inflation rate either has a negative impact on final consumption expenditure. While inflation is the significant factor, other factors like exchange rate volatility, and unemployment rates also affect final consumption expenditure.

Unemployment occurs when people are without work, are available for work, and are actively seeking work (World Employment Social Outlook, 2020). In Nigeria, high unemployment rates can lead to reduced consumer spending, which in turn can impact inflation rates. When people have less disposable income, they are less likely to spend, which slows down economic activity. Unemployment can significantly impact final consumption expenditure, as reduced employment opportunities lead to lower household incomes, which in turn reduce consumption spending.

Exchange rate volatility refers to fluctuations in a country's currency value (e.g., Naira) compared to another currency (e.g., US Dollar) (Husted & Melvin, 2018). This can lead to inflation, as imports become more expensive. When the Naira's value drops, it costs more to buy foreign goods, resulting in higher prices. Businesses pay more for imported raw materials and pass on the increased costs to consumers, leading to higher prices for essentials and straining household budgets.

This study aims to examine the impact of inflationary pressure, exchange rate volatility and unemployment rates on final consumption expenditure in Nigeria, over the periods spanning between 1991-2024.

## **1.2 Statement of Problem**

Final households' consumption expenditure and inflation rate are closely linked, with changes in consumption patterns influenced by inflation rates.

While income plays a key role in determining household consumption, other factors as well augment household consumption according to some existing studies. Macroeconomic prices such as inflation, in one way measures the cost of goods and services that are affordable by households in order to adjust to a particular standard of living and can trigger high cost of consumption with an increase in demand for money (Ikwuagwu, Ariwa & Onyele, 2017).

The rising cost of living fuelled by inflationary pressure, has eroded the purchasing power of households, affecting their consumption patterns and overall well being(Adebisi, 2017). Previous studies have been conducted to investigate the relationships between inflation and private consumption expenditure but research on this particular area hasn't been thoroughly investigated.

According to the World Bank's national accounts data and OECD national accounts data files (2024), Nigeria's private consumption expenditure was reported as 26.818 USD bn in June 2024. This records an increase from the previous number of 25.498 USD bn for March 2024. Nigerians spent 12 trillion on household consumption in the first six months of 2024, (NBS). The household consumption expenditure declined in Q1 and Q2 of 2024, accounting for a negative growth rate of -42.28% and -61.18%, respectively. The growth rates of Q1 of 2024 and Q2 of 2024 indicate lower rates compared to the corresponding quarters of Q1 2023 and Q2 2023.

On a quarter-on-quarter basis, real household consumption expenditure decreased by 45.71% in Q1 of 2024 and declined by 99.24% in Q2 of 2024.

In nominal terms, household final consumption expenditure grew by 11.01% in Q1 2024 and 10.79% in Q2 2024. Household consumption accounted for 32.70% of real GDP at market prices in Q1 2024 and 25.02% in Q2 2024 in real terms.

Private consumption expenditure measures the amount of money that individuals spend on various products and services. Since it is a major factor of economic growth, the need to study the effect of inflationary pressure on it becomes important, as inflation policies may have adverse effects on it depending on the period.

Inflation in Nigeria has had varying effects on household consumption, influenced by factors like exchange rate volatility, unemployment rates, and global economic conditions. These factors have led Nigerian households to adjust their expenditure in response to changes in prices of goods and services and income levels.

Exchange rate fluctuations affect import prices and inflation, impacting household budgets (Obstfeld & Rogoff 2000). When the exchange rate depreciates (that is the value of the local currency, naira, decreases) the prices of imported goods increase, this makes imported goods more expensive for households potentially reducing consumption expenditure. When import prices rise due to exchange rate depreciation, households may

have less disposable income to spend on other goods and services (Burstein & Rebelo 2005).

Exchange rate fluctuations lead to inflationary pressures that reduces the purchasing power of households, making them spend more on the same goods and services (Oyejide, 2011).

Unemployment reduces households' income, leading to decreased consumption expenditure. In Nigeria, unemployment leads to a significant reduction in household income, making it challenging for families to afford basic necessities. Unemployment of breadwinners leads to an immediate and significant decline in household consumption spending, (Gupta & Kishore, 2022). People who are out of work for an extended period may struggle to find new jobs or earn lower wages when they do, making them less likely to spend money. Unemployment can lead to persistent changes in spending habits.

There is a need for further research on the specific impact of inflationary pressure, unemployment rates and exchange rate volatility on household consumption expenditure in Nigeria. Predicting and knowing what influences households consumption patterns or behaviours is believed to be necessary.

Grasping this research will help create effective economic policies that stabilize prices and safeguard household purchasing power. Minimizing inflationary pressures, high

unemployment rates, and exchange rate volatility is key to reaching Nigeria's economic development goals.

### **1.3 Objectives of Study**

The main objective of this study is to examine the impact of inflationary pressure on final household consumption in Nigeria from 1991 to 2024. Other specific objectives includes to:

1. To determine if there is any effect of inflation on final consumption expenditure in Nigeria.
2. Evaluate the impact of exchange rate volatility on final households consumption expenditure in Nigeria
3. To assess the impact of unemployment rates on final households consumption expenditure in Nigeria.

### **1.4 Research Questions:**

1. Does inflation have a significant impact on consumption expenditure in Nigeria?
2. To what extent is the relationship between exchange rate volatility and consumption expenditure in Nigeria?
3. What is the effect of unemployment rates on final consumption expenditure in Nigeria?

### **1.5 Null Hypotheses:**

Null Hypothesis: There is no significant effect of inflation on final household consumption in Nigeria.

Null Hypothesis: Exchange rate volatility has no significant effect on final household consumption in Nigeria.

Null Hypothesis: Unemployment rate has no significant effect on final households consumption in Nigeria.

### **1.6 Significance of Study**

This study will be significant for both Nigerian businesses, households and the existing body of knowledge on this particular topic.

Government and Policymakers:

The findings of this study will provide evidence-based insights that can help the Nigerian government, the Central Bank, and other economic regulators understand how persistent inflation affects household welfare. This will assist in designing and implementing effective monetary and fiscal policies that aim to stabilize prices, protect consumers' purchasing power, and reduce the adverse impact of inflation on vulnerable households.

Businesses

This study findings on the effect of inflation rate of household consumption, will help provide beneficial information for businesses in Nigeria, enabling them to formulate

informed pricing approaches that match profitability in the business while ensuring affordability by consumers using flexible pricing to remain competitive.

Also, it will also help businesses prepare for changes in the demand of their product and tailor production levels appropriately, thereby mitigating waste and improving resource allocations.

### Households

Households can also understand how inflation rate affects their purchasing power and also try to adjust their spending habits to adapt to the decreased purchasing power by prioritizing spending. Households can also learn to appropriate a large portion of their income to essential expenses like food, housing, etc. which are prone to be affected by inflation over time.

Also, make smart investment decisions by investing in assets that do well during inflation such as real estate, stocks, etc.

### Researchers

The study will serve as a valuable resource for scholars, students, and researchers who are interested in inflation and household economics. This study will also contribute to the existing body of knowledge on this topic by offering fresh perspectives or insights, also providing empirical evidence to support existing theories on this particular topic.

## **1.7 Scope of Study**

It is beyond doubt that inflation rates have significant impacts on household consumption in Nigeria.

This study examines the impact of inflation rate on household consumption in Nigeria. The study will focus on understanding the relationship between inflation rates, unemployment rates, exchange rate volatility and household consumption patterns, using time series data of 1991-2024. This project will analyze the effects of inflation on household income, expenditure, and consumption behavior, with a focus on identifying the determinants of household consumption in Nigeria. The study will exclude business consumption expenditure, government consumption expenditure and focus exclusively on household consumption. The results of this study will provide insights into the trends and patterns in household consumption in Nigeria.

The study's scope includes examining the impact of inflation on household consumption, identifying the determinants of household consumption, and the relationship between inflation rates and household consumption.

## **1.8 Limitations of Study**

This study is limited to the examination of inflationary pressure and final households consumption expenditure in Nigeria. The study relies on secondary data, which have limitations in terms of accuracy, completeness, or availability.

The study focuses specifically on Nigeria, which limits the generalizability of the findings to other countries or regions with different economic conditions. The study uses data from a specific time period (1991-2024), which will not capture long-term trends or effects of inflation on household consumption in Nigeria.

The availability of data on household consumption and inflation rates in Nigeria is limited, and potentially affects the study's ability to provide a comprehensive analysis.

These constraints may affect the study's conclusions.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Inflation, the persistent rise in the general price level of goods and services, has far-reaching effects on household welfare and spending patterns. In Nigeria, inflationary pressures have consistently influenced how households allocate their limited resources, often compelling shifts in consumption priorities. Household consumption expenditure, being a major component of aggregate demand, is directly affected by changes in purchasing power.

This chapter reviews existing literature on the effect of inflationary pressure on households' consumption expenditures in Nigeria, covering the conceptual framework, theoretical perspectives, and empirical evidence.

#### **2.1 Conceptual Clarification**

##### **2.1.1 Concept of Inflation**

Inflation is a widely studied macroeconomic phenomenon that plays a crucial role in shaping a country's economic landscape. At its core, inflation refers to a general and sustained increase in the prices of goods and services over a specific period, which ultimately reduces the purchasing power of money. This implies that as inflation rises, consumers can afford fewer goods and services with the same amount of income.

Various scholars and institutions have defined inflation to reflect its multi-dimensional impacts. IMF, 2023 describes inflation as the rate at which the general level of prices for goods and services increases, thereby diminishing the value of a country's currency. This perspective emphasizes inflation as a monetary issue that affects both macroeconomic stability and household welfare. Similarly, inflation is a situation where the supply of money exceeds the availability of goods and services, leading to a persistent rise in prices and a decline in the real value of money (CBN, 2022).

From a theoretical view, (Milton Friedman, 1963) posits that "inflation is always and everywhere a monetary phenomenon," arguing that it is caused by an excessive increase in the money supply. His position aligns with the Quantity Theory of Money, which maintains a direct relationship between money supply and price level, assuming velocity and output remain constant.

Economists like Parkin, Samuelson & Nordhaus offer definitions that stress the persistent nature of inflation. (Parkin, 2021) defines inflation as a continuous rise in the average level of prices, while (Samuelson & Nordhaus, 2019) conceptualizes it as an upward trend in the general price level, measured by indices such as the Consumer Price Index (CPI) or the GDP deflator. These definitions are practical for policy formulation as they provide measurable frameworks for tracking inflationary trends.

In the context of Nigeria, inflation has been a recurring macroeconomic challenge, often fueled by factors such as exchange rate depreciation, insecurity, fuel subsidy removal, and structural inefficiencies in production and distribution systems (Ezeanyeji, 2019).

Inflation in Nigeria is often imported due to the country's high dependence on foreign goods and the volatility of the naira against major international currencies (Uzonwanne, 2021). This imported inflation is exacerbated by weak infrastructure and institutional capacities, which limit the economy's ability to absorb external shocks.

(Jhingan & Mankiw, 2021) extended to examining inflation's impact on consumer behavior and the real economy. According to Jhingan, inflation erodes the real value of money, thereby distorting price signals and leading to inefficient economic decisions. Mankiw adds that inflation can reduce the standard of living, particularly when wage growth fails to keep pace with rising prices. This creates economic insecurity and can widen the gap between different income groups.

In addition, inflation can be classified based on its causes. Demand-pull inflation occurs when aggregate demand in an economy outpaces aggregate supply. Cost-push inflation results from increases in the cost of production, such as wages and raw materials. Structural inflation, which is more common in developing countries, arises from long-standing bottlenecks in the economy, including poor infrastructure, inefficient markets, and institutional weaknesses.

Overall, inflation is a complex and multifaceted issue that has significant implications for households, businesses, and policymakers. In Nigeria, inflation is not merely a result of monetary expansion but a product of interwoven factors including fiscal policy misalignments, exchange rate instability, and socio-political factors. Understanding its nature and dynamics is crucial for assessing its impact on household consumption expenditure, which is a major component of aggregate demand and economic welfare.

### **2.1.2 Concept of Consumption Expenditure**

Consumption expenditure represents the total value of money spent by individuals or households on goods and services for direct use or satisfaction of needs. It is a fundamental element of aggregate demand and a major contributor to economic activity in most countries. (SNA, 2008) distinguishes between Private Final Consumption Expenditure (PFCE) and Government Final Consumption Expenditure (GFCE). Where PFCE encompasses household spending on consumables like food, health, education, and durable goods, and GFCE includes state expenditures for public services. Consumption often accounts for the largest share of GDP and reflects the general welfare of a population (Okonjo, 2019).

In the Nigerian economy, household consumption expenditure is central to sustaining domestic demand, but it remains highly sensitive to inflation, income volatility, unemployment rates and exchange rate fluctuations.

(Eze & Adeyemi, 2021) explained that inflation reduces the purchasing power of households, forcing them to reallocate spending toward essential needs while cutting down on non-essentials. This is particularly evident among lower-income groups, who experience a disproportionate burden from rising prices. (Afolabi, 2020) further emphasizes that frequent currency depreciation and rising food prices have significantly shaped consumption behavior in Nigeria, with many households relying on informal income sources and subsistence strategies.

Theoretical perspectives such as Keynes' consumption function and the Permanent Income Hypothesis suggest that consumption depends not just on current income but also on expected lifetime earnings. However, in economies like Nigeria, credit constraints and uncertain incomes mean that households often consume based solely on present earnings. Consumption patterns in such settings provide valuable insights into economic vulnerability and policy effectiveness (Musa & Tanko, 2022).

Understanding how consumption expenditure responds to macroeconomic pressures, especially inflation, is essential for assessing household welfare and the resilience of the broader economy.

### **2.1.3 Household Consumption Expenditure**

Household consumption expenditure refers to the total amount spent by individuals or family units on goods and services for personal use, including necessities such as food,

housing, clothing, education, transportation, and healthcare. It reflects the actual out-of-pocket spending that directly contributes to daily welfare and living standards. Household consumption expenditure is a major determinant of economic growth, accounting for a substantial portion of national output, especially in consumption-led economies like Nigeria (Onu & Adebayo, 2020).

In macroeconomic accounting, household consumption forms a key part of Private Final Consumption Expenditure (PFCE), which is used to measure the portion of GDP attributed to individual consumer spending. It includes both monetary purchases and non-monetary contributions such as imputed rent and in-kind benefits. In Nigeria, household consumption patterns are influenced by factors such as disposable income, employment status, inflation, access to credit, and demographic characteristics (Akanbi & Okonkwo, 2021).

Furthermore, fluctuations in macroeconomic conditions, such as inflation, exchange rate volatility, and unemployment, significantly affect the ability of households to sustain consumption. (Uche & Hassan, 2022) argued that persistent inflation and high unemployment rates in Nigeria have led many households to reduce spending, switch to cheaper alternatives, or rely on informal income-generating activities. Understanding household consumption expenditure is therefore essential for policymakers to design interventions that protect consumer welfare and promote inclusive growth.

#### **2.1.4 Inflationary Pressure and Cost of Living**

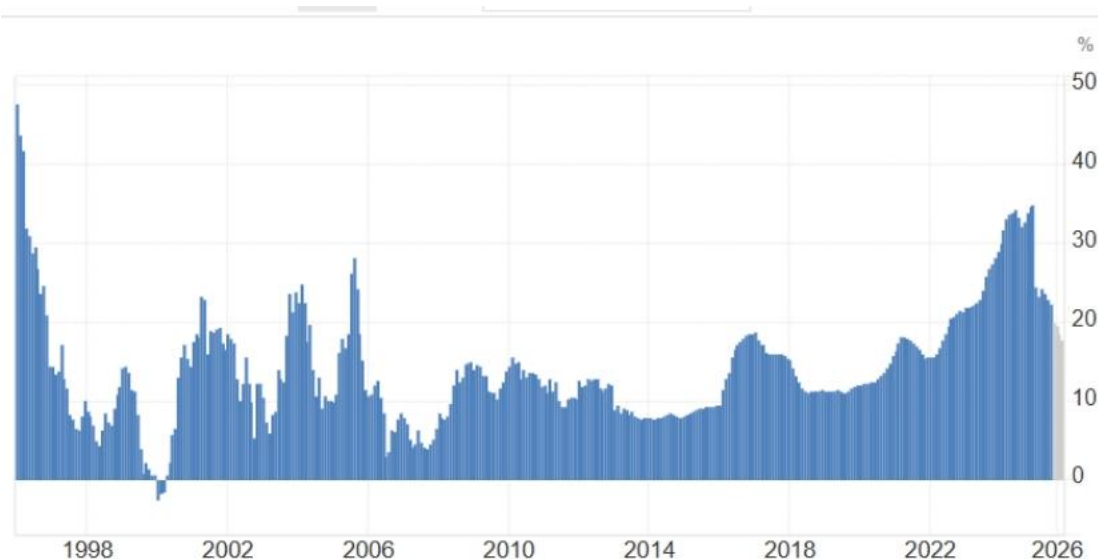
Inflationary pressure refers to the economic condition where prices rise steadily over time, reducing the purchasing power of money and directly impacting the cost of living. Cost of living denotes the amount of money required to maintain a basic standard of living, including expenses on food, shelter, healthcare, and other essential needs. As prices rise, households face increasing difficulty in meeting these needs without a corresponding increase in income (Ibrahim & Yusuf, 2021).

In Nigeria, inflation has consistently undermined household welfare by increasing the prices of basic commodities, particularly food, energy, and transport. Inflationary pressure has caused many households to shift consumption from quality goods and services to cheaper and less nutritious alternatives, thereby affecting health and long-term productivity (Egwu & Nwosu, 2020).

(NBS, 2023) reports that food inflation, which disproportionately affects low-income families, is one of the main drivers of rising living costs in Nigeria.

The link between inflation and the cost of living is particularly evident in urban and rural communities where price volatility is high and wage growth is stagnant. (Ojo & Falade, 2022) noted that when inflation outpaces income, households experience real income decline, forcing them to reduce discretionary spending and even essential consumption. Consequently, inflationary pressure not only reduces household consumption expenditure

but also exacerbates poverty, inequality, and social vulnerability, especially in fragile economies like Nigeria.



Sources: [tradingeconomics](https://tradingeconomics.com/nigeria/inflation)

From 1981 to 2023, Nigeria’s inflation rate showed sharp fluctuations, peaking at 72.8% in 1995 during political and economic instability. The late 1980s and early 1990s saw major spikes due to the Structural Adjustment Programme and currency devaluation, while the 2000s brought relative stability with mostly single or low double-digit rates. Inflation rose again from 2016 onward, reaching 24.66% in 2023, driven by forex shortages, subsidy removals, and global price shocks. Overall, the trend reflects recurring inflationary pressures from policy changes, external shocks, and structural weaknesses.

### **2.1.5 The Nexus Between Inflation and Household Consumption in Developing Economies**

The relationship between inflation and household consumption in developing economies is complex and often characterized by volatility and vulnerability. Inflation reduces the real value of money, leading to a decline in household purchasing power. This results in lower real consumption, particularly among low- and middle-income households whose expenditures are heavily skewed toward basic necessities. In economies where social protection systems are weak and income is unstable, inflation significantly constrains the ability of households to sustain consumption patterns (Bello & Atanda, 2021).

In developing countries like Nigeria, where a large proportion of the population spends more than half of their income on food and essential services, inflation tends to have immediate and severe impacts. High food and energy inflation can force households to cut back on non-essential spending, reduce savings, or even engage in harmful coping strategies, such as reducing food intake or withdrawing children from school (Nwankwo & Obasi, 2022). The inflation-consumption nexus is further exacerbated by limited access to credit markets and poor wage growth, which make it difficult for households to smooth consumption over time.

Moreover, the structural characteristics of developing economies — such as large informal sectors, heavy reliance on imports, and weak monetary policy transmission mechanisms — hinder effective inflation management. (Odili & Amadi, 2023), stated

that inflation shocks in these contexts are often persistent and asymmetric, disproportionately affecting the poor. Therefore, understanding this nexus is crucial for designing policies aimed at price stability, inclusive growth, and improved household welfare in developing economies.

### **Annual Inflation rates and household consumption rates in Nigeria 1991-2024**

| Year | Household Consumption Rates | Annual Inflation Rates | Year | Household Consumption Rates | Annual Inflation Rates |
|------|-----------------------------|------------------------|------|-----------------------------|------------------------|
| 1991 | 12,022,300,000,000          | 13.01%                 | 2010 | 36,676,900,000,000          | 13.7%                  |
| 1992 | 14,057,400,000,000          | 44.59%                 | 2011 | 35,556,000,000,000          | 10.8%                  |
| 1993 | 12,898,400,000,000          | 57.17%                 | 2012 | 35,558,000,000,000          | 12.2%                  |
| 1994 | 11,627,700,000,000          | 57.03%                 | 2013 | 43,048,300,000,000          | 8.5%                   |
| 1995 | 12,204,200,000,000          | 72.84%                 | 2014 | 43,312,500,000,000          | 8%                     |
| 1996 | 14,643,000,000,000          | 23.9%                  | 2015 | 43,941,900,000,000          | 9%                     |
| 1997 | 14,168,300,000,000          | 10.7%                  | 2016 | 41,424,100,000,000          | 1.57%                  |
| 1998 | 14,121,000,000,000          | 7.9%                   | 2017 | 41,029,500,000,000          | 16.5%                  |
| 1999 | 12,915,300,000,000          | 6.6%                   | 2018 | 43,171,600,000,000          | 12.1%                  |

|      |                    |       |      |                     |       |
|------|--------------------|-------|------|---------------------|-------|
| 2000 | 13,143,700,000,000 | 6.9%  | 2019 | 42,742,900,000,000  | 11.4% |
| 2001 | 20,949,400,000,000 | 18.9% | 2020 | 43,683,500,000,000  | 13.2% |
| 2002 | 24,138,100,000,000 | 12.9% | 2021 | 109,433,099,125,300 | 17%   |
| 2003 | 26,797,300,000,000 | 14%   | 2022 | 128,548,080,000,000 | 18.8% |
| 2004 | 26,979,900,000,000 | 15%   | 2023 | 126,350,000,000,000 | 24.7% |
| 2005 | 30,215,400,000,000 | 17.9% | 2024 | 130,190,000,000,000 | 32.5% |
| 2006 | 26,070,700,000,000 | 8.2%  |      |                     |       |
| 2007 | 35,086,900,000,000 | 5.4%  |      |                     |       |
| 2008 | 29,480,700,000,000 | 11.6% |      |                     |       |
| 2009 | 36,049,700,000,000 | 12.5% |      |                     |       |

Source:[indexmundi](#)

### **2.1.6 Components and Measurement of Private Final Consumption Expenditure (PFCE)**

Private Final Consumption Expenditure (PFCE) refers to the total value of all goods and services consumed by households and non-profit institutions serving households (NPISHs), excluding purchases of dwellings but including imputed rent for owner-

occupied housing. It is a vital indicator of consumer demand and overall economic activity, as it typically accounts for the largest share of Gross Domestic Product (GDP) in most economies (Okon & Uche, 2021).

PFCE includes expenditures on both durable goods (e.g., cars, furniture), semi-durable goods (e.g., clothing), non-durable goods (e.g., food, fuel), and services (e.g., education, health, transport). PFCE is measured by aggregating household purchases of goods and services at market prices, including goods produced for own consumption, goods received as income in kind, and the value of services provided by owner-occupied housing( SNA, 2008).

The accuracy of PFCE measurement is crucial for macroeconomic planning. National statistical offices typically rely on household budget surveys, retail trade data, and administrative records to compute PFCE. (Ajayi & Folarin, 2022) emphasized that in developing economies like Nigeria, challenges such as informal sector activities and inadequate data collection can lead to underestimation or misrepresentation of PFCE figures, affecting economic policy formulation and implementation.

**Composition of Private Final Household Consumption Expenditure in Nigeria.**

| Description                                 | Weight (%) |
|---|------------|
| Food and non alcoholic beverages            | 40%        |
| Alcoholic beverages,, tobacco and narcotics | 3.4%       |
| Clothing and footwear                       | 5.0%       |

|   |            |
|---|------------|
| Housing, water, electricity, gas and their fuels                    | 8.4%       |
| Furnishings, household equipments and routine household maintenance | 3.0%       |
| Health  | 3.0%       |
| Transport   | 2.16%      |
| Information and Communication                                       | 3.3%       |
| Education services  | 6.2%       |
| Insurance and financial services                                    | 0.5%       |
| Restaurant and accommodation services                               | 12.9%      |
| Personal care, social protection, etc                               | 3.3%       |
| Recreation, sport and culture                                       | 0.3%       |
|   | Total= 100 |

Source: Nigeria Bureau of statistics

### **2.1.7 Types and Causes of Inflation**

Inflation is a macroeconomic phenomenon that significantly impacts both micro and macroeconomic stability. In developing countries like Nigeria, where economic structures are fragile, understanding the types and causes of inflation is essential to designing effective policy responses. Inflation in such contexts often results in reduced real income, altered consumption patterns, and increased poverty levels, especially among vulnerable households.

## A. Types of Inflation

Inflation types refer to the different mechanisms through which the general price level increases. Understanding these helps policymakers to identify the dominant inflationary drivers and craft targeted responses. The major types include:

### 1. Demand-Pull Inflation

Demand-pull inflation occurs when aggregate demand in the economy exceeds aggregate supply. This typically arises in periods of rapid economic growth, increased consumer spending, or expansionary fiscal and monetary policies. For instance, if the government injects large sums into the economy through salary increases or subsidies without a matching rise in goods and services, prices are likely to increase. (Adebayo, 2022) observed that in Nigeria, election-year spending often contributes to demand-pull inflation due to massive public expenditures.

### 2. Cost-Push Inflation

This type of inflation stems from rising production costs. When firms experience higher costs in raw materials, energy, or wages, they often pass these costs on to consumers in the form of higher prices. (Obiora, 2021) notes that frequent fuel price hikes, electricity tariffs, and wage demands from organized labor in Nigeria are major triggers of cost-push inflation. Cost-push inflation can be especially persistent when the affected inputs are

non-substitutable or essential, such as petroleum products in transportation and production.

### 3. Structural Inflation

Structural inflation is unique to developing economies and stems from rigidities or inefficiencies in economic structures. These include poor infrastructure, distribution bottlenecks, low agricultural productivity, and weak industrial capacity. (Umeh & Okon, 2023) argued that structural inflation in Nigeria is evident in the high transportation costs of agricultural goods due to bad roads, which contribute to food inflation regardless of production volumes.

### 4. Monetary Inflation

Monetary inflation is caused by an excessive increase in the money supply. When too much money chases too few goods, prices rise. This often results from expansionary monetary policies or deficit financing by the government. (Salisu, 2020) linked recurrent inflationary trends in Nigeria to poor monetary discipline and Central Bank financing of budget deficits, which increases liquidity in the economy without corresponding output growth.

### 5. Imported Inflation

Imported inflation occurs when the prices of imported goods increase, often due to global inflationary trends or currency depreciation. Since Nigeria is heavily dependent on

imports for food, fuel, and manufactured goods, any depreciation in the naira directly translates to higher domestic prices. (Nwachukwu, 2022) emphasized that the naira's volatility has exacerbated inflationary pressures, especially in sectors reliant on imported inputs.

## B. Causes of Inflation

Beyond the classification of inflation types, it is critical to examine the causal factors that trigger or sustain inflationary trends. These are both internal and external and often overlap:

### 1. Excessive Money Supply

When the Central Bank prints more money or allows excessive liquidity through low-interest rates and open market operations, inflation tends to rise. This is particularly risky when not supported by an increase in productive capacity. (Salisu, 2020) noted that unchecked expansion in money supply has historically led to inflationary spikes in Nigeria.

### 2. Currency Depreciation

A weak domestic currency increases the cost of imported goods and services. As Nigeria heavily depends on imports, especially for refined petroleum and food, currency depreciation directly fuels inflation. Exchange rate instability also creates speculative behavior, further worsening inflationary trends (Nwachukwu, 2022).

### 3. Structural Deficiencies

Deficiencies in transport, energy, storage, and logistics systems contribute to high costs of doing business. These inefficiencies often result in price hikes. (Umeh & Okon, 2023) argue that even when food is abundant in rural areas, poor infrastructure makes it expensive to transport to urban markets, leading to artificial scarcity and inflation.

### 4. External Shocks and Global Crises

Events such as global oil price fluctuations, pandemics, and international conflicts (e.g., Russia-Ukraine war) can disrupt supply chains and drive up the prices of essential commodities. As a net importer of refined fuel and wheat, Nigeria is highly vulnerable to such external shocks (Obiora, 2021).

### 5. Fiscal Deficits and Public Debt

Persistent government borrowing and deficit financing often lead to inflation, especially when financed through money creation rather than productivity-enhancing investment. High levels of public debt can also undermine investor confidence and contribute to inflation expectations (Adebayo, 2022).

#### **2.1.8 Inflation and Real Income of Households**

Inflation significantly affects the real income of households, especially in developing economies like Nigeria, where wage growth often lags behind inflation. When prices rise

faster than income, households lose purchasing power, resulting in a reduction in real income. This means that the same amount of money can now buy fewer goods and services, directly impacting consumption expenditure. (Okonkwo & Ajayi, 2020), observed that the erosion of real income leads households to reduce spending on non-essential items and, in severe cases, essential needs like healthcare and education. The impact is more pronounced in households dependent on fixed salaries, pensions, or informal earnings without automatic inflation adjustments.

Furthermore, rising inflation discourages savings and reduces disposable income, forcing households to prioritize spending and often cut back on quality food, housing, and transportation. Inflation in Nigeria has disproportionately affected low- and middle-income households, thereby widening income inequality and reducing aggregate welfare, (Uchenna & Oyejide, 2019).

(The Nigerian National Bureau of Statistics, 2023), reported that real wages declined by over 15% in the past five years, despite nominal increases, due to persistent inflation above 17%. This real income erosion has pushed more families into poverty and reduced overall household consumption.

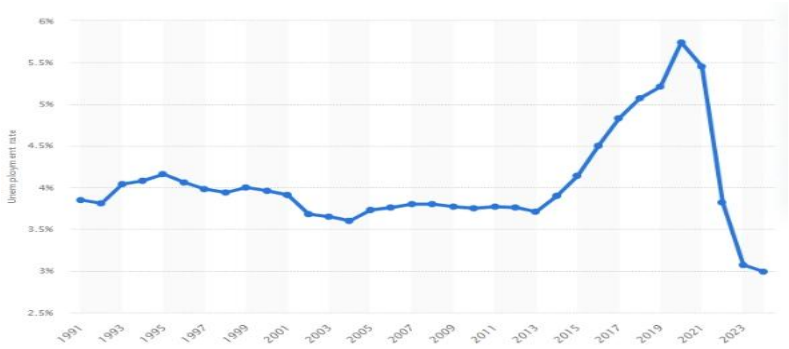
### **2.1.9 Inflation and Employment/Unemployment**

Inflation can also influence employment levels, although the relationship is complex and context-dependent. In theory, the short-run Phillips Curve suggests an inverse relationship between inflation and unemployment: as inflation rises, unemployment falls,

and vice versa. However, in the Nigerian economy, this theory often fails to hold due to structural challenges and macroeconomic mismanagement. The economy has experienced episodes of stagflation, where inflation and unemployment rise simultaneously (Ezeaku, 2021). This contradicts traditional economic expectations and presents a critical challenge to policymakers.

In high-inflation environments, companies face increasing production costs due to rising input prices. Many firms are forced to cut labor costs through layoffs or hiring freezes, contributing to a rise in unemployment (Ogunleye & Falade, 2020). This, in turn, reduces household income and further depresses consumption. Moreover, inflation-induced uncertainty discourages long-term investment and business expansion, compounding the employment challenge. The informal sector, which employs a significant portion of Nigeria’s workforce, is particularly vulnerable, as inflation reduces earnings without the protection of formal labor contracts or wage indexation (Adediran & Salami, 2022).

### Unemployment Rate



Sources: [statista](https://www.statista.com)

From 1986 to 2023, Nigeria's unemployment rate stayed mostly between 3% and 6%, remaining low through the 1980s–2000s due to a dominant informal sector. It began rising after 2015, peaking at 5.74% in 2020 amid recession and COVID-19 impacts, then declined to 3.07% in 2023, likely reflecting methodological changes and increased informal employment rather than improved job conditions.

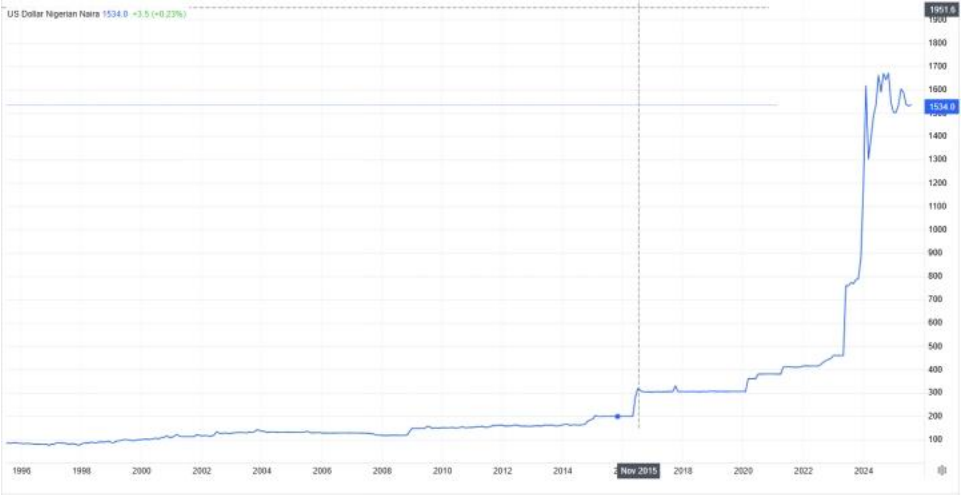
#### **2.1.10 Exchange Rate Volatility and Import-Dependent Consumption**

Nigeria's heavy reliance on imported goods makes its economy particularly sensitive to exchange rate movements. As the value of the naira depreciates, the cost of importing goods and services rises, which in turn increases the general price level. Exchange rate volatility contributes to imported inflation, especially in sectors like food, pharmaceuticals, and electronics, where local production is insufficient. The depreciation of the naira has been a key driver of inflation in Nigeria, translating to higher costs for consumers and reduced real purchasing power (Adebayo & Onanuga, 2020).

This has a direct bearing on household consumption, particularly for urban dwellers who depend heavily on imported products. Price hikes in imported items force consumers to substitute with lower-quality alternatives or reduce their overall consumption (Ogundipe & Oluwatobi, 2019). Moreover, the uncertainty associated with exchange rate instability discourages investment in local production and creates a cycle of dependence on imports, further exacerbating inflation and its effects on household expenditure. Importantly, this

dynamic affects not just luxury goods but also essentials such as food, medicine, and fuel, which are crucial to household welfare.

### Exchange Rate



Source: [tradingeconomics](https://tradingeconomics.com)

From 1982 to 2023, the Nigerian Naira consistently depreciated against the US Dollar, moving from below 1 NGN/USD in the early 1980s to 450.71 in 2023. Key periods of sharp decline occurred after the 1986 Structural Adjustment Programme, in the early 2000s due to liberalization and inflation, and from 2021 to 2023 amid forex shortages and policy shifts. While brief stability was seen between 2017 and 2020, the overall trend reflects persistent currency weakening driven by economic reforms, oil price shocks, and macroeconomic instability.

### **2.1.11 Interest Rates and Credit Availability for Consumption**

Interest rates directly impact the cost of borrowing, which in turn affects households' ability to finance consumption. In Nigeria, interest rates are influenced by the Central Bank of Nigeria's (CBN) monetary policy stance, which often aims to control inflation by adjusting benchmark rates. High interest rates, while potentially effective in curbing inflation, also discourage consumer borrowing and reduce the availability of credit (Ibrahim & Aliyu, 2019). This is particularly detrimental to middle- and lower-income households that rely on loans to finance major expenditures such as housing, education, or durable goods.

In an inflationary environment, lenders often raise interest rates to protect their returns, which reduces the affordability of loans and mortgages. Consequently, households limit their spending to essential items only, leading to reduced aggregate demand in the economy (Adegbite, 2021). Additionally, commercial banks in Nigeria often adopt tight lending criteria during inflationary periods, further restricting access to credit. The combined effect of high inflation and high interest rates leads to a contraction in household consumption, slowing down economic growth and reducing living standards.

### **2.1.12 Inflation and Consumer Price Index (CPI)**

Inflation and the Consumer Price Index (CPI) are closely connected economic measures that reveal the impact of price changes on consumers' purchasing power and the overall health of a nation's economy. While inflation refers to the general rise in prices over time,

the CPI is a statistical measure used to track this trend by monitoring changes in the price of a selected basket of goods and services typically consumed by households.

The Consumer Price Index (CPI) is one of the most widely used tools for measuring inflation. It reflects the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services, including food, housing, clothing, transportation, and medical care (NBS, 2023). An upward movement in the CPI indicates inflation, while a downward trend suggests deflation.

In Nigeria, the CPI is published monthly by the National Bureau of Statistics (NBS). It is calculated using a Laspeyres-type index formula, which compares the cost of a fixed basket of goods and services in the current period with the cost of that same basket in a base period. The basket is designed to reflect the consumption patterns of the average Nigerian household, and it is periodically updated to ensure relevance in the face of changing consumption behaviors (NBS, 2023).

In recent years, inflation in Nigeria, as captured by the CPI, has been influenced by factors such as exchange rate volatility, fuel subsidy reforms, insecurity, supply chain disruptions, and food inflation.

The CPI is instrumental in calculating real income, which adjusts nominal income for changes in the price level. A stagnant nominal income combined with a rising CPI

indicates a fall in real income, meaning that households can afford fewer goods and services despite earning the same amount.

In conclusion, understanding the dynamics of the CPI and its relationship with inflation is vital for analyzing the effect of inflationary pressures on household consumption. It provides a measurable framework for evaluating the cost of living and the real value of income, both of which are central to assessing economic well-being in Nigeria.

## **2.2 Inflationary Pressure and Real Income: A Historical Overview in Nigeria**

Inflationary pressure has been a persistent and complex feature of Nigeria's macroeconomic environment since independence in 1960. The relationship between inflation and real income has evolved over the decades, influenced by various internal and external economic shocks, policy choices, and structural inefficiencies. This section presents a chronological overview of inflationary trends and their effects on real household incomes in Nigeria, using historical data and scholarly evidence.

### **1960s–1970s: Post-Independence Boom and Oil Windfall**

In the immediate post-independence era (1960–1969), Nigeria maintained relatively low inflation rates, largely due to a nascent but stable agricultural-based economy and a fixed exchange rate regime (CBN, 2023). Inflation averaged below 5% annually during this period. However, the situation changed dramatically in the 1970s following the oil boom. With the 1973 oil price shock, Nigeria experienced a sudden influx of oil revenues, which

led to increased government spending and a surge in aggregate demand. Between 1973 and 1979, inflation soared, reaching an average of over 30% in some years (CBN, 2022).

This period also marked a decoupling of nominal and real income. While nominal wages increased in both public and private sectors due to oil wealth, real income — which adjusts for inflation — began to stagnate or decline for many Nigerians, especially those in rural or informal sectors (Iyoha & Oriakhi, 2002). The misalignment between monetary expansion and output growth worsened inflationary pressures and eroded the purchasing power of households.

### **1980s: Economic Crisis and Structural Adjustment**

The early 1980s were characterized by economic decline due to a drop in global oil prices, declining foreign reserves, and excessive fiscal deficits. Inflation averaged 20–25% between 1980 and 1985, while unemployment and poverty rose simultaneously (Obadan, 2001). To address these issues, Nigeria adopted the Structural Adjustment Programme (SAP) in 1986 under the supervision of the International Monetary Fund (IMF) and World Bank. A key component of SAP was the deregulation of the economy, including exchange rate liberalization and subsidy removal.

While these reforms aimed to restore macroeconomic balance, they triggered inflationary shocks. The naira depreciated significantly, and the cost of imported goods skyrocketed. Inflation peaked at 72.8% in 1995, the highest in Nigerian history at the time (CBN,

2022). As a result, real income suffered dramatically, especially among fixed-income earners and low-income households. The average Nigerian household faced increased cost of living without a proportional rise in earnings (Egwakhe & Olayemi, 2017).

### **1999–2010: Democratic Era and Relative Stability**

Following the return to democratic rule in 1999, Nigeria experienced relative macroeconomic stability, with inflation declining to single digits in the early 2000s. Key reforms under the Obasanjo administration, such as debt relief through the Paris Club agreement in 2005 and improvements in public financial management, contributed to this stability (Okonjo-Iweala, 2012).

However, real income growth remained uneven. Although GDP per capita improved, income inequality widened, and inflation averaged 11.5% between 2000 and 2010 (World Bank, 2021). Structural challenges such as infrastructure deficits, policy inconsistency, and corruption limited the extent to which economic growth translated into real wage increases and improved household welfare (Olayemi & Afolabi, 2019).

### **2011–2015: Rising Inflation Amid Oil Price Volatility**

The period between 2011 and 2015 witnessed renewed inflationary pressure due to global oil market instability, fiscal indiscipline, and Boko Haram-related insecurity in the North-East. Although the inflation rate was moderately contained (between 8% and 13%), real

income stagnated or declined, especially in the face of currency depreciation and high unemployment (NBS, 2015).

The partial removal of fuel subsidies in 2012 led to a sudden spike in prices of transportation and basic goods, further reducing disposable income and increasing household vulnerability (Ogunleye & Oladeji, 2017). The economic gains made in the early 2000s began to erode as inflation outpaced wage growth for the majority of citizens.

### **2016–2020: Recession, Inflation, and COVID-19**

The Nigerian economy entered a recession in 2016, triggered by a sharp decline in oil prices, militancy in the Niger Delta, and foreign exchange scarcity. Inflation reached 18.6% in 2017, while unemployment and underemployment soared (NBS, 2018). These macroeconomic distortions severely impacted household consumption as real income levels declined and poverty rates rose to over 40% (World Bank, 2020).

The COVID-19 pandemic in 2020 further exacerbated inflationary pressures, with food inflation reaching alarming levels due to border closures, supply chain disruptions, and insecurity in agricultural regions (Adeniran, 2021). Despite government interventions like cash transfers and palliatives, most households experienced significant reductions in real income and purchasing power.

## **2021–Present: Post-Pandemic Inflation and Subsidy Removal**

From 2021 onwards, Nigeria has witnessed persistent double-digit inflation, driven by rising food prices, forex scarcity, fuel subsidy removal, and policy bottlenecks. In June 2023, the official removal of fuel subsidies led to immediate price surges in transportation, electricity, and food, with inflation peaking at over 27% by late 2023 (IMF, 2024). As of 2024–2025, inflation remains a major concern for economic planners, with severe consequences on household consumption and real incomes.

Recent studies show that inflation disproportionately affects low-income households, which spend a larger share of their income on food and energy (Akpan & Udoette, 2023). As wage adjustments lag behind rising prices, real income continues to decline, intensifying poverty and food insecurity.

## **2.3 Theoretical Review**

### **Theories of Inflation**

#### **1. Keynesian Consumption Theory (John Maynard Keynes, 1936)**

The Keynesian Consumption Theory, proposed by John Maynard Keynes, posits that household consumption is primarily determined by current income. According to the theory, as income increases, consumption also rises, though at a diminishing rate due to a portion being saved. This theory introduces the concept of the marginal propensity to consume (MPC), highlighting that consumption is a function of disposable income.

In inflationary environments like Nigeria, rising prices reduce the real value of income, constraining households' ability to spend. This is especially evident among low-income households, whose expenditures are largely directed toward basic needs. The erosion of purchasing power compels such households to cut non-essential spending, consistent with Keynes' assertion that consumption falls when real income declines.

Given Nigeria's recurring inflation, often driven by supply shocks, weak currency, and rising costs of living, the Keynesian framework aptly explains changes in consumption behavior. Empirical studies affirm that inflation negatively affects real incomes, thereby reducing household consumption—aligning directly with this study's focus (Oladipo, 2021).

## 2. Permanent Income Hypothesis (Friedman, 1957)

The Permanent Income Hypothesis (PIH), developed by Milton Friedman, posits that individuals base their consumption decisions not solely on current income, but on their long-term expected or "permanent" income. According to this theory, temporary changes in income—such as short-term inflation shocks—have minimal impact on consumption, whereas permanent changes influence long-term consumption behavior.

In the context of Nigeria, however, frequent inflationary pressures tend to distort household expectations and reduce real income stability. While PIH assumes rational forward-looking behavior, most Nigerian households—particularly in low-income

segments—operate with little or no savings and limited access to credit. This forces them to adjust consumption more directly to fluctuations in current income, contradicting the PIH assumption.

Nonetheless, PIH remains relevant as it explains why wealthier or formally employed households with stable income streams might maintain consumption levels during inflationary episodes. Households with predictable income sources or savings tend to smooth consumption, while those without such buffers respond sharply to inflation, validating a partial applicability of the theory in developing economies like Nigeria (Adewale, 2021).

### 3. Life-Cycle Hypothesis (Modigliani & Brumberg, 1954)

The Life-Cycle Hypothesis (LCH), formulated by Modigliani and Brumberg suggests that individuals plan their consumption and savings behavior over their lifetime to achieve a stable standard of living. According to the hypothesis, people save during their working years and dissave during retirement, with consumption driven by expected lifetime income rather than current income alone.

In the context of Nigeria, however, structural challenges such as low wages, lack of formal retirement systems, and high inflation weaken the practical application of this theory. Many households, especially in the informal sector, live hand-to-mouth, unable to effectively plan or save for future consumption. Inflationary pressures further undermine

long-term planning by eroding real savings and increasing uncertainty. The lack of social security and the prevalence of economic shocks often force households to prioritize immediate consumption over long-term financial strategies, (Ibe & Musa, 2022).

Despite these limitations, the LCH remains useful in understanding how inflation disrupts intertemporal consumption choices. Wealthier households with access to financial planning tools and formal employment tend to follow LCH patterns, while vulnerable populations deviate significantly due to inflation-induced consumption distortions.

#### 4. Relative Income Hypothesis (Duesenberry)

The Relative Income Hypothesis, developed by (James Duesenberry, 1949), argues that an individual's consumption is influenced not only by their absolute income but also by their income relative to others. According to this theory, social comparison and habit formation lead households to maintain consumption levels even when income falls, contributing to downward consumption rigidity.

In inflation-prone economies like Nigeria, this hypothesis sheds light on the social dimensions of consumption behavior. Households may strive to maintain perceived social status by sustaining consumption patterns despite shrinking real incomes. This often results in increased borrowing or depletion of savings. (Akinola & Sanni, 2021), noted that the pressure to “keep up” with societal consumption standards in urban Nigeria fuels unsustainable expenditure during inflationary periods.

The Relative Income Hypothesis thus complements other consumption theories by accounting for psychological and social factors influencing spending, particularly under economic stress, making it relevant for explaining household behavior amidst Nigeria's persistent inflation.

#### 5. Quantity Theory of Money (Fisher, 1911)

The Quantity Theory of Money, popularized by Irving Fisher posits a direct and proportional relationship between the money supply and the general price level in an economy. Expressed through the identity  $MV = PT$  — where M is the money supply, V is the velocity of money, P is the price level, and T is the volume of transactions — the theory implies that an increase in money supply, assuming constant velocity and output, leads to a proportional increase in prices (inflation).

In the Nigerian context, this theory is particularly relevant in explaining inflationary trends resulting from excessive monetary expansion, often driven by deficit financing, currency devaluation, or central bank interventions. Persistent growth in Nigeria's broad money supply has contributed significantly to inflationary pressure, which directly affects household consumption by reducing purchasing power (Chukwu & Bello, 2021).

The implication of Fisher's theory for household consumption is clear: when inflation is driven by an oversupply of money, real incomes decline, forcing households to adjust consumption downward. This erosion of real income particularly impacts fixed-income

earners and vulnerable households, thereby constraining overall consumption expenditure in the economy (Yusuf & Eze, 2022).

## **2.4 Empirical Review**

Empirical literature on the relationship between inflation and household consumption expenditure (HCE) in developing economies, including Nigeria, has yielded mixed findings, underscoring the need for further investigation. Various studies, both within and outside the country, have explored this relationship using different econometric models, timeframes, and macroeconomic indicators.

Nigeria context include;

Eziji (2015) used Johansen co-integration to study determinants of total consumption expenditure from 1986 to 2012. The study's findings showed a positive and significant relationship between income and consumption, whereas inflation and exchange rates had a negative effect. These results align with Keynesian consumption theory, which posits that current income is a primary determinant of spending.

Yusuf (2017) applied the ARDL model to explore the link between interest rates and private consumption from 1981 to 2014. The study found that all control variables (money supply, per capita income, bank loans) positively impacted consumption, except real interest rate, which had a negative effect—confirming classical economic

expectations. The ARDL method also allowed for modeling short- and long-run dynamics, adding robustness to the findings.

Ikwuagwu (2017) used ARDL and Granger causality tests to assess the determinants of aggregate consumption from 1981 to 2015. The study found a strong and positive link between GDP and HCE, while inflation had a unidirectional causal impact on consumption. This suggests that inflation is not only a determinant of consumption but also a lead indicator in the consumption-inflation nexus.

Manasseh, Abada, Ogbuabor, Urama, and Okoro (2018) conducted a study on the relationship between consumer spending (private consumption expenditure), interest rate, and inflation in Nigeria, spanning from 1981 to 2011. The study adopted a modified consumption spending model and the Granger causality wald test, to ascertain the predictive power of consumption spending on future interest rates and inflation rates. The study found that all explanatory variables are responsible for 93.38% change in consumption spending, with interest and inflation rates, indirect tax, savings, and per capita income as important influencers of private consumption expenditure in Nigeria. The recommendation from this study is the need for expansionary fiscal and monetary policies to influence the level of aggregate demand in the economy.

Nura Abba and Abubakar Abdullahi (2020) analyzed the impact of inflation on household consumption expenditure in Nigeria. This study used the Auto-Regressive Distributed Lag model (ARDL) to examine the impact of inflation on household

consumption expenditure from 1981 to 2020. The study's result showed inflation has a negative and significant effect on household consumption expenditure in Nigeria. It also showed that population growth negatively impacts household consumption expenditure. The study suggests that the government should implement policies to control inflation, boost personal income, and increase productivity to improve household consumption expenditure in Nigeria.

Effiong & Kehinde (2020) analyzed the relationship between government spending and private consumption from 1981 to 2018 using ARDL. Their results showed a significant positive relationship between recurrent expenditure and private consumption, but capital expenditure was statistically insignificant. These findings suggest that daily government spending (such as salaries and subsidies) has a more immediate effect on consumption than infrastructural investment.

Osuji Obinna (2020) empirically examined the effect of inflation on household final consumption expenditure in Nigeria. The study focused on the period from 1981 to 2018, using the Ordinary Least Squares (OLS) method. The findings revealed a positive significant long-run relationship between inflation and household consumption expenditure in Nigeria. The study recommended deliberate policy action by the government to ensure low and stable prices.

Ayodele, Osunaiye, Joseph, and Adewale (2022) examined the relationship between inflation and household consumption in Nigeria using secondary data for the period of

1990 to 2022. The study made use of the Auto-Regressive Distributed Lag (ARDL) model. The study's result showed a negative relationship between inflation and household consumption in Nigeria. The study recommended that policymakers implement price control strategies to curtail inflation. The government could also focus on stabilizing prices through supply side measures, such as increasing production & reducing supply chain bottlenecks. Adeneye and Abeebe examined the impact of inflationary pressure on final consumption expenditure of households in Nigeria, spanning the period of 1999 to 2023. Using annual time series data obtained from World Bank Group Development Indicators (2023) and Central Bank of Nigeria Statistical Bulletin (2023), the study applied Auto-Regressive Distributed Lag (ARDL) regression analysis and correlation analysis. The study's results revealed that inflationary pressure, proxied by Consumer Price Index (CPI), has a negative and statistically significant impact on final consumption expenditure of households (FCEH). The study also found a short-run and long-run cointegrating relationship between inflationary pressure and household consumption expenditure in Nigeria. The study recommended that appropriate fiscal and monetary policies targeted at eroding inflationary pressure should be formulated and implemented, such as stabilizing price levels of goods and services and reducing production costs.

Foreign countries context include;

Nyamekye and Poku (2017) conducted a comprehensive analysis of Ghana's economy from 1964 to 2013, using Ordinary Least Squares (OLS), Vector Error Correction Model

(VECM), and Johansen Co-integration techniques to study the link between inflation and consumer spending patterns. The Johansen test revealed a stable long-run relationship, which was further confirmed by OLS and VECM estimates. However, critics argue that the use of the Johansen co-integration method, which assumes all variables are integrated of order one (1), may produce misleading results if the stationarity condition is violated.

Arapova (2018) investigated determinants of household final consumption expenditure (HFCE) in Asian economies and Russia between 1991 and 2015. Using a panel regression approach, the study revealed that increases in Gross National Income (GNI) positively impact HFCE. Specifically, a 1% rise in GNI increased HFCE by 0.82% globally and by 0.49% in Asian countries. However, the panel model did not account for possible endogeneity among regressors, potentially biasing the estimates.

Francois and Mjeso (2018) applied the Autoregressive Distributed Lag (ARDL) method on quarterly data from 1995 to 2015 to evaluate determinants of HCE in South Africa. Their findings revealed a long-term positive relationship between real income and household spending, while inflation and interest rates exerted a negative impact. This supports the theoretical view that rising prices erode purchasing power, leading to reduced real consumption. However, the study failed to explore potential non-linear effects of inflation at different thresholds, which could have improved the robustness of their conclusions.

Surgiator and Wobiwo (2020) focused on 33 provinces in Indonesia from 2010 to 2019, employing a dynamic panel regression model using the First Difference Generalized Method of Moments (FD-GMM). Their findings indicated that inflation and unemployment significantly reduced HFCE, while lagged HFCE, real GDP, and government expenditure had a strong positive influence. The FD-GMM approach was appropriate due to its ability to address endogeneity and heteroskedasticity, making the results more reliable.

Olusola, Chimezie, Shuuya, and Ade (2022) studied the impact of inflation on private consumption expenditure and economic growth between 1990 and 2020 in Ghana. The study employed the Ordinary Least Squares (OLS), Engle-Granger cointegration, error correction, and Granger causality as estimation techniques to determine the association between inflation rate and private consumption expenditure. The analysis from the study revealed that a cointegrating relationship between inflation rate, private consumption expenditure, interest rate, and gross domestic product exists. The study also showed that interest rate and gross domestic product have a positive significant effect on private consumption expenditure, and inflation rate has a negative significant effect on private consumption

Ewane and Andigema (2022) examined the effect of inflation rate on household final consumption expenditure in Cameroon using World Bank data from 1980 to 2020. The study employed Auto-Regressive Distributed Lag (ARDL), bound test, and Error

Correction Model (ECM) based on the conclusion of the unit root test. The study's result indicated that inflation rate has a positive and significant effect on household final consumption expenditure in both the long run and the short run.

In summary, while several empirical studies affirm a negative relationship between inflation and HCE (e.g., Francois & Mjeso, 2018; Yusuf et al., 2017), others report positive or mixed outcomes (e.g., Osuji, 2020; Eziji, 2015). Differences in methodology, variable selection, country-specific factors, and timeframes may account for these discrepancies. Therefore, a more robust, country-specific analysis with appropriate econometric techniques is necessary to resolve these contradictions and guide economic policy in Nigeria and similar developing economies.

## **2.5 Gaps in the Literature**

Despite the growing body of research on inflation in Nigeria, there remains a limited focus on how inflation specifically affects household consumption. Most studies adopt a macroeconomic perspective, overlooking micro-level impacts and ignoring how inflation differently affects various household expenditure categories such as food, health, and education. This gap weakens the relevance of policy recommendations aimed at cushioning inflation's effects on households.

Additionally, the behavioral responses of households to inflationary pressure such as consumption smoothing or informal borrowing are often neglected. Much of the existing

literature is also outdated, failing to incorporate recent inflationary drivers like the COVID-19 pandemic, fuel subsidy removal, and global supply shocks. These changes have significantly reshaped household spending dynamics in Nigeria.

Furthermore, few studies use household-level or panel data to capture the heterogeneity in consumption responses. These gaps highlight the need for more current, disaggregated, and behaviorally-informed studies to inform effective inflation management strategies in Nigeria.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Theoretical Framework

This study is grounded in the Keynesian Consumption Theory (Keynes, 1936), which posits that household consumption is primarily determined by current disposable income. According to Keynes, as income increases, consumption rises but not proportionally, since a fraction of income is allocated to savings. The theory introduces the concept of the marginal propensity *to* consume (*MPC*), which explains how changes in income translate into changes in consumption.

In Nigeria, persistent inflation, unemployment, and exchange rate volatility continually erode real household incomes, making the Keynesian framework particularly relevant. Rising prices reduce the purchasing power of households, thereby forcing them to prioritize spending on necessities while cutting back on non-essential goods. At the same time, high unemployment reduces overall disposable income, and exchange rate depreciation raises the cost of imported goods, further tightening household budgets.

The Keynesian framework therefore provides a strong theoretical basis for this study, as it explains the process through which economic changes, like higher prices, impact people's spending habits.

The relationship between household consumption expenditure and macroeconomic variables is expressed in a functional form as:

$$\text{HCE} = f(\text{INF}, \text{UNEMP}, \text{EXR}, \text{INT}, \text{GEXP}) \dots\dots\dots$$

(3.1)

Where:

- HCE = Household Consumption Expenditure
- INF = Inflation Rate
- UNEMP = Unemployment Rate
- EXR = Exchange Rate
- INT = Interest Rate
- GEXP = Government Expenditure

**3.2 Model Specification**

Drawing from the Keynesian Consumption Theory (Keynes, 1936), household consumption expenditure is fundamentally driven by disposable income and affected by macroeconomic shocks such as inflation, unemployment, and exchange rate fluctuations. In the Nigerian context, rising inflation reduces purchasing power, unemployment lowers disposable income, and exchange rate depreciation increases import costs, all of which constrain household spending. Additionally, interest rate and government expenditure are included as control variables to capture the influence of monetary and fiscal conditions on household consumption.

The functional form of the model is therefore specified as:

$$HCE_t = f (INF_t, UNEMP_t, EXR_t, INT_t, GEXP_t) \dots\dots\dots$$

(3.2)

The econometric model is expressed as:

$$HCE_t = \beta_0 + \beta_1 INF_t + \beta_2 UNEMP_t + \beta_3 EXR_t + \beta_4 INT_t + \beta_5 GEXP_t + \mu_t \dots\dots\dots$$

(3.3)

Where:

- $HCE_t$  = Household Consumption Expenditure at time  $t$
- $INF_t$  = Inflation Rate at time  $t$
- $UNEMP_t$  = Unemployment Rate at time  $t$
- $EXR_t$  = Exchange Rate at time  $t$
- $INT_t$  = Interest Rate at time  $t$
- $GEXP_t$  = Government Expenditure at time  $t$
- $\beta_0$  = Constant term
- $\beta_1 - \beta_5$  = Coefficients of the independent variables
- $\mu_t$  = Error term

In line with Keynesian consumption theory and empirical expectations, the direction of impact of each explanatory variable on household consumption expenditure is presented in **Table 3.1**.

**Table 3.1: Expected Signs of Coefficients**

| <b>Variable</b> | <b>Description</b>     | <b>Expected Sign</b> | <b>Justification</b>   |
|-----------------|------------------------|----------------------|--|
| INF             | Inflation Rate         | $\beta_1 < 0$        | Rising inflation erodes real income and reduces household purchasing power.          |
| UNEMP           | Unemployment Rate      | $\beta_2 < 0$        | Higher unemployment reduces disposable income and lowers consumption.                |
| EXR             | Exchange Rate          | $\beta_3 < 0$        | Exchange rate depreciation increases import costs, reducing household consumption.   |
| INT             | Interest Rate          | $\beta_4 < 0$        | High interest rates increase borrowing costs and discourage consumption.             |
| GEXP            | Government Expenditure | $\beta_5 > 0$        | Increased government spending improves welfare and stimulates household consumption. |

Thus, it is expected that inflation, unemployment, exchange rate, and interest rate will negatively affect household consumption expenditure, while government expenditure will positively influence it.

### **3.3 Description of Variables and Measurements**

In this study, household consumption expenditure is modeled as a function of key macroeconomic indicators such as inflation, unemployment, exchange rate, interest rate, and government expenditure. Each variable has been carefully selected in line with the Keynesian consumption theory and previous empirical studies, and is operationalized

using standard economic measures. The table below presents the description, type, measurement, and sources of the variables used in the model.

**Table 3.2: Description of Variables and Measurements**

| Variable Name                           | Variable Type        | Measurement   | Source                                      |
|---|----------------------|---|---|
| HCE (Household Consumption Expenditure) | Dependent Variable   | Annual household final consumption expenditure (₦ Billion, Constant Prices) | CBN Statistical Bulletin, NBS (1991–2024)   |
| INF (Inflation Rate)                    | Independent Variable | Annual percentage change in Consumer Price Index (CPI)                      | NBS, Trading Economics, Statista            |
| UNEMP (Unemployment Rate)               | Independent Variable | Percentage of total labor force unemployed                                  | NBS, Statista (1991–2024)                   |
| EXR (Exchange Rate)                     | Independent Variable | Annual average Naira/US Dollar official exchange rate                       | CBN Statistical Bulletin, Trading Economics |
| INT (Interest Rate)                     | Control Variable     | Annual average lending interest rate (%)                                    | CBN Statistical Bulletin, Trading Economics |
| GEXP (Government Expenditure)           | Control Variable     | Annual total government expenditure (₦ Billion, Constant Prices)            | CBN Statistical Bulletin, NBS (1991–2024)   |

### 3.4 Method of Data Analysis

This study adopts both descriptive and inferential statistical techniques in analyzing the data. Descriptive statistics such as mean, standard deviation, minimum, and maximum

values are employed to provide a clear summary of the dataset and capture the general trends of the variables under consideration. Inferential statistics are applied using advanced time series econometric techniques to investigate the relationship between inflationary pressures and household consumption expenditure in Nigeria.

Specifically, the Auto Regressive Distributed Lag (ARDL) approach developed by Pesaran, Shin, and Smith (2001) is employed, as it is particularly suitable when the variables are integrated at different orders, i.e.,  $I(0)$  and  $I(1)$ . The ARDL technique facilitates the estimation of both short-run and long-run dynamics of the model, thereby providing robust results. In addition, the study applies unit root tests to examine stationarity, while diagnostic tests such as heteroskedasticity, autocorrelation, and model stability tests are conducted to ensure the validity and reliability of the findings.

All estimations are carried out using econometric software such as **EViews**, which enhances computational accuracy, efficiency, and consistency in the interpretation of results.

### **3.4.1 Descriptive Statistics**

Descriptive statistics were used in this study to examine the characteristics of the dataset in terms of distribution, central tendency, variability, and dispersion, as well as its departure from normalcy. The minimum and maximum values were assessed to determine the range of the data, while the mean was used to capture the central tendency.

Standard deviation was employed to measure variability, and skewness and kurtosis were used to evaluate the departure from normality. These statistics provide insights into the structure and spread of the data, thereby helping to understand the underlying trends and patterns.

### **3.4.2 Testing for Time Series Stationarity (Unit Root)**

Since the data employed in this study are time series in nature, testing for stationarity is crucial to avoid spurious regression results. Unit root tests such as the Augmented Dickey-Fuller (ADF) tests are conducted to determine the order of integration of each variable. The outcome of these tests guides the appropriate econometric modeling approach, particularly in confirming the suitability of the ARDL technique.

### **3.4.3 Auto Regressive Distributed Lag (ARDL)**

The Auto Regressive Distributed Lag (ARDL) model, introduced by Pesaran, Shin, and Smith (2001), is a robust econometric framework for investigating both short-run and long-run relationships among time series variables. One of its most important advantages is the ability to handle regressors that are integrated at different levels, specifically  $I(0)$  and  $I(1)$ , but not  $I(2)$ . This makes the ARDL technique highly relevant for macroeconomic studies where variables frequently exhibit mixed orders of integration (Nkoro & Uko, 2016).

The ARDL methodology estimates a dynamic equation by including both current and lagged values of the dependent and explanatory variables. By doing so, the model simultaneously captures immediate short-run effects and long-run equilibrium adjustments, thereby providing a comprehensive picture of the relationship among variables. Another key strength of the ARDL model is its suitability for relatively small sample sizes, as it produces consistent and unbiased estimates of long-run coefficients even when data points are limited.

In the context of this study, the ARDL model is employed to assess the effect of inflationary pressures and other macroeconomic indicators on household consumption expenditure. The model decomposes the effects of inflation, exchange rate, interest rate, and government expenditure into short-run and long-run dynamics, allowing for a deeper understanding of how these factors influence household welfare over time.

**ARDL Model Specification:**

$$HCE_t = \alpha + \sum_{i=1}^p \beta_i HCE_{t-i} + \sum_{j=0}^{q1} \delta_j INF_{t-j} + \sum_{k=0}^{q2} \gamma_k EXR_{t-k} + \sum_{m=0}^{q3} \theta_m INT_{t-m} + \sum_{n=0}^{q3} \emptyset_k GEX_{t-n} \dots + \epsilon_t$$

Where:

- $HCE_t$  = Household Consumption Expenditure at time  $t$
- $INF_t$  = Inflation rate at time  $t$

- $EXR_t$  = Exchange rate at time  $t$
- $INT_t$  = Interest rate at time  $t$
- $GEXP_t$  = Government expenditure at time  $t$
- $\alpha$  = Constant term
- $\beta_i, \delta_j, \gamma_k, \theta_m, \phi_n$  = Short-run dynamic coefficients of respective variables
- $p, q_1, q_2, q_3, q_4$  = Optimal lag lengths determined using information criteria such as AIC (Akaike Information Criterion) or BIC (Bayesian Information Criterion)
- $\epsilon_t$  = Error term at time  $t$

This formulation enables the separation of short-run fluctuations from long-run equilibrium relationships, ensuring a comprehensive understanding of the impact of inflationary pressures on household consumption expenditures in Nigeria.

#### **3.4.3.1 ARDL Model Testing Procedure**

The ARDL model testing procedure follows a systematic approach to ensure that both the short-run dynamics and long-run equilibrium relationships among the variables are correctly identified. This approach is particularly suitable for analyzing the effects of inflationary pressures and macroeconomic factors on household consumption expenditure in Nigeria. The general ARDL( $p, q_1, q_2, \dots, q_k$ ) model can be expressed as:

$$Y_t = \alpha_0 + \sum_{i=1}^p \beta_i Y_{t-i} + \sum_{j=1}^{q1} \gamma_j X_{1,t-j} + \sum_{k=1}^{q2} \delta_k X_{2,t-k} + \dots + \mu_t$$

Where:

- $Y_t$  = dependent variable (Household Consumption Expenditure)
- $X_1, X_2, \dots, X_k$  = independent variables (Inflation, Exchange Rate, Interest Rate, Government Expenditure)
- $\alpha_0$  = constant term
- $\mu_t$  = error term

### 3.4.3.2 Bounds Test for Cointegration

The first step in the ARDL testing framework is the Bounds Test for Cointegration, which determines whether a long-run equilibrium relationship exists between household consumption expenditure and the explanatory variables. The null hypothesis of no cointegration is tested against the alternative hypothesis using an F-statistic, which is compared to the lower and upper bounds of the critical values given by Pesaran et al. (2001).

- If  $F_{stat} > \text{Upper Bound} \rightarrow$  Cointegration exists.
- If  $F_{stat} < \text{Lower Bound} \rightarrow$  No Cointegration.

- If  $F_{stat}$  lies between the bounds  $\rightarrow$  Inconclusive.

### 3.4.3.3 Estimation of Long-Run Coefficients

Once cointegration is confirmed, the long-run coefficients are estimated. The long-run ARDL model can be expressed as:

$$Y_t = \alpha_0 + \sum_{j=0}^{q1} \lambda_j X_{1,t-j} + \sum_{k=0}^{q2} \phi_k X_{2,t-k} + \dots + \epsilon_t$$

Where the coefficients  $(\lambda, \phi, )$  capture the long-term equilibrium effects of inflation, exchange rate, interest rate, and government expenditure on household consumption expenditure.

### 3.4.3.4 Error Correction Model (ECM)

Following the long-run estimation, the Error Correction Model (ECM) is specified to capture the short-run dynamics. The ECM integrates both the short-run changes in variables and the speed of adjustment toward long-run equilibrium. The general form of the Unrestricted Error Correction Model (UECM) is:

$$\Delta Y_t = \alpha_0 + \sum_{i=1}^{p-1} \Delta \beta_i \Delta Y_{t-i} + \sum_{j=0}^{q1-1} \Delta \gamma_j \Delta X_{1,t-j} + \sum_{k=0}^{q2-1} \delta_k \Delta X_{2,t-k} + \dots + \psi ECT_{t-1} \mu_t$$

Where:

- $\Delta$  = first difference operator
- $ECT_{t-1}$  = error correction term derived from the long-run model
- $\psi$  = speed of adjustment coefficient (expected to be negative and significant)

A significant and negative  $\psi$  confirms convergence toward long-run equilibrium after short-run deviations.

### 3.4.3.5 Diagnostic Tests

To guarantee robustness and reliability of the ARDL model, the following diagnostic tests are conducted:

- **Serial Correlation Test (Breusch-Godfrey):** Ensures residual independence.
- **Normality Test (Jarque-Bera):** Confirms residuals are normally distributed.
- **Functional Form Test (Ramsey RESET):** Validates model specification.

### 3.4.3.6 Heteroskedasticity Test

The heteroskedasticity test (e.g., Breusch-Pagan-Godfrey) is employed to check whether residuals have constant variance. The absence of heteroskedasticity validates standard errors, ensuring robust statistical inference.

### 3.4.3.7 Model Stability Tests

Model stability is examined using CUSUM and CUSUMSQ tests. If the plots of CUSUM and CUSUMSQ statistics remain within the 5% significance bounds, the ARDL estimates are considered stable over the study period. A stable model indicates that the long-run

relationships between inflationary pressures and household consumption expenditure remain consistent, making policy recommendations reliable.

### **3.5 Sources of Data**

The study makes use of secondary data obtained from credible and verifiable sources to ensure reliability and accuracy of the findings. Specifically, the data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, the National Bureau of Statistics (NBS) covering the period 1991–2024, as well as international and private sector databases such as Trading Economics and Statista. These sources were selected due to their consistency, comprehensive coverage of macroeconomic and sectoral indicators, and their relevance to the Nigerian economy. The combination of national and international data repositories provides both depth and comparative perspective, while the extended time frame allows the study to adequately capture trends, fluctuations, and long-run relationships among the variables under investigation.

## CHAPTER FOUR

### DATA PRESENTATION AND ANALYSES

#### 4.1 Introduction

This chapter presents and analyzes the data collected for the study. It begins with descriptive statistics of the variables, followed by unit root tests to establish their stationarity. The Autoregressive Distributed Lag (ARDL) model is then employed to estimate both long-run and short-run relationships.

#### 4.2 Descriptive Statistics

This section summarizes the key characteristics of the variables used in the study. The descriptive statistics provide insights into the mean, maximum, minimum, and standard deviation of each variable, which help in understanding their distribution and variability before further econometric analysis.

**Table 4.1 Descriptive statistics**

|           | <b>HCE (₦B)</b> | <b>GEXP (₦B)</b> | <b>EXR</b> | <b>INF</b> | <b>INT</b> | <b>UNEMP</b> |
|-----------|-----------------|------------------|------------|------------|------------|--------------|
| Mean      | 38011.74        | 3911.358         | 143.1759   | 19.18886   | 14.02143   | 4.065714     |
| Median    | 15261.24        | 2038.000         | 128.2919   | 13.00000   | 13.50000   | 3.900000     |
| Maximum   | 141696.8        | 19808.44         | 450.7075   | 72.80000   | 26.00000   | 5.740000     |
| Minimum   | 123.2138        | 41.02830         | 5.353000   | 5.400000   | 6.000000   | 3.070000     |
| Std. Dev. | 43709.28        | 4672.744         | 123.4614   | 16.58368   | 3.871736   | 0.567986     |
| Skewness  | 0.932960        | 1.693739         | 0.909192   | 1.913238   | 0.569899   | 1.425900     |

|   |          |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|----------|
| Kurtosis  | 2.510020 | 5.632369 | 3.033039 | 5.595461 | 4.466593 | 4.640629 |
|   |          |          |          |          |          |          |
| Jarque-Bera   | 5.427533 | 26.83972 | 4.823604 | 31.17675 | 5.031301 | 15.78562 |
| Probability   | 0.066287 | 0.000001 | 0.089654 | 0.000000 | 0.080810 | 0.000373 |
|   |          |          |          |          |          |          |
| Sum   | 1330411. | 136897.5 | 5011.158 | 671.6100 | 490.7500 | 142.3000 |
| Sum Sq. Dev.  | 6.50E+10 | 7.42E+08 | 518252.7 | 9350.625 | 509.6714 | 10.96866 |
|   |          |          |          |          |          |          |
| Observations  | 35       | 35       | 35       | 35       | 35       | 35       |
| HCE = Household Consumption Expenditure, INF = Inflation Rate, EXR = Exchange Rate<br>UNEMP = Unemployment Rate, INT = Interest Rate, GEXP = Government Expenditure |          |          |          |          |          |          |

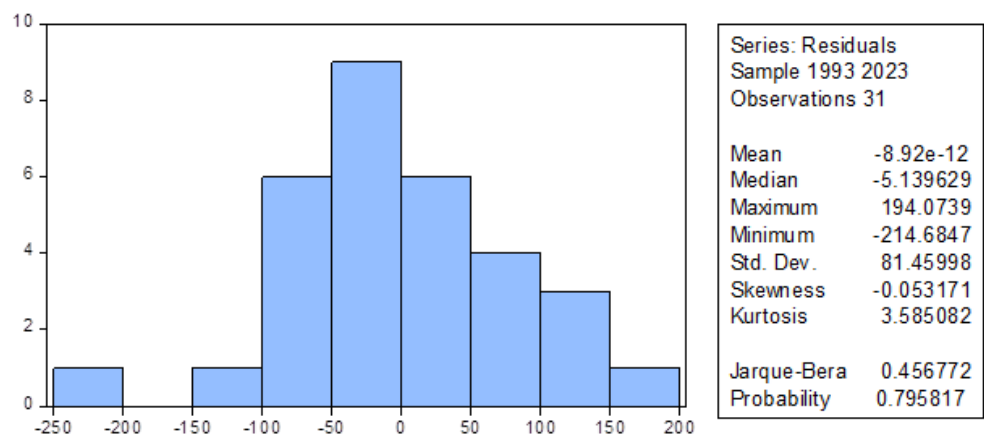
**Source:** Author's Computation from data (2025) (*E-view*)

The descriptive statistics presented on the effect of inflationary pressure on households' consumption expenditures in Nigeria provide useful insights into the behavior of the variables under study. Household consumption expenditure (HCE) recorded an average of ₦38,011.74 billion, with a wide variation ranging from ₦123.21 billion to ₦141,696.8 billion, as reflected in its high standard deviation (₦43,709.28 billion). This indicates a significant disparity in household spending patterns across the observed period, possibly due to inflationary shocks and fluctuating economic conditions. Government expenditure (GEXP) also shows considerable variation, averaging ₦3,911.36 billion with a maximum of ₦19,808.44 billion and a strong right-skewed distribution (skewness of 1.69), suggesting that in certain years, government spending spiked significantly above the

mean. Exchange rate (EXR) averaged ₦143.18 per US dollar, but with a wide range between ₦5.35 and ₦450.71, reflecting the effects of naira depreciation over time. Inflation (INF) had an average rate of 19.19%, with fluctuations between 5.4% and 72.8%, indicating periods of severe inflationary pressure that could erode household purchasing power. Interest rates (INT) were relatively stable, averaging 14.02%, while unemployment (UNEMP) remained low on average at 4.07%, though slightly skewed to the right.

The Jarque-Bera normality test results show that most variables, particularly government expenditure, inflation, and unemployment, deviate significantly from normal distribution (p-values < 0.05), suggesting the presence of outliers and volatility. However, household consumption expenditure and exchange rate appear closer to normality, with p-values of 0.066 and 0.089 respectively. Overall, the results suggest that household consumption in Nigeria is highly sensitive to macroeconomic fluctuations, particularly inflation and exchange rate volatility, which may explain the wide dispersion in household spending levels over the study period. This aligns with economic theory that persistent inflationary pressures and currency depreciation reduce real income, thereby influencing household consumption behavior.

**Figure 4.1 Normality Test**



**Source:** Author’s Computation from data (2025) (*E-view*)

From Figure 4.1, the p.value of 0.795817 is greater than 0.05, thus it is inferred that on aggregate the variables of the study are normally distributed.

**Table 4.2 Unit Root Tests**

|                | Unit Root Test at Levels |                        |            | Unit Root Test at First Difference |                        |            | Order of Integration |
|----------------|--------------------------|------------------------|------------|------------------------------------|------------------------|------------|----------------------|
|                | ADF Test Statistics      | 95% Critical ADF Value | Remarks    | ADF Test Statistics                | 95% Critical ADF Value | Remarks    |                      |
| <b>LNHCE</b>   | -4.293906                | -2.951125              | Stationary | -3.838297                          | -2.954021              | Stationary | I(0)                 |
| <b>LNINF</b>   | -3.236871                | -2.951125              | Stationary | -6.589989                          | -2.954021              | Stationary | I(0)                 |
| <b>LNUNEMP</b> | -                        | -                      | Stationary | -                                  | -                      | Stationary | I(0)                 |

|  |               |               |                    |               |               |            |      |
|--|---------------|---------------|--------------------|---------------|---------------|------------|------|
|  | 3.825048      | 2.963972      |                    | 3.483466      | 2.957110      |            |      |
| <b>LNEXR</b>   | -<br>1.858758 | -<br>2.951125 | Non-<br>Stationary | -<br>5.726601 | -<br>2.954021 | Stationary | I(1) |
| <b>LNINT</b>   | -<br>2.633749 | -<br>2.951125 | Non-<br>Stationary | -<br>6.875198 | -<br>2.954021 | Stationary | I(1) |
| <b>LNGEXP</b>  | -<br>2.948221 | -<br>2.954021 | Non-<br>Stationary | -<br>8.565381 | -<br>2.954021 | Stationary | I(1) |
| LNHCE = <i>Natural log of Household Consumption Expenditure</i> , LNINF = <i>Natural log of Inflation Rate</i> , LNEXR = <i>Natural log of Exchange Rate</i> , LNUNEMP = <i>Natural log of Unemployment Rate</i> , LNINT = <i>Natural log of Interest Rate</i> , LNGEXP = <i>Natural log of Government Expenditure</i> |               |               |                    |               |               |            |      |

**Source:** Author's Computation from data (2025) (*E-view*)

The results of the unit root tests presented in Table 4.2 reveal the stationarity properties of the variables used in analyzing the effect of inflationary pressure on households' consumption expenditures in Nigeria. At levels, the Augmented Dickey-Fuller (ADF) test indicates that some variables are stationary, while others are not. Specifically, the natural logarithms of household consumption expenditure (LNHCE), inflation rate (LNINF), and unemployment rate (LNUNEMP) are stationary at level [I(0)], since their ADF statistics (-4.293906, -3.236871, and -3.825048, respectively) are more negative than the 95% critical values. This implies that these variables exhibit mean reversion and do not contain unit roots at levels.

On the other hand, exchange rate (LNEXR), interest rate (LNINT), and government expenditure (LNGEXP) were non-stationary at levels because their ADF test statistics (-1.858758, -2.633749, and -2.948221, respectively) are greater than the critical values, suggesting the presence of unit roots. However, when tested at first difference, all three

became stationary [I(1)], with ADF values significantly exceeding the critical thresholds (-5.726601, -6.875198, and -8.565381, respectively).

Overall, the mixture of I(0) and I(1) variables suggests that the series are integrated of different orders, making them suitable for advanced econometric modeling such as the Autoregressive Distributed Lag (ARDL) bounds testing approach, which accommodates both I(0) and I(1) variables. This outcome implies that household consumption expenditure, inflation, and unemployment respond more quickly to shocks without requiring differencing, while exchange rate, interest rate, and government expenditure require differencing to achieve stationarity, reflecting their higher degree of persistence and volatility in Nigeria's economy.

**Table 4.3 Johansen Multivariate Cointegration Tests Results**

| <i>Trace Test</i>      |                       |                       |              | <i>Maximum Eigenvalue Test</i> |                       |                       |              |
|------------------------|-----------------------|-----------------------|--------------|--------------------------------|-----------------------|-----------------------|--------------|
| <b>Null Hypothesis</b> | <b>Test Statistic</b> | <b>Critical Value</b> | <b>Prob.</b> | <b>Null Hypothesis</b>         | <b>Test Statistic</b> | <b>Critical Value</b> | <b>Prob.</b> |
| $r = 0^*$              | 161.6497              | 95.75366              | 0.0000       | $r = 0^*$                      | 68.12135              | 40.07757              | 0.0000       |
| $r \leq 1^*$           | 93.52836              | 69.81889              | 0.0002       | $r \leq 1^*$                   | 44.02985              | 33.87687              | 0.0022       |
| $r \leq 2^*$           | 49.49850              | 47.85613              | 0.0347       | $r \leq 2^*$                   | 24.71885              | 27.58434              | 0.1115       |
| $r \leq 3^*$           | 24.77965              | 29.79707              | 0.1694       | $r \leq 3^*$                   | 20.51033              | 21.13162              | 0.0609       |
| $r \leq 4^*$           | 4.269317              | 15.49471              | 0.8806       | $r \leq 4^*$                   | 3.430633              | 14.26460              | 0.9140       |
| $r \leq 5^*$           | 0.838684              | 3.841466              | 0.3598       | $r \leq 5^*$                   | 0.838684              | 3.841466              | 0.3598       |

**Source:** Author's Computation from data (2025) (*E-view*)

The Johansen multivariate cointegration test results in Table 4.3 provide evidence on the long-run relationship among the variables under study. Both the Trace Test and the Maximum Eigenvalue Test consistently reject the null hypothesis of no cointegration at the 5% significance level. Specifically, for the case of  $r = 0$ , the trace statistic (161.65) far exceeds the critical value (95.75), and the corresponding probability (0.0000) confirms strong rejection of the null, indicating at least one cointegrating vector. Similarly, the maximum eigenvalue statistic (68.12) is greater than the critical value (40.08), with a probability of 0.0000, further confirming cointegration.

The results also show that the null hypothesis of at most one cointegrating vector ( $r \leq 1$ ) is rejected in both tests, as the trace statistic (93.53) and eigenvalue statistic (44.03) are significantly above their critical values with probabilities less than 0.01. For  $r \leq 2$ , the trace test (49.50) is slightly above the critical value (47.86) with a p-value of 0.0347, indicating the presence of at least three cointegrating relationships. However, the maximum eigenvalue test at this level (24.72 vs. 27.58) does not support rejection of the null, with a p-value of 0.1115.

Beyond this point ( $r \leq 3$ ,  $r \leq 4$ ,  $r \leq 5$ ), both tests fail to reject the null hypotheses, as the test statistics fall below their critical values, and the p-values are above 0.05. This means that there are no additional cointegrating vectors.

Overall, the Johansen test results provide strong evidence of the existence of up to two to three cointegrating equations, suggesting a stable long-run equilibrium relationship

among household consumption expenditure, inflation, exchange rate, unemployment, interest rate, and government expenditure in Nigeria. This implies that despite short-term fluctuations, these macroeconomic variables move together in the long run, supporting the theoretical expectation that inflationary pressures, fiscal policy, and exchange rate dynamics jointly determine household consumption behavior over time.

### **4.3 The Autoregressive Distributed Lag (ARDL) Model and Bounds Testing Approach**

To examine both the long-run relationships and short-run dynamics among the variables, this study employed the Autoregressive Distributed Lag (ARDL) model in conjunction with the Bounds testing approach. Initially proposed by Pesaran and Shin (1995) and later refined by Pesaran, Shin, and Smith (2001), the ARDL framework offers significant methodological advantages—most notably, its flexibility in handling variables with different orders of integration. Unlike traditional cointegration methods that require all series to be integrated of the same order, the ARDL approach remains valid when variables are a mixture of level stationary (I(0)) and first-difference stationary (I(1)) (Belloumi, 2014).

Moreover, as Belloumi (2014) notes, the ARDL model is particularly appropriate for studies with relatively small sample sizes, a common characteristic of time series research in developing economies. In addition, the approach yields consistent estimates of both short-run and long-run parameters, while incorporating an error correction

mechanism that captures short-term disequilibria and guides the system back toward long-run equilibrium (Harris & Sollis, 2003).

### 4.3. 1 ARDL Bounds Testing

The ARDL Bounds Test is applied to determine whether a long-run relationship exists among the study variables. The test evaluates the null hypothesis of no cointegration, meaning that no long-term association is present. The decision rule relies on comparing the computed F-statistic with two critical bounds. If the F-statistic falls below the lower bound ( $I(0)$ ), the null hypothesis cannot be rejected, suggesting the absence of cointegration. In contrast, if the F-statistic is greater than the upper bound ( $I(1)$ ), the null hypothesis is rejected, confirming the presence of a stable long-run equilibrium relationship. However, when the F-statistic lies between the two bounds, the result is inconclusive, as the evidence is insufficient to definitively establish the presence or absence of cointegration.

**Table 4.4: ARDL Bounds Test Result**

| F-Bounds Test  |          | Null Hypothesis: No levels relationship |      |      |
|----------------|----------|---|------|------|
| Test Statistic | Value    | Signif.                                 | I(0) | I(1) |
| F-statistic    | 7.811291 | 10%                                     | 2.08 | 3    |
| K              | 5        | 5%                                      | 2.39 | 3.38 |
|                |          | 2.5%                                    | 2.7  | 3.73 |
|                |          | 1%                                      | 3.06 | 4.15 |

**Source:** Author’s Computation from data (2025) (*E-view*)

The ARDL Bounds Test presented in Table 4.4 was carried out to examine whether a long-run (levels) relationship exists among the study variables. The computed F-statistic is **7.811291**, which is assessed against the critical values of the lower bound (I(0)) and upper bound (I(1)) at different significance levels. At the 10% level, the upper bound is 3.00; at 5%, it is 3.38; at 2.5%, 3.73; and at 1%, 4.15. Since the F-statistic is greater than the upper bound critical values at all conventional significance levels, the null hypothesis of no cointegration is rejected. This provides strong evidence of a statistically significant long-run equilibrium relationship among household consumption expenditure, inflation, exchange rate, interest rate, government expenditure, and unemployment, thereby justifying the application of the ARDL framework to capture both short-run and long-run dynamics in the study.

**Table 4.5: ARDL Long Run Form**

| Dependent Variable: D(LNHCE)                   |                    |                   |                    |              |
|--|--------------------|-------------------|--------------------|--------------|
| Selected Model: ARDL(1, 1, 1, 1, 1, 1)         |                    |                   |                    |              |
| Case 2: Restricted Constant and No Trend       |                    |                   |                    |              |
| <b>Conditional Error Correction Regression</b> |                    |                   |                    |              |
| <b>Variable</b>                                | <b>Coefficient</b> | <b>Std. Error</b> | <b>t-Statistic</b> | <b>Prob.</b> |
| C  | 1.144260           | 0.391840          | 2.920220           | 0.0079       |
| LNHCE(-1)*                                     | -0.058061          | 0.124034          | -0.468107          | 0.6443       |
| LNGEXP(-1)                                     | -0.145063          | 0.176227          | -0.823156          | 0.4193       |
| LNEX__RATE(-1)                                 | 0.206641           | 0.078754          | 2.623874           | 0.0155       |

|  |           |          |           |        |
|--|-----------|----------|-----------|--------|
| LNINF__RATE(-1)  | 0.090717  | 0.046142 | 1.966034  | 0.0620 |
| LNINTR(-1)   | -0.153234 | 0.103775 | -1.476595 | 0.1540 |
| LNUNEMP__RATE(-1)  | -0.059352 | 0.207163 | -0.286500 | 0.7772 |
| D(LNGEXP)  | -0.109965 | 0.164691 | -0.667704 | 0.5113 |
| D(LNEX__RATE)  | 0.009654  | 0.103720 | 0.093081  | 0.9267 |
| D(LNINF__RATE)   | 0.108452  | 0.045323 | 2.392848  | 0.0257 |
| D(LNINTR)  | -0.009870 | 0.126572 | -0.077975 | 0.9386 |
| D(LNUNEMP__RATE)   | -0.258842 | 0.328628 | -0.787643 | 0.4393 |
| <b>Levels Equation</b>   |           |          |           |        |
| LNGEXP   | -2.498436 | 8.244020 | -0.303060 | 0.7647 |
| LNEX__RATE   | 3.559005  | 7.913761 | 0.449724  | 0.6573 |
| LNINF__RATE  | 1.562437  | 3.247709 | 0.481089  | 0.6352 |
| LNINTR   | -2.639167 | 5.858749 | -0.450466 | 0.6568 |
| LNUNEMP__RATE  | -1.022231 | 4.433301 | -0.230580 | 0.8198 |
| C  | 19.70778  | 43.69660 | 0.451014  | 0.6564 |
| <b>NB: *Significant at 10%, **Significant at 5%, and ***Significant at 1%.</b> |           |          |           |        |

**Source:** Author's Computation from data (2025) (*E-view*)

The ARDL Long Run Form results in Table 4.5 examine the impact of exchange rate (LNEX\_RATE), government expenditure (LNGEXP), inflation rate (LNINF\_RATE), interest rate (LNINTR), and unemployment rate (LNUNEMP\_RATE) on household consumption expenditure (LNHCE) in Nigeria. The estimated long-run coefficients for LNGEXP (-2.498436), LNEX\_RATE (3.559005), LNINF\_RATE (1.562437), LNINTR

(-2.639167), and LNUNEMP\_RATE (-1.022231) are all statistically insignificant at conventional levels, confirming that these indicators do not exert meaningful long-run effects on consumption.

Positive coefficients for LNEX\_RATE and LNINF\_RATE suggest that currency depreciation and inflation are associated with increased household spending, while the negative signs for LNGEXP, LNINTR, and LNUNEMP\_RATE indicate that government spending inefficiencies, higher borrowing costs, and weak labor market conditions reduce consumption. The constant term (19.70778) is also statistically insignificant, reflecting the absence of a strong baseline influence from omitted factors.

In the short run, some variables are significant. LNEX\_RATE(-1) is positive and significant (0.206641,  $p = 0.0155$ ), suggesting that exchange rate volatility has a strong short-term impact on household consumption. Similarly, D(LNINF\_RATE) is positive and significant (0.108452,  $p = 0.0257$ ), showing that inflationary shocks increase household spending in the short term. Other variables, including government expenditure, interest rate, and unemployment, remain statistically insignificant in the short-run estimates.

In sum, household consumption expenditure in Nigeria is significantly shaped by short-run dynamics of inflation and exchange rate, while the long-run effects of macroeconomic indicators remain statistically weak. This underscores the study's focus on the effect of inflationary pressure on household consumption expenditures in Nigeria,

highlighting that inflation primarily influences spending behavior in the short run rather than through long-run persistence.

**Table 4.6: ARDL Error Correction Regression- Short Run Estimates**

| ARDL Error Correction Regression         |             |                       |             |           |
|--|-------------|-----------------------|-------------|-----------|
| Dependent Variable: D(LNHCE)             |             |                       |             |           |
| Selected Model: ARDL(1, 1, 1, 1, 1, 1)   |             |                       |             |           |
| ECM Regression                           |             |                       |             |           |
| Case 2: Restricted Constant and No Trend |             |                       |             |           |
| Variable                                 | Coefficient | Std. Error            | t-Statistic | Prob.     |
| D(LNGEXP)                                | -0.109965   | 0.128498              | -0.855774   | 0.4013    |
| D(LNEX__RATE)                            | 0.009654    | 0.060795              | 0.158802    | 0.8753    |
| D(LNINF__RATE)                           | 0.108452    | 0.033000              | 3.286424    | 0.0034    |
| D(LNINTR)                                | -0.009870   | 0.097398              | -0.101332   | 0.9202    |
| D(LNUNEMP__RATE)                         | -0.258842   | 0.210083              | -1.232092   | 0.2309    |
| CointEq(-1)*                             | -0.058061   | 0.006960              | -8.342152   | 0.0000    |
| R-squared                                | 0.693659    | Mean dependent var    |             | 0.207280  |
| Adjusted R-squared                       | 0.638955    | S.D. dependent var    |             | 0.173559  |
| S.E. of regression                       | 0.104287    | Akaike info criterion |             | -1.524564 |
| Sum squared resid                        | 0.304519    | Schwarz criterion     |             | -1.255206 |
| Log likelihood                           | 31.91758    | Hannan-Quinn criter.  |             | -1.432705 |

|  |          |  |  |
|--|----------|--|--|
| Durbin-Watson stat                                 | 2.371930 |  |  |
| * p-value incompatible with t-Bounds distribution. |          |  |  |

**Source:** Author's Computation from data (2025) (*E-view*)

The ARDL Error Correction Regression results presented in Table 4.6 analyze the short-run dynamics of household consumption expenditure (LNHCE) in Nigeria.

Among the explanatory variables, government expenditure (D(LNGEXP),  $-0.1099$ ,  $p = 0.4013$ ), exchange rate (D(LNEX\_RATE),  $0.0097$ ,  $p = 0.8753$ ), interest rate (D(LNINTR),  $-0.0099$ ,  $p = 0.9202$ ), and unemployment (D(LNUNEMP\_RATE),  $-0.2588$ ,  $p = 0.2309$ ) are statistically insignificant, suggesting that these variables do not exert immediate short-run effects on household consumption.

By contrast, inflation rate (D(LNINF\_RATE),  $0.1085$ ,  $p = 0.0034$ ) is positive and statistically significant, indicating that rising prices increase household expenditure in the short run, consistent with inflationary pressures pushing up nominal consumption spending.

The error correction term (CointEq(-1)) is negative ( $-0.0581$ ) and highly significant ( $p = 0.0000$ ), confirming the existence of a valid long-run equilibrium relationship. The coefficient suggests that approximately 5.8% of short-run disequilibria in household consumption are corrected within a period.

The diagnostic statistics further support the model fit:  $R^2 = 0.6937$  and Adjusted  $R^2 = 0.6390$  indicate that the explanatory variables account for about 64% of the variation in short-run household consumption. The Durbin-Watson statistic of 2.37 suggests no serious autocorrelation problems.

In sum, the short-run results show that inflation exerts a significant and positive effect on household consumption, while exchange rate, government expenditure, interest rate, and unemployment have statistically insignificant effects. The significant negative error correction term confirms long-run convergence despite these short-run volatilities.

#### **4.4 Hypotheses Testing**

The hypotheses in this study were evaluated at the 5% significance level. A p-value equal to or less than 0.05 indicates statistical significance and leads to the rejection of the null hypothesis, while a p-value above 0.05 results in its acceptance. The analysis draws on the ARDL Long Run Form (Table 4.5) and the Short-Run Error Correction Regression estimates (Table 4.6) to assess the effects of inflation, exchange rate volatility, and unemployment on final household consumption in Nigeria.

**H01: There is no significant effect of inflation on final household consumption in Nigeria.**

The ARDL short-run estimates reveal that inflation is positive and statistically significant

(D(LNINF\_\_RATE), coefficient = 0.108452,  $p = 0.0034$ ). In the long run, inflation (LNINF\_\_RATE, coefficient = 1.562420,  $p = 0.6352$ ) is not statistically significant.

Since the short-run result is significant at the 5% level, the null hypothesis is rejected in the short run. Inflation significantly affects household consumption in Nigeria in the short run but not in the long run.

**H02: Exchange rate volatility has no significant effect on final household consumption in Nigeria.**

The short-run ARDL results show that exchange rate (D(LNEX\_\_RATE), coefficient = 0.009654,  $p = 0.8753$ ) is not statistically significant. In the long run, the exchange rate (LNEX\_\_RATE, coefficient = 3.559010,  $p = 0.6573$ ) is also not significant.

Since both short-run and long-run estimates are not significant, the null hypothesis is accepted. Exchange rate volatility does not significantly affect household consumption in Nigeria.

**H03: Unemployment rate has no significant effect on final household consumption in Nigeria.**

The ARDL short-run estimates indicate that unemployment (D(LNUNEMP\_\_RATE), coefficient =  $-0.258842$ ,  $p = 0.2309$ ) is not statistically significant. In the long run, unemployment (LNUNEMP\_\_RATE, coefficient =  $-1.022180$ ,  $p = 0.8198$ ) is also not significant.

Since both short-run and long-run results are not significant, the null hypothesis is accepted. Unemployment does not significantly affect household consumption in Nigeria.

Out of the three hypotheses, only inflation (H01) is significant in the short run, while exchange rate volatility (H02) and unemployment (H03) are not significant in both the short run and the long run. The error correction term (CointEq(-1), coefficient = -0.058061,  $p = 0.0000$ ) is negative and highly significant, confirming a valid long-run equilibrium relationship. This implies that about 5.8% of short-run disequilibria in household consumption are corrected within one period, supporting the existence of long-run convergence despite weak individual variable significance in the long run.

**Table 4.7: Summary of Hypotheses Testing Results**

| Hypothesis   | Variable            | Short-Run Result  | Long-Run Result                                  | Decision (5% level)                             | Interpretation   |
|--|---------------------|---|--|---|--|
| <b>H01: Inflation has no significant effect on final household consumption</b> | Inflation (INF)     | Significant (D(LNINF__RATE), coef = 0.108452, $p = 0.0034$ )    | Not Significant (coef = 1.562420, $p = 0.6352$ ) | Reject H01 in short run; Accept H01 in long run | Inflation significantly increases household consumption in the short run but has no significant long-run effect. |
| <b>H02: Exchange rate volatility has no</b>                                    | Exchange Rate (EXR) | Not Significant (D(LNEX__RATE), coef = 0.009654, $p = 0.8753$ ) | Not Significant (coef =                          | Accept H02                                      | Exchange rate volatility does not significantly  |

|  |                      |  |  |            |   |
|--|----------------------|--|--|------------|---|
| significant effect on final household consumption                                      |                      |  | 3.559010, p = 0.6573)                          |            | affect household consumption in either the short run or the long run.   |
| <b>H03: Unemployment rate has no significant effect on final household consumption</b> | Unemployment (UNEMP) | Not Significant (D(LNUNEMP__RATE), coef = -0.258842, p = 0.2309) | Not Significant (coef = -1.022180, p = 0.8198) | Accept H03 | Rising unemployment does not significantly affect household consumption in both the short run and the long run. |

#### 4.5 Discussion of Findings

The findings of this study provide empirical evidence on the macroeconomic determinants of final household consumption in Nigeria. The ARDL results show that inflation exerts a statistically significant positive effect on household consumption in the short run, but its long-run effect is not significant. This suggests that while rising prices push households toward higher nominal expenditure in the immediate term, the effect does not persist over time. This finding is consistent with the short-run consumption adjustment patterns described in Keynesian analysis, where nominal expenditure rises under price shocks, but does not align with long-run expectations of reduced real purchasing power.

Similarly, exchange rate volatility was found not to have any significant effect on household consumption in both the short and long run. This indicates that fluctuations in the naira exchange rate did not directly constrain household consumption during the study period. This outcome diverges from studies such as Olayungbo and Adediran (2017) and Adegbite and Ayinde (2022), who emphasized significant disruptive effects of exchange rate instability, suggesting that other mitigating factors may have cushioned households against exchange rate pass-through effects.

Unemployment was also found to be statistically insignificant in both the short and long run. This indicates that rising unemployment did not exert a measurable effect on household consumption within the study period. While this result contrasts with findings by Oyinlola et al. (2019), Iheanacho (2020), and Adebayo and Onifade (2023), it may reflect the predominance of informal sector activities in Nigeria, where household income and consumption patterns are less directly tied to formal unemployment rates.

Overall, the findings emphasize that inflation, exchange rate volatility, and unemployment did not jointly exert strong long-run constraints on household welfare in Nigeria during the study period. Instead, only short-run inflationary effects were statistically significant, highlighting consumption volatility in response to price pressures without persistent long-run impacts.

Unlike previous studies that consistently found significant long-run effects of inflation, exchange rate volatility, and unemployment on household consumption, this study

demonstrates that only short-run inflationary pressures are statistically significant in Nigeria. This distinction underscores the importance of contextualizing macroeconomic effects within country-specific structures, particularly the role of the informal sector in shaping consumption dynamics.

#### **4.6 Policy Implication**

The study's findings carry significant policy implications for stabilizing and enhancing household consumption in Nigeria.

First, the significant short-run effect of inflation underscores the need for effective short-term price stabilization policies. Strengthening food supply systems, addressing production bottlenecks, and enhancing the Central Bank's inflation-monitoring framework would help moderate short-run price shocks and protect household expenditure patterns (CBN, 2021; IMF, 2023; Omodero, 2020).

Second, the insignificance of exchange rate effects suggests that exchange rate volatility alone does not directly explain household consumption outcomes. However, maintaining exchange rate stability remains important to prevent potential inflationary pass-through effects. Policies that promote diversification of foreign exchange earnings and reduce import dependence would still support broader household welfare (Alege et al., 2021).

Finally, the insignificance of unemployment implies that formal labor market conditions did not significantly shape household consumption within the study period, possibly due

to informal sector dominance. Nonetheless, employment-driven policies remain critical for long-term welfare. Targeted investments in job creation, entrepreneurship support, and skill development are essential for sustainable improvements in disposable income (World Bank, 2022; Adebayo and Onifade, 2023).

In sum, the results suggest that achieving stable household consumption in Nigeria requires policy measures that prioritize short-term inflation control while sustaining efforts in exchange rate management and employment generation. Such measures would enhance household welfare, moderate volatility in consumption, and strengthen aggregate demand for long-term economic growth.

While earlier research strongly emphasized exchange rate stability and unemployment reduction as direct drivers of household consumption, this study highlights inflation control as the dominant short-run policy priority. This difference reveals that the Nigerian consumption structure is more immediately responsive to price shocks than to exchange rate movements or formal unemployment, thereby offering a fresh perspective for policymakers.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION, AND RECOMMENDATIONS**

#### **5.1 Summary**

This study investigated the effect of inflation, exchange rate volatility, and unemployment on final household consumption in Nigeria using the Autoregressive Distributed Lag (ARDL) model. Secondary time-series data were analyzed, covering both short-run and long-run dynamics. The ARDL bounds test confirmed the existence of a long-run relationship among the variables.

The findings show that inflation has a significant effect on household consumption in the short run, but no significant effect in the long run. Exchange rate volatility is not statistically significant in both the short run and long run, indicating no measurable effect on household consumption. Similarly, unemployment is statistically insignificant in both the short run and long run. Overall, the evidence suggests that only inflation exerts short-run influence on household consumption, while exchange rate volatility and unemployment do not significantly explain consumption dynamics in Nigeria.

#### **5.2 Conclusion**

This study concludes that inflation, exchange rate volatility, and unemployment are important macroeconomic variables, but only inflation exerts a significant short-run effect on household consumption in Nigeria. Inflation increases nominal household

expenditure in the short run, reflecting price pressures on consumption. Exchange rate volatility and unemployment, however, show no significant short-run or long-run effects on household consumption during the study period. The findings demonstrate that household welfare in Nigeria is more immediately responsive to price shocks than to exchange rate fluctuations or formal unemployment levels, underscoring the influence of inflation as the dominant short-run determinant of household consumption.

### **5.3 Recommendations**

Based on the findings of the study, the following recommendations are made:

1. **Strengthening Inflation Management:** Since inflation was found to exert a significant effect on household consumption in the short run, the Central Bank should adopt stronger inflation-targeting frameworks and align monetary policy with fiscal strategies to control inflation. Beyond monetary measures, supply-side constraints such as poor agricultural infrastructure, storage facilities, and inefficient transportation systems should be addressed to reduce cost-push inflation and stabilize consumer prices.
2. **Monitoring Exchange Rate Volatility:** Although exchange rate volatility was not statistically significant in both the short and long run, maintaining a stable exchange rate remains essential to prevent possible transmission of external shocks. Diversification of exports, promotion of local value addition, and stronger

foreign reserves will reduce this vulnerability. Transparency in currency management and policies that encourage diaspora remittances can also restore market confidence and stabilize the exchange rate.

3. **Addressing Unemployment Challenges:** While unemployment was not found to be statistically significant in influencing household consumption during the study period, government policies should still prioritize labor-intensive sectors like agriculture, manufacturing, and construction to prevent worsening welfare conditions. Entrepreneurship development, vocational training, and easier access to affordable credit for SMEs would stimulate business expansion and enhance job creation, especially for youths.
4. **Strengthening Social Safety Nets:** Direct interventions such as conditional cash transfers, food subsidies, and affordable healthcare must be expanded to protect vulnerable households from inflationary pressures. Promoting financial inclusion, improving access to microcredit, and investing in education and healthcare will enhance resilience and long-term household welfare.

#### **5.4 Contribution to Knowledge**

This study contributes to knowledge in several ways:

1. **Linking Macroeconomic Instability to Household Welfare:** This study provides fresh empirical evidence on how macroeconomic variables—particularly inflation—directly influence household consumption. Unlike many previous

studies that focused mainly on GDP growth, this research prioritizes household welfare as a more accurate measure of economic stability.

2. **Short-Run and Long-Run Dynamics of Household Welfare:** By adopting the ARDL model, the study distinguishes between short-run and long-run effects of macroeconomic variables on household consumption. The findings show that inflation significantly reduces consumption in the short run, while unemployment and exchange rate volatility showed no statistically significant effect during the study period. This provides nuanced insights into how households respond differently to macroeconomic shocks.
3. **Policy-Relevant Insights for Nigeria's Economy:** The research strengthens the link between academic evidence and policymaking by demonstrating that inflation significantly shapes household welfare. Although unemployment and exchange rate volatility were not significant, they remain important policy concerns due to their potential indirect effects. Policymakers can draw on these insights to frame integrated and coordinated policies that stabilize the economy and protect living standards.
4. **A People-Centered Economic Perspective:** Conceptually, the study shifts emphasis from aggregate economic outcomes to household-level experiences. By focusing on household consumption as a transmission channel of macroeconomic

shocks, the study highlights the human side of economic instability, which is crucial for welfare-centered policy design in Nigeria.

5. **Foundation for Future Research:** The study also contributes methodologically by applying the ARDL framework, which can be extended in future studies to nonlinear models or cross-country comparisons. This creates opportunities for comparative analysis across Sub-Saharan Africa and provides a solid basis for further scholarly exploration of welfare outcomes.

### **5.5 Suggestions for Further Studies**

Future studies should consider:

1. Including additional determinants of consumption, such as remittances, credit availability, and government transfers.
2. Using nonlinear or asymmetric ARDL models to capture differences between rising and falling inflation or exchange rate volatility.
3. Conducting household-level studies with microdata to provide disaggregated insights across different income groups.
4. Undertaking comparative studies across African economies to assess whether Nigeria's experience is unique or reflects broader regional trends.
5. Exploring the role of digital financial inclusion in mitigating the adverse effects of macroeconomic shocks on household consumption.

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## APPENDICES

|              | HCE_BILLI<br>ON_ | GEXP_BILL<br>ION | EX_RATE  | INF_RATE | INTR     | UNEMP_RA<br>TE |
|--------------|------------------|------------------|----------|----------|----------|----------------|
| Mean         | 38011.74         | 3911.358         | 143.1759 | 19.18886 | 14.02143 | 4.065714       |
| Median       | 15261.24         | 2038.000         | 128.2919 | 13.00000 | 13.50000 | 3.900000       |
| Maximum      | 141696.8         | 19808.44         | 450.7075 | 72.80000 | 26.00000 | 5.740000       |
| Minimum      | 123.2138         | 41.02830         | 5.353000 | 5.400000 | 6.000000 | 3.070000       |
| Std. Dev.    | 43709.28         | 4672.744         | 123.4614 | 16.58368 | 3.871736 | 0.567986       |
| Skewness     | 0.932960         | 1.693739         | 0.909192 | 1.913238 | 0.569899 | 1.425900       |
| Kurtosis     | 2.510020         | 5.632369         | 3.033039 | 5.595461 | 4.466593 | 4.640629       |
|              |                  |                  |          |          |          |                |
| Jarque-Bera  | 5.427533         | 26.83972         | 4.823604 | 31.17675 | 5.031301 | 15.78562       |
| Probability  | 0.066287         | 0.000001         | 0.089654 | 0.000000 | 0.080810 | 0.000373       |
|              |                  |                  |          |          |          |                |
| Sum          | 1330411.         | 136897.5         | 5011.158 | 671.6100 | 490.7500 | 142.3000       |
| Sum Sq. Dev. | 6.50E+10         | 7.42E+08         | 518252.7 | 9350.625 | 509.6714 | 10.96866       |
|              |                  |                  |          |          |          |                |
| Observations | 35               | 35               | 35       | 35       | 35       | 35             |

## UNIT ROOT TEST AT LEVEL

### HCE AT LEVEL

Null Hypothesis: LNHCE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -4.293906   | 0.0018 |
| Test critical values: 1% level         | -3.639407   |        |
| 5% level                               | -2.951125   |        |
| 10% level                              | -2.614300   |        |

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

### INF AT LEVEL

Null Hypothesis: LNINF\_\_RATE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -3.236871   | 0.0264 |
| Test critical values: 1% level         | -3.639407   |        |

5% level -2.951125

10% level -2.614300

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

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### **UNEMP AT LEVEL**

Null Hypothesis: LNUNEMP\_\_RATE has a unit root

Exogenous: Constant

Lag Length: 4 (Automatic - based on SIC, maxlag=8)

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|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -3.825048   | 0.0069 |
| Test critical values:                  |             |        |
| 1% level                               | -3.670170   |        |
| 5% level                               | -2.963972   |        |
| 10% level                              | -2.621007   |        |

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

### **EXR AT LEVEL**

Null Hypothesis: LNEX\_\_RATE has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -1.858758   | 0.3470 |
| Test critical values: 1% level         | -3.639407   |        |
| 5% level                               | -2.951125   |        |
| 10% level                              | -2.614300   |        |

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

## INT AT LEVEL

Null Hypothesis: LNINTR has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -2.633749   | 0.0963 |
| Test critical values: 1% level         | -3.639407   |        |
| 5% level                               | -2.951125   |        |
| 10% level                              | -2.614300   |        |

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

## **GEXP AT LEVEL**

Null Hypothesis: LNGEXP has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=8)

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|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -2.948221   | 0.0506 |
| Test critical values: 1% level         | -3.646342   |        |
| 5% level                               | -2.954021   |        |
| 10% level                              | -2.615817   |        |

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

## **UNIT ROOT AT FIRST DIFFERENCE**

### **HCE AT FIRST DIFFERENCE**

Null Hypothesis: D(LNHCE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

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|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -3.838297   | 0.0062 |

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|                       |           |           |
|-----------------------|-----------|-----------|
| Test critical values: | 1% level  | -3.646342 |
|                       | 5% level  | -2.954021 |
|                       | 10% level | -2.615817 |

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

### **INF AT FIRST DIFFERENCE**

Null Hypothesis: D(LNINF\_\_RATE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

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|  | t-Statistic | Prob.*    |
|--|-------------|-----------|
| Augmented Dickey-Fuller test statistic | -6.589989   | 0.0000    |
| Test critical values:                  |             |           |
|  | 1% level    | -3.646342 |
|  | 5% level    | -2.954021 |
|  | 10% level   | -2.615817 |

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

### **UNEMP AT FIRST DIFFERENCE**

Null Hypothesis: D(LNUNEMP\_\_RATE) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=8)

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

|  |           |           |        |
|--|-----------|-----------|--------|
| Augmented Dickey-Fuller test statistic |           | -3.483466 | 0.5290 |
| Test critical values:                  | 1% level  | -3.653730 |        |
|  | 5% level  | -2.957110 |        |
|  | 10% level | -2.617434 |        |

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

### EXR AT FIRST DIFFERENCE

Null Hypothesis: D(LNEX\_\_RATE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

|  |           | t-Statistic | Prob.* |
|--|-----------|-------------|--------|
| Augmented Dickey-Fuller test statistic |           | -5.726601   | 0.0000 |
| Test critical values:                  | 1% level  | -3.646342   |        |
|  | 5% level  | -2.954021   |        |
|  | 10% level | -2.615817   |        |

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

### INT AT FIRST DIFFERENCE

Null Hypothesis: D(LNINTR) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

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|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -6.875198   | 0.0000 |
| Test critical values: 1% level         | -3.646342   |        |
| 5% level                               | -2.954021   |        |
| 10% level                              | -2.615817   |        |

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

## **GEXP AT FIRST DIFFERENCE**

Null Hypothesis: D(LNGEXP) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=8)

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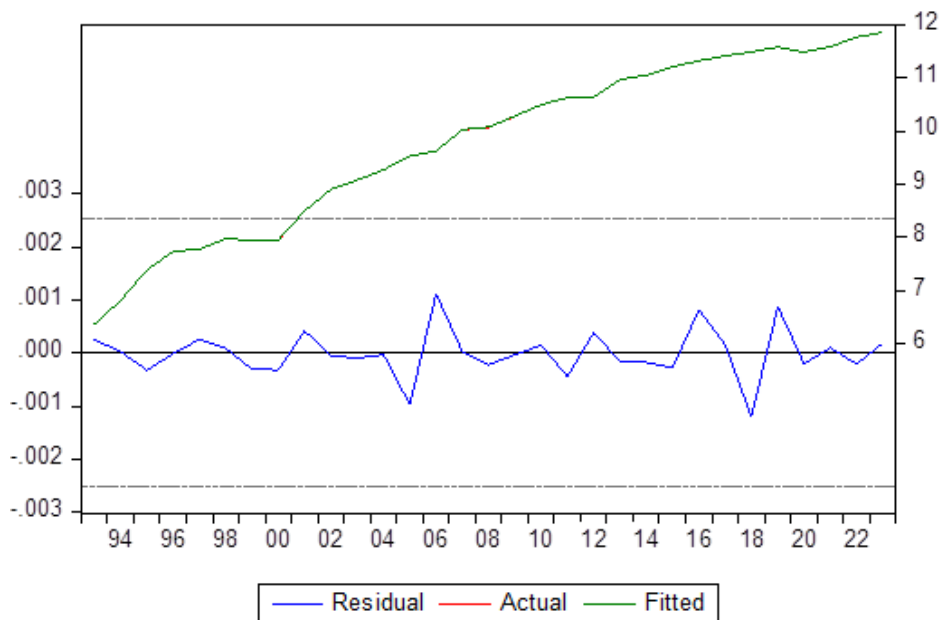
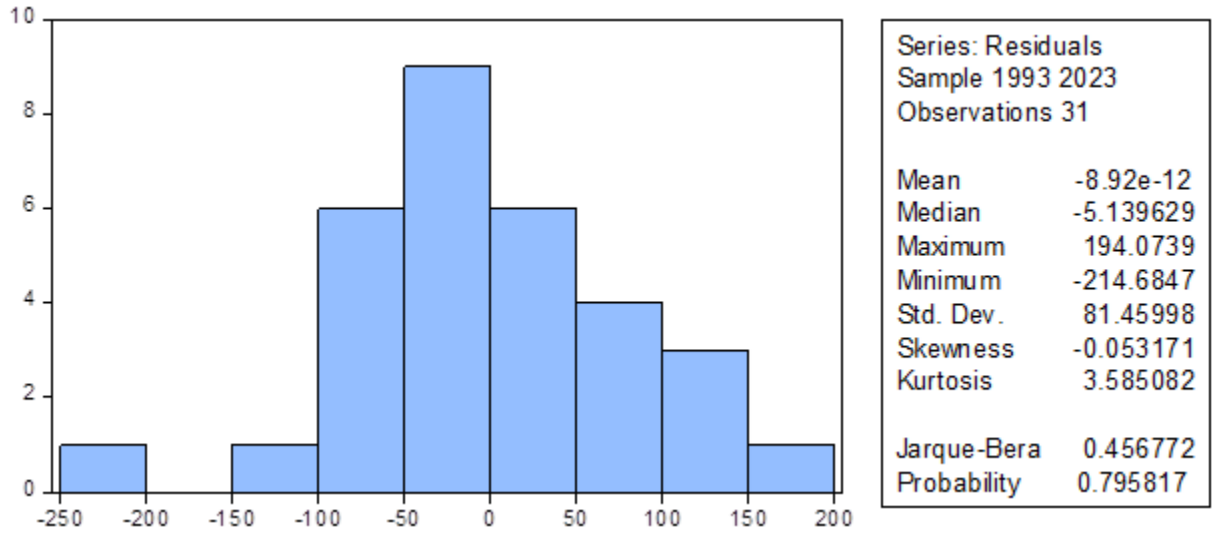
---

|  | t-Statistic | Prob.* |
|--|-------------|--------|
| Augmented Dickey-Fuller test statistic | -8.565381   | 0.0000 |
| Test critical values: 1% level         | -3.646342   |        |
| 5% level                               | -2.954021   |        |
| 10% level                              | -2.615817   |        |

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



## LONG RUN AND BOUNDS TEST

ARDL Long Run Form and Bounds Test

Dependent Variable: D(LNHCE)

Selected Model: ARDL(1, 1, 1, 1, 1, 1)

Case 2: Restricted Constant and No Trend

Date: 09/09/25 Time: 08:58

Sample: 1989 2023

Included observations: 34

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### Conditional Error Correction Regression

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| Variable          | Coefficient | Std. Error | t-Statistic | Prob.  |
|-------------------|-------------|------------|-------------|--------|
| C                 | 1.144260    | 0.391840   | 2.920220    | 0.0079 |
| LNHCE(-1)*        | -0.058061   | 0.124034   | -0.468107   | 0.6443 |
| LNGEXP(-1)        | -0.145063   | 0.176227   | -0.823156   | 0.4193 |
| LNEX__RATE(-1)    | 0.206641    | 0.078754   | 2.623874    | 0.0155 |
| LNINF__RATE(-1)   | 0.090717    | 0.046142   | 1.966034    | 0.0620 |
| LNINTR(-1)        | -0.153234   | 0.103775   | -1.476595   | 0.1540 |
| LNUNEMP__RATE(-1) | -0.059352   | 0.207163   | -0.286500   | 0.7772 |
| D(LNGEXP)         | -0.109965   | 0.164691   | -0.667704   | 0.5113 |
| D(LNEX__RATE)     | 0.009654    | 0.103720   | 0.093081    | 0.9267 |
| D(LNINF__RATE)    | 0.108452    | 0.045323   | 2.392848    | 0.0257 |
| D(LNINTR)         | -0.009870   | 0.126572   | -0.077975   | 0.9386 |

D(LNUNEMP\_\_RATE) -0.258842 0.328628 -0.787643 0.4393

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\* p-value incompatible with t-Bounds distribution.

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Levels Equation

Case 2: Restricted Constant and No Trend

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| Variable      | Coefficient | Std. Error | t-Statistic | Prob.  |
|---------------|-------------|------------|-------------|--------|
| LNEXP         | -2.498436   | 8.244020   | -0.303060   | 0.7647 |
| LNEX__RATE    | 3.559005    | 7.913761   | 0.449724    | 0.6573 |
| LNINF__RATE   | 1.562437    | 3.247709   | 0.481089    | 0.6352 |
| LNINTR        | -2.639167   | 5.858749   | -0.450466   | 0.6568 |
| LNUNEMP__RATE | -1.022231   | 4.433301   | -0.230580   | 0.8198 |
| C             | 19.70778    | 43.69660   | 0.451014    | 0.6564 |

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EC = LNHCE - (-2.4984\*LNEXP + 3.5590\*LNEX\_\_RATE + 1.5624

\*LNINF\_\_RATE -2.6392\*LNINTR -1.0222\*LNUNEMP\_\_RATE +  
19.7078

)

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F-Bounds Test Null Hypothesis: No levels relationship

| Test Statistic     | Value    | Signif. | I(0)  | I(1)  |
|--------------------|----------|---------|-------|-------|
| Asymptotic:        |          |         |       |       |
| n=1000             |          |         |       |       |
| F-statistic        | 7.811291 | 10%     | 2.08  | 3     |
| k                  | 5        | 5%      | 2.39  | 3.38  |
|                    |          | 2.5%    | 2.7   | 3.73  |
|                    |          | 1%      | 3.06  | 4.15  |
| Finite             |          |         |       |       |
| Sample:            |          |         |       |       |
| Actual Sample Size | 34       |         | n=35  |       |
|                    |          | 10%     | 2.331 | 3.417 |
|                    |          | 5%      | 2.804 | 4.013 |
|                    |          | 1%      | 3.9   | 5.419 |
| Finite             |          |         |       |       |
| Sample:            |          |         |       |       |
|                    |          |         | n=30  |       |
|                    |          | 10%     | 2.407 | 3.517 |
|                    |          | 5%      | 2.91  | 4.193 |
|                    |          | 1%      | 4.134 | 5.761 |

## ECM TEST

ARDL Error Correction Regression

Dependent Variable: D(LNHCE)

Selected Model: ARDL(1, 1, 1, 1, 1, 1)

Case 2: Restricted Constant and No Trend

Date: 09/09/25 Time: 08:49

Sample: 1989 2023

Included observations: 34

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### ECM Regression

Case 2: Restricted Constant and No Trend

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| Variable         | Coefficient | Std. Error | t-Statistic | Prob.  |
|------------------|-------------|------------|-------------|--------|
| D(LNGEXP)        | -0.109965   | 0.128498   | -0.855774   | 0.4013 |
| D(LNEX__RATE)    | 0.009654    | 0.060795   | 0.158802    | 0.8753 |
| D(LNINF__RATE)   | 0.108452    | 0.033000   | 3.286424    | 0.0034 |
| D(LNINTR)        | -0.009870   | 0.097398   | -0.101332   | 0.9202 |
| D(LNUNEMP__RATE) | -0.258842   | 0.210083   | -1.232092   | 0.2309 |
| CointEq(-1)*     | -0.058061   | 0.006960   | -8.342152   | 0.0000 |

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|                    |          |                    |          |
|--------------------|----------|--------------------|----------|
| R-squared          | 0.693659 | Mean dependent var | 0.207280 |
| Adjusted R-squared | 0.638955 | S.D. dependent var | 0.173559 |

|                    |          |                       |           |
|--------------------|----------|-----------------------|-----------|
| S.E. of regression | 0.104287 | Akaike info criterion | -1.524564 |
| Sum squared resid  | 0.304519 | Schwarz criterion     | -1.255206 |
| Log likelihood     | 31.91758 | Hannan-Quinn criter.  | -1.432705 |
| Durbin-Watson stat | 2.371930 |                       |           |

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\* p-value incompatible with t-Bounds distribution.

Null Hypothesis: No levels  
F-Bounds Test relationship

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| Test Statistic | Value    | Signif. | I(0) | I(1) |
|----------------|----------|---------|------|------|
| F-statistic    | 7.811291 | 10%     | 2.08 | 3    |
| k              | 5        | 5%      | 2.39 | 3.38 |
|                |          | 2.5%    | 2.7  | 3.73 |
|                |          | 1%      | 3.06 | 4.15 |

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