

THE EFFECT OF INFLATION ON PURCHASING POWER AND SAVING CULTURE IN NIGERIA

Salami Suleiman PhD¹

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Makeri Simon Chamba²

^{1,2}Department of Accounting, Faculty of Management Sciences

Ahmadu Bello University, Zaria, 810211, Nigeria

+ Corresponding author: ssalami@abu.edu.ng; suleiman_salami@yahoo.com;
suleimanbinsalam@gmail.com +2347036425085

Abstract

Practical economic conditions in Nigeria over the past decade have been characterized by persistent inflationary pressures, rising living costs, and declining real household income, all of which have continued to weaken consumers' ability to maintain stable consumption and savings patterns. These macroeconomic challenges have raised concerns about how inflation influences household financial behavior, particularly in terms of purchasing power and saving culture. This study examined the effect of inflation on purchasing power and saving culture in Nigeria over the period 2010 to 2024. Three specific objectives guided the investigation: to evaluate how inflation has affected the purchasing power of Nigerian consumers; to assess the impact of inflation on the savings culture of individuals and households; and to examine how inflation has influenced the household savings-purchasing ratio. An ex-post facto research design was adopted, and annual secondary data on the inflation rate, real GDP per capita, gross domestic savings as a percentage of GDP, and the savings-purchasing ratio were sourced from the Central Bank of Nigeria Statistical Bulletin, the National Bureau of Statistics, and the World Bank World Development Indicators. Ordinary Least Squares regression analysis was employed to estimate three separate models corresponding to each research hypothesis. Regression results showed that inflation has a significant negative effect on purchasing power, saving culture and household savings-purchasing ratio. The study concluded that persistent inflation systematically erodes household purchasing capacity and weakens saving culture in Nigeria. It recommended stronger monetary policy commitment to price stability, supply-side fiscal interventions, and inflation-indexed savings products to protect household financial welfare.

Keywords: Inflation, purchasing power, saving culture, savings-purchasing ratio

1.0 Introduction

Purchasing power and savings culture form two essential pillars of household financial wellbeing. Purchasing power refers to the real value of income expressed in the quantity of goods and services that households can afford. Recent studies show that purchasing power declines when

general price levels rise faster than income, limiting households' ability to maintain their standard of living (World Bank, 2024; UNDP, 2023).

Evidence from Nigeria illustrates this relationship clearly. According to the World Bank (2024), persistent inflation and rising

living costs have significantly eroded the purchasing power of households, contributing to an increase in the proportion of Nigerians living below the national poverty line from 40.1% in 2018 to an estimated 56.0% in 2024. The report further estimates that approximately 129 million Nigerians were living in poverty in 2024, reflecting the growing difficulty households face in meeting consumption needs as prices rise faster than incomes. Under such conditions, a larger share of household income is devoted to essential consumption, particularly food, transportation, and energy, leaving less disposable income available for saving.

Similarly, savings culture reflects the behavior, attitudes, and capacity of individuals or households to set aside part of their income for future consumption, investment, or financial security. Research conducted within the last five years highlights that a strong savings culture enhances resilience against economic shocks and facilitates capital formation (Agbasi & Onoh, 2024; Rius & Román, 2021). Empirical evidence from OECD countries further demonstrates the importance of household saving behaviors. OECD statistics indicate that household saving rates averaged approximately 14.3% of disposable income in 2020 during the COVID-19 period before moderating to about 11.7% in 2022 and 11.2% in 2023 as households adjusted to inflationary pressures and increased consumption expenditure (OECD, 2024).

These trends suggest that while households may increase precautionary savings during periods of uncertainty, sustained inflation and reductions in purchasing power often weaken their capacity to maintain such savings over time. Consequently, purchasing power and savings culture remain closely interconnected determinants of household financial stability and long-term economic wellbeing.

In Nigeria, both purchasing power and savings culture have been under significant pressure. Despite being one of Africa's largest economies, the country has experienced persistent erosion of real household income and declining savings capacity, particularly over the last decade. Rising living costs have forced many households to allocate a larger share of income to consumption, often leaving little or no room for savings (BusinessDay, 2023). This dynamic indicates a weakening savings consumption balance, a trend measurable through the household savings-consumption ratio, which serves as a proxy for both savings culture and purchasing power.

The primary economic factor influencing these outcomes is inflation. Inflation represents the sustained increase in general price levels and remains one of Nigeria's most persistent macroeconomic challenges. Recent evidence shows that Nigeria has experienced recurrent double-digit inflation between 2010 and 2024, resulting in a significant reduction in households' real purchasing capacity (World Bank, 2024; Guardian News, 2023). High inflation also

distorts the incentives to save, as the real value of money held in savings deteriorates rapidly (Ademola & Ubale, 2025).

The interaction between inflation, purchasing power, and savings culture is therefore crucial. Rising inflation directly reduces purchasing power by increasing consumption costs, and indirectly weakens savings culture by reducing disposable income and discouraging long term financial planning. However, despite these clear relationships, existing studies tend to examine either inflation and consumption, or inflation and savings, without integrating both outcomes within a unified framework. Additionally, few studies incorporate household savings-consumption ratio to capture the combined behavioral response of households under inflationary pressure.

Given Nigeria's ongoing inflationary challenges and the scarcity of integrated empirical evidence, it becomes important to analyze how inflation simultaneously affects purchasing power, savings culture, and the balance between savings and consumption. Understanding these linkages will provide more comprehensive insights for policy formulation, financial planning, and macroeconomic stability.

Although Nigeria has experienced sustained economic growth in previous years, persistent inflation has remained a major threat to household welfare. Between 2010 and 2024, inflation consistently remained above single digits, peaking at 28.20% in 2023 the highest in nearly two decades

(NBS, 2023; World Bank, 2024). As prices rise rapidly, households face diminishing purchasing power, making it increasingly difficult to afford basic necessities. This decline in real income has forced many households to priorities consumption over savings.

Despite this, the central problem confronting Nigeria remains largely unexplored in academic research: How inflation simultaneously weakens purchasing power and erodes the savings culture of households over time. While numerous studies examine the effects of inflation on consumption (Osuji, 2020) and others assess inflation's impact on savings behavior (Agbasi & Onoh, 2024), few attempt to analyze both dimensions together. The consequence is a fragmented understanding that fails to reveal how inflation reshapes household financial behavior holistically.

Furthermore, existing literature often overlooks the role of a combined indicator such as the household savings-consumption ratio, which captures the trade-off households make between spending and saving under inflationary pressure. Recent inflationary episodes driven by currency depreciation, fuel subsidy reforms, supply-side constraints, and global economic disruptions remain insufficiently examined, particularly within the Nigerian context. The inflation dynamics observed in Nigeria over the last few years underscore the importance of this gap. Headline inflation accelerated to 33.2% in 2024, the highest level in decades, largely due to exchange rate depreciation,

rising energy costs, and food supply disruptions (World Bank, 2025).

Although inflation moderated to about 23.0% in 2025 following tighter monetary policy and relative exchange-rate stability, household welfare remained under pressure and an estimated seven million additional Nigerians fell below the national poverty line during the year (World Bank, 2026). While early 2026 data suggest a gradual easing in inflationary pressures, food and energy costs continue to exert significant pressure on household budgets, thereby influencing consumption decisions and reducing the capacity of many households to save (Financial Market Dealers Association [FMDA], 2026).

These developments have important implications for household financial behaviors. As the cost of essential goods and services rises, households are often compelled to allocate a larger proportion of their income to current consumption while reducing precautionary and long-term savings. Consequently, the balance between savings and consumption becomes increasingly sensitive to inflationary shocks. Despite the significance of this relationship, empirical studies in Nigeria have largely examined purchasing power, consumption, and savings as separate phenomena rather than as interconnected outcomes of inflationary pressure.

Therefore, the problem this study seeks to solve is the lack of integrated empirical evidence on how inflation affects purchasing

power, savings culture, and the balance between household savings and consumption in Nigeria between 2010 and 2024. Addressing this gap is essential for designing targeted policies aimed at protecting household welfare, improving real income retention, and strengthening domestic savings mobilization.

2.0 Literature Review and Hypothesis Development

The concepts of purchasing power, saving culture, and inflation are central to understanding household economic behavior, especially in inflation - prone economies like Nigeria. **Purchasing power** reflects the real value of income and determines the quantity of goods and services households can afford. **Saving culture** captures the behavioral, psychological, and institutional patterns that influence households' decisions to save over time. **Inflation**, on the other hand, represents a sustained rise in the general price level that erodes the real value of money. Examining the interaction among these concepts provides important insight into how inflation shapes household purchase, savings behavior, and long-term financial planning.

2.1 Concept of Purchasing Power

Purchasing power is commonly defined in terms of income value and price movements. Samuelson and Nordhaus (2019) describe it as the quantity of goods and services that can be purchased with a unit of currency, highlighting the effect of price changes, though this definition does not explicitly

account for how households respond behaviorally to rising costs. Mankiw (2020) focuses on the real value of money after adjusting for inflation, but this view overlooks structural factors such as exchange - rate volatility and wage rigidity, which are common in developing countries. From a behavioral standpoint, Iyadi and Sado (2023) emphasize households' ability to maintain consumption levels amid fluctuating prices, although broader macroeconomic influences are underplayed. **Drawing from these perspectives, this study defines purchasing power as the real capacity of Nigerian households to acquire goods and services after accounting for inflation, income stability, and market price fluctuations.**

2.2 Concept of Saving Culture

Saving culture refers to the behavioral patterns and attitudes that influence individuals' willingness and ability to save. Adelakun (2015) defines it as the propensity of households to set aside part of their income for future use, emphasizing intention but insufficiently accounting for external constraints like inflation. Chuba and Ebbotemhen (2019) describe saving culture as the systematic accumulation of financial resources over time, which highlights consistency but downplays psychological and economic barriers. Osundina and Osundina (2015) view saving culture as a function of financial knowledge, access to banking services, and personal discipline, yet this perspective does not fully incorporate macroeconomic risks such as currency depreciation. **In this study, saving**

culture is understood as the combination of behavioral tendencies, financial literacy, economic conditions, and institutional factors that influence how Nigerian households save, either regularly or sporadically.

2.3 Concept of Inflation

Inflation has been defined in multiple ways in economic literature. Blanchard (2017) defines it as a sustained increase in the general price level of goods and services, but this definition does not account for sectoral variations in price movements. Akinbobola (2012) views inflation as a macroeconomic distortion arising from monetary expansion and exchange-rate pressures, focusing narrowly on monetary causes. Cynthia (2018) describes inflation as a situation where rising prices reduce real interest rates, discouraging savings, a perspective useful for banking studies but less comprehensive regarding household welfare. **Accordingly, this study defines inflation as a persistent rise in the prices of goods and services in Nigeria, driven by monetary, structural, and supply-side pressures, which reduces purchasing power and lowers real savings**

2.4 Conceptual Framework

The conceptual framework illustrates how inflation affects both purchasing power and household saving behavior through multiple, interrelated channels. First, **inflation erodes real income**, reducing households' disposable resources and limiting their ability to save. Second, **price instability prompts consumption adjustments**, as

rising prices force households to prioritize essentials while curbing demand for non-essential items. Third, **negative real interest rates** arise when inflation exceeds nominal deposit rates, discouraging formal savings and weakening overall saving culture. Fourth, **exchange rate pass-through** amplifies inflation, as currency depreciation increases the cost of imported goods and further reduces purchasing power.

Finally, households respond through **behavioral adaptations**, often turning to informal savings mechanisms or short-term consumption strategies to cope with uncertainty and protect their financial well-being. Collectively, these channels provide a foundation for analyzing how inflation shapes purchasing power and household saving behavior in Nigeria, incorporating both economic and behavioral dimensions.

2.5 Empirical Review

2.5.1 Inflation and Purchasing Power

Inflation has been widely recognized as a critical factor affecting household welfare and purchasing power. Akinbola (2012) examined the impact of inflation on household real income and purchasing power in Nigeria. Using annual time-series data spanning 1986 - 2008, the study applied a Vector Autoregressive (VAR) model to analyze the dynamic relationship between inflation and real income. The findings indicated that inflation significantly reduces real household income, thereby weakening purchasing power. The study concluded that persistent inflation erodes the real value of

income, limiting households' ability to afford essential goods and services. However, the use of older data may not adequately reflect recent macroeconomic trends, prompting the recommendation for stronger inflation-control measures.

Similarly, Iyadi and Sado (2023) investigated how inflation affects household purchasing behavior and expenditure patterns in Nigeria. The study examined inflation and household expenditure patterns as the main variables. Household survey data were collected from three Nigerian states and analyzed using descriptive statistics and regression techniques. The findings revealed that inflationary pressures compel households to reduce non-essential expenditures in order to cope with rising prices. The study concluded that inflation significantly alters household consumption behavior as households adjust their spending patterns to maintain basic consumption. One limitation of the study is that rural households were excluded, which limits the generalizability of the findings. The authors therefore recommended the implementation of policies that stabilize prices and improve household income levels.

In another related study, Ogunlesi and Adebayo (2019) examined the indirect relationship between exchange-rate depreciation, inflation, and household purchasing power in Nigeria. The variables considered included exchange rate, inflation rate, and purchasing power. Annual time-series data spanning 1980 - 2017 were analyzed using the Autoregressive

Distributed Lag (ARDL) model. The findings showed that exchange-rate depreciation significantly increases inflation, which subsequently weakens consumer purchasing power. The study concluded that macroeconomic instability transmitted through exchange-rate fluctuations can intensify inflationary pressures and reduce household purchasing capacity. However, the study did not explicitly account for structural breaks such as the 2016 economic recession. The authors recommended exchange-rate stabilization policies as a means of mitigating inflationary pressures.

Emughedi (2025) examined the effect of petrol price increases on household purchasing power. The study considered fuel prices, real income, household spending, and savings capacity as the major variables. Primary data were collected from households in Ibadan South - West Local Government Area and analyzed using survey analysis and regression techniques. The results indicated that petrol price increases significantly reduce real income and weaken household purchasing power. The study concluded that price shocks in fuel markets have strong spillover effects on household welfare. A limitation of the study is that it was geographically restricted to a single local government area, thereby limiting wider generalization. The study recommended policies aimed at cushioning households from the adverse effects of fuel price increases.

Furthermore, Ademola and Ubale (2025) examined the impact of inflation on

household living standards in Nigeria. The variables examined included inflation and household standard of living. The study utilized time-series data spanning 1981 - 2023 and employed the Autoregressive Distributed Lag (ARDL) model for analysis. The findings revealed that inflation significantly reduces real income and deteriorates household living standards. The study concluded that persistent inflation negatively affects household welfare in Nigeria. However, the study did not explicitly analyze purchasing power in relation to household saving behaviour. The authors recommended stronger macroeconomic policies aimed at stabilizing prices.

From a more recent perspective, Ayodele Sunday Gbenga, Osunaiye David Solomon, Joseph Paul, and Adewale Adegioriola (2024) analyzed inflation and household consumption in Nigeria. Regression results indicated that GDP growth positively affects consumption, while inflation and interest rates negatively impact household purchasing capacity by raising the cost of living and borrowing. However, the study focuses primarily on consumption and does not examine the implications for household savings.

Internationally, Lloyd (2024) used World Bank cross-country data (2000 - 2022) to show that inflation disproportionately reduces low-income households' purchasing power. Despite providing comparative insights, cross-country aggregation masks Nigeria-specific dynamics. Likewise,

Kehinde (2025) reported that persistent inflation in Sub-Saharan Africa erodes purchasing power and suppresses consumption, particularly among low-income households, though country-specific implications for Nigeria remain underexplored.

Collectively, these studies confirm that inflation consistently undermines household purchasing power in Nigeria. Most prior research, however, emphasizes consumption and welfare outcomes, with limited attention to how reduced purchasing power affects household savings behaviour. This presents a clear research gap that this study addresses. From the foregoing, it is hypothesized that:

H_{01} : Inflation has no significant effect on the purchasing power of Nigerian consumers.

2.5.2 Inflation and Savings Culture

Adelakun (2015) examined the effect of inflation on domestic savings in Nigeria. The study focused on inflation rate and domestic savings as the principal variables. Time-series data covering the period 1980–2013 were analyzed using the Ordinary Least Squares (OLS) regression technique. The findings indicated that inflation has a significant negative relationship with domestic savings. The study concluded that rising prices reduce the real value of savings and discourage saving behavior. A major limitation of the study is that the use of OLS with time-series data may lead to spurious regression results if the variables are non-

stationary. The study therefore recommended the implementation of policies aimed at maintaining price stability in order to encourage savings.

Similarly, Chuba and Ebbotemhen (2019) analyzed the relationship between inflation and national savings in Nigeria. The variables examined were inflation and national savings. The study used time-series data covering 1981–2017 and applied the Error Correction Model (ECM) for analysis. The results revealed that inflation significantly reduces national savings in both the short run and the long run. The study concluded that high inflation discourages savings by eroding the real value of money. However, the study relied on aggregate data, which limits insights into household-level saving behavior. The authors recommended stronger inflation control policies to improve savings rates.

In another study, Osundina and Osundina (2015) investigated how inflation affects saving behavior among households. The variables considered included inflation and household saving behavior. Primary survey data were collected from households in Oyo State and analyzed using descriptive statistical techniques. The findings revealed that inflation discourages both formal and informal saving practices. The study concluded that rising prices reduce households' willingness and ability to save. The study was limited by its geographical scope, which restricts national generalization. The authors recommended

strengthening financial inclusion and stabilizing prices to encourage savings.

At the micro level, Ademola, Kazeem, and Oladejo (2024) examined savings among women entrepreneurs, finding that income, education, financial literacy, and access to financial services enhance saving capacity, while larger household size reduces it. Yet, the study did not assess inflation as a determinant of saving behavior. Likewise, Obiukwu and Adurogboye (2025) used Structural Equation Modelling (SEM) to show that inflation indirectly reduces household savings by negatively affecting SME income, though causality between SME performance and household savings remained unclear.

Longitudinal and international evidence further supports the inflation savings link. Amassoma *et al.* (2018) reported that inflation reduces disposable income, thereby lowering savings, while cross-country studies (Agenor *et al.*, 2000; Ngalawa *et al.*, 2017; Mwase *et al.*, 2020) similarly found that inflation discourages saving behavior. However, cross - country analyses often overlook Nigeria specific structural and institutional characteristics, underscoring the need for country-level investigation.

The IMF (2022) highlighted that persistent inflation substantially reduces household savings in Nigeria, particularly among low and middle income groups, though household level heterogeneity across income groups and regions was not captured. Recent Nigeria-specific studies, such as Osuji

(2020), showed that inflation alters consumption patterns and limits households' ability to allocate income toward savings. Despite this, empirical research linking inflation, purchasing power, and household saving behavior simultaneously remains limited.

H_0 2 : Inflation has no significant impact on the savings culture of individuals and households in Nigeria.

2.5.3 Inflation and Household Savings - Purchasing Dynamics

Several studies have analyzed the interaction between inflation, household consumption, and savings behavior. Eneji and Olabode (2022) examined the effect of inflation on the balance between household savings and consumption. The study analyzed inflation, household savings, and household consumption using household - level panel data from selected Nigerian states. Panel econometric techniques were employed for the analysis. The findings showed that inflation reduces households' ability to save and shifts consumption toward basic necessities. The study concluded that inflation forces households to prioritize immediate consumption over long-term financial planning. However, the study covered only selected states, which limits its national representativeness. The authors recommended policies aimed at stabilizing prices and improving household income.

Likewise, Ojo and Shittu (2020) assessed the welfare effects of inflation on households in Nigeria. The study considered

inflation, household consumption, and savings as the major variables. Macroeconomic data were analyzed using a Computable General Equilibrium (CGE) model. The findings revealed that inflation reduces real consumption and discourages household savings. The study concluded that inflation negatively affects household welfare and financial stability. A limitation of the study is that CGE models rely on strong assumptions that may not fully reflect actual household behavior. The authors recommended strengthening macroeconomic stabilization policies.

Similarly, Patrick (2024) examined the combined effects of taxation and inflation on household consumption in Nigeria. The study considered inflation, taxation, and household consumption using time-series data covering the period 1983 - 2023. The Autoregressive Distributed Lag (ARDL) model was employed for the analysis. The findings indicated that inflation significantly reduces household consumption in the long run. The study concluded that persistent inflation weakens real income and affects household financial decisions. However, the study did not explicitly examine the savings - purchasing relationship. The author recommended fiscal and monetary policies aimed at controlling inflation.

Ayebaemi and Amaegberi (2025) demonstrated that inflation reshapes household income allocation between consumption and savings, reinforcing the notion that households often sacrifice savings to meet immediate needs. These

findings, along with those of prior studies, indicate that inflation significantly alters savings - consumption dynamics in Nigeria. From the foregoing, it is therefore hypothesized that:

H_{03} : Inflation has no significant effect on the household savings - consumption ratio in Nigeria between 2010 and 2024

2.6 Theoretical Framework

The research framework is grounded in Keynesian Theory of Consumption and Savings, which posits that household income is allocated between consumption and savings. According to Keynes (1936), consumption expenditure is primarily determined by current disposable income, while savings represent the residual portion of income not consumed. The theory further suggests that changes in economic conditions can alter household consumption and saving decisions.

In the context of this study, inflation serves as a major economic condition that influences household behavior. Rising prices reduce the real value of income and weaken purchasing power, making it more difficult for households to maintain previous levels of consumption. To preserve living standards, households may reduce savings or increase current expenditure on essential goods and services. This outcome is consistent with Keynes' proposition that consumption tends to remain relatively stable even when real income declines, causing savings to absorb a larger share of the adjustment.

The theory also supports the relationship between inflation and savings culture. As inflation erodes the real value of money and lowers the real return on savings, households become less motivated to defer consumption. Consequently, saving behavior may weaken as individuals prioritize present consumption over future financial accumulation. This tendency aligns with Keynes' liquidity preference argument, which suggests that uncertainty regarding future prices encourages individuals to hold

fewer financial savings and spend more in the present.

Accordingly, Keynesian Theory provides the theoretical basis for examining how inflation influences purchasing power, savings culture, and the household savings-consumption ratio in Nigeria. The theory explains why persistent inflation may reduce purchasing power, weaken savings behavior, and alter the balance between household savings and consumption.

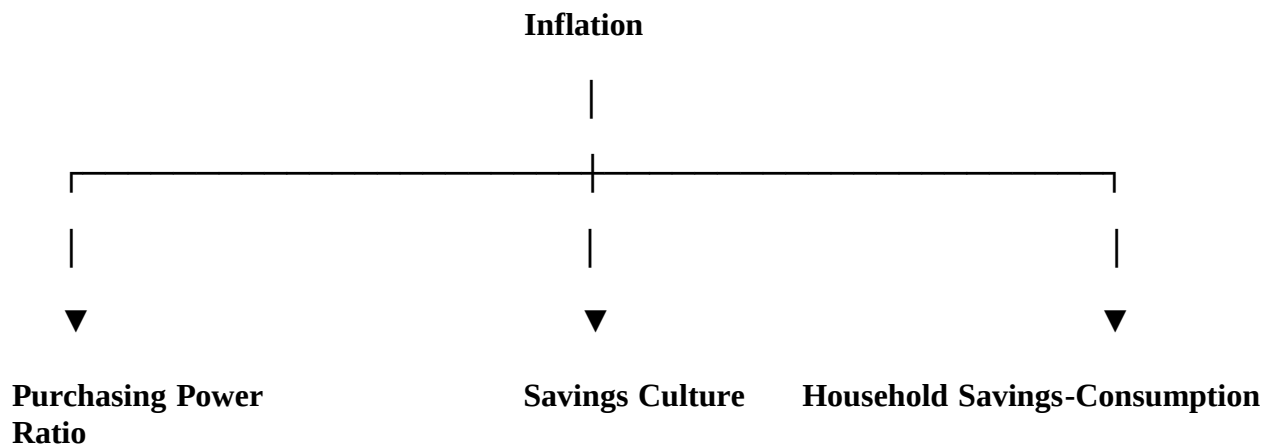


Figure 2.1: Theoretical Framework

3.0

Research Methodology

This study employs an ex-post facto research design. The choice of this design is informed by the nature of the variables under investigation, namely inflation, purchasing power, savings culture, and household savings-consumption ratio. These variables already exist and cannot be influenced or controlled by the researcher. Consequently, the study examines historical data to determine the relationships among

the variables within the period covered. The use of historical secondary data to examine relationships among financial and economic variables is consistent with previous Nigerian research that employed a correlational design using panel data to investigate the relationship between credit quality and financial performance (Bello & Umar, 2019).

The study relies on secondary data obtained from official and widely recognized sources. Data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, the National Bureau of Statistics (NBS), and the World Bank's World Development Indicators (WDI). The use of secondary data obtained from authoritative institutional sources is consistent with the approach adopted by Bello and Umar (2019), who relied on data from banks' annual reports and the Central Bank of Nigeria. These sources were chosen because they provide reliable and consistent macroeconomic data required for the analysis.

3.1 Population of the Study

The population for this study consists of all annual macroeconomic data relating to inflation, purchasing power, household savings, and household consumption in Nigeria. It includes all available yearly observations published by relevant

government agencies and international organizations.

3.2 Sample Size

The sample comprises annual time-series data covering the period from 2010 to 2024. This gives a total of fifteen (15) yearly observations for each variable used in the study. The period was selected because it provides sufficient data for assessing the effect of inflation on household economic behavior in Nigeria.

3.3 Sampling Technique

The study adopts a census approach, whereby all available annual observations within the period 2010–2024 are included in the analysis. Since the study makes use of the complete set of data for the specified period, no further sampling was required. The selected period covers important economic developments in Nigeria and provides adequate information for achieving the objectives of the study.

Table 3.1: Sources of Data

Data Source	Institution	Type of Data Provided	Relevance to the Study
Central Bank of Nigeria Statistical Bulletin	Central Bank of Nigeria (CBN)	Inflation rate, interest rate, macroeconomic indicators	Provides official monetary and macroeconomic statistics used to analyze inflation trends in Nigeria
National Bureau of Statistics Publications	National Bureau of Statistics (NBS)	Household consumption, purchasing indicators, price index	Supplies national statistical data relevant to household welfare and purchasing power
World Bank World Development Indicators (WDI)	World Bank	International and national macroeconomic data such as inflation, savings, and consumption	Provides standardized global datasets used for validating and supplementing national statistics

To examine the effect of inflation on purchasing power and saving culture in Nigeria, the study specifies two simple linear regression models:

Model I:

$$PP = \beta_0 + \beta_1 INF + \mu$$

Model II:

$$SAV = \alpha_0 + \alpha_1 INF + \varepsilon$$

Model III:

$$SPR = \gamma_0 + \gamma_1 INF + v$$

where PP represents purchasing power, SAV denotes saving culture, SPR represents the household savings - purchasing ratio, INF is the inflation rate, β_0 , α_0 , and γ_0 are intercept terms, β_1 , α_1 , and γ_1 are slope coefficients, and μ , ε , and v are error terms.

Purchasing Power (PP) is proxied by real household final consumption expenditure per capita. This measure is derived from the World Bank's World Development Indicators (WDI) and is widely used as an indicator of household welfare and living standards (World Bank, 2025). Real household consumption expenditure reflects the quantity of goods and services consumed by households after adjusting for changes in price levels. It is considered an appropriate proxy for purchasing power because it captures households' ability to maintain consumption despite fluctuations in inflation and income.

Saving Culture (SAV) is proxied by Gross Domestic Savings (GDS) as a percentage of Gross Domestic Product (GDP), obtained from the World Development Indicators database. Gross domestic savings represent GDP less final consumption expenditure and provide an aggregate measure of saving behavior within an economy (World Bank, 2025). The proxy is adopted because consistent long-run household-level savings data for Nigeria are not readily available. Similar measures have been employed in macroeconomic studies examining savings behavior and economic performance (Loayza, Schmidt-Hebbel, & Servén, 2000).

The Household Savings - Purchasing Ratio (SPR) is measured as the ratio of Gross Domestic Savings to Real GDP per Capita, which serves as a proxy for purchasing power. Based on Keynesian consumption theory, income is allocated between consumption and savings (Keynes,

1936). The ratio reflects the balance between household saving behavior and purchasing capacity. Higher values indicate a greater tendency to save relative to purchasing power, while lower values suggest that more resources are directed toward current spending, leaving less for savings. The SPR therefore provides a useful measure of how inflation affects household financial behavior over time.

Inflation Rate (INF) is measured by the annual percentage change in the Consumer Price Index (CPI). This measure is consistent with the methodology employed by the National Bureau of Statistics (NBS), the Central Bank of Nigeria (CBN), the International Monetary Fund (IMF), and the World Bank. CPI-based inflation measures changes in the average prices of a basket of consumer goods and services and is therefore the most widely accepted indicator of changes in the cost of living and the erosion of purchasing power (International Monetary Fund, 2025; World Bank, 2025).

The study employs the Ordinary Least Squares (OLS) regression technique to estimate the specified models. OLS is one of the most widely used estimation methods in applied economic research because it provides estimates of the magnitude and direction of relationships among variables. The technique is particularly useful for examining the effect of inflation on purchasing power, saving behavior, and the household savings–consumption ratio.

The choice of OLS is further supported by the Gauss - Markov theorem, which states that OLS estimators are Best Linear Unbiased Estimators (BLUE) when the assumptions of the Classical Linear Regression Model are satisfied (Gujarati & Porter, 2009). Consequently, OLS is considered suitable for analyzing the relationships among the variables included in this study.

4.0 Results and Discussion

4.1 Data Presentation

Table 4.1 presents the annual values of all study variables for the period 2010 to 2024.

The inflation rate is expressed as the annual percentage change in the Consumer Price Index. Purchasing power is represented by real GDP per capita in United States dollars. Saving culture is proxied by gross domestic savings as a percentage of GDP. The savings-purchasing ratio is computed as the ratio of gross domestic savings to real household purchasing capacity, expressed as an index. These variables collectively capture the macroeconomic environment within which Nigerian households made consumption and savings decisions over the fifteen-year period under investigation.

Table 4.1: Annual Data on Inflation, Purchasing Power, Saving Culture, and Savings - Purchasing Ratio, Nigeria 2010 - 2024

Year	Inflation (INF) %	Rate	Purchasing Power (PP) USD	Saving (SAV) % of GDP	Culture	Savings Purchasing Ratio (SPR)
2010	13.72		2316	16.82		0.285
2011	10.84		2753	20.52		0.327
2012	12.22		2753	19.71		0.318
2013	8.50		2989	18.24		0.295
2014	8.06		3203	16.37		0.268
2015	9.01		2640	10.84		0.185
2016	15.68		2178	7.82		0.128
2017	16.52		1969	11.48		0.198
2018	11.44		2028	12.73		0.218
2019	11.98		2230	14.31		0.245
2020	13.25		2097	12.58		0.206
2021	17.01		2086	11.82		0.189
2022	19.64		2185	10.42		0.166
2023	24.66		1847	8.51		0.127
2024	32.70		1519	6.21		0.089

Note. Note. INF = Annual CPI change (NBS/CBN); PP = Real GDP per capita in USD (World Bank WDI); SAV = Gross domestic savings as % of GDP (CBN/WB); SPR = Ratio of gross domestic savings to inflation-adjusted household income.

Examining Table 4.1 reveals several important patterns. The inflation rate fluctuated considerably across the fifteen-year period, starting at 13.72% in 2010, declining to a low of 8.06% in 2014, and thereafter rising progressively to reach 32.70% by 2024. This upward trend in inflation, particularly from 2021 onwards, reflects the combined effects of the COVID - 19 pandemic, fuel subsidy removal, exchange rate unification, and structural

supply-side constraints that severely affected the Nigerian economy. Purchasing power, as measured by real GDP per capita, exhibited an inverse pattern, peaking at USD 3,203 in 2014 before declining substantially to USD 1,519 by 2024. This contraction of nearly 52.6% from its peak represents a profound deterioration in the real income of Nigerian households over the period and provides initial descriptive evidence of the inverse

relationship between inflation and purchasing power.

Saving culture, as measured by gross domestic savings as a percentage of GDP, also displayed a declining trend consistent with the expectation that rising inflation suppresses savings. The ratio peaked at 20.52% in 2011 and fell persistently to 6.21% by 2024, representing a decline of approximately 14.31 percentage points over the study period. This trajectory aligns with theoretical predictions from the Keynesian Theory of Consumption and the Life Cycle Hypothesis, which anticipate that households facing rising prices will consume a larger proportion of their income and reduce their savings propensity. The savings-purchasing ratio similarly declined from 0.327 in 2011 to a low of 0.089 in 2024, confirming that the balance between savings and purchasing capacity shifted progressively in favor of consumption as inflationary pressures intensified over the study period.

4.2 Trend Analysis of Study Variables

The trend analysis presented in this section provides a visual and descriptive account of how each variable evolved over the 2010 to 2024 period. Understanding the behavioral patterns of individual variables before

conducting multivariate regression analysis is important for identifying structural shifts, turning points, and co-movement patterns that may inform the interpretation of econometric results.

Figure 4.1 presents the trend in Nigeria's annual inflation rate from 2010 to 2024. The trajectory reveals three distinct phases. The first phase, spanning 2010 to 2015, was characterized by moderate inflation oscillating between 8% and 14%, with the lowest point of 8.06% recorded in 2014. This period coincided with relative macroeconomic stability, strong oil revenues, and relatively controlled monetary policy under the Goodluck Jonathan administration. The second phase, from 2016 to 2020, saw inflation escalate sharply to 15.68% in 2016, driven primarily by the 2016 economic recession triggered by the collapse in global oil prices, the adoption of a managed float exchange rate, and severe import-cost pass-through effects. The third and most severe phase, from 2021 to 2024, witnessed an unrelenting acceleration of inflation, culminating at 32.70% in 2024 the highest level in the entire study period. This period was marked by the COVID-19 economic disruptions, removal of fuel subsidies, naira devaluation, and cascading food and energy price shocks.

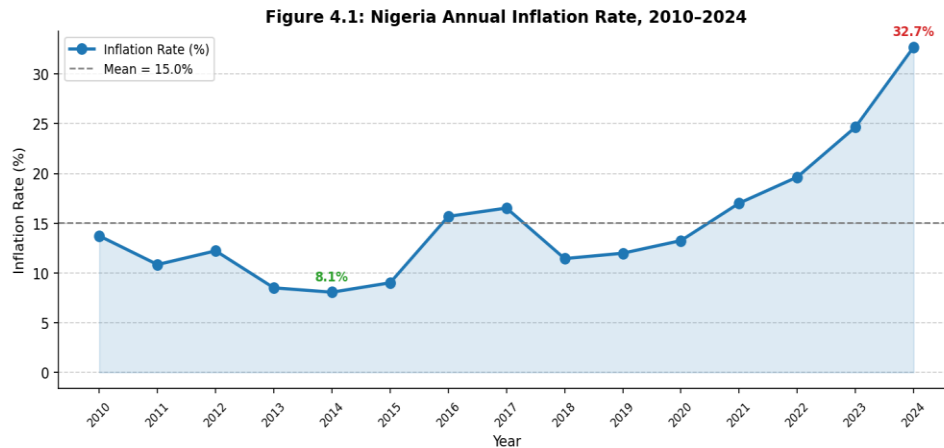


Figure 4.1: Nigeria Annual Inflation Rate, 2010 - 2024

Figure 4.2 displays the trend in real GDP per capita, which serves as the proxy for purchasing power. The figure reveals a broadly inverse relationship with the inflation trend. Purchasing power reached its highest level of USD 3,203 in 2014, reflecting the strong revenue inflows from elevated global oil prices that characterized that period. From 2015 onwards, real per capita income began a sustained decline, interrupted only by a slight recovery

between 2018 and 2022, before falling sharply to USD 1,519 in 2024. This represents the lowest purchasing power level in the entire study period and reflects the compounding effects of inflation, naira depreciation, and population growth on per capita real income. The sharp deterioration from 2022 to 2024 is particularly notable, occurring in the context of accelerating price levels that eroded whatever nominal income gains households may have achieved.

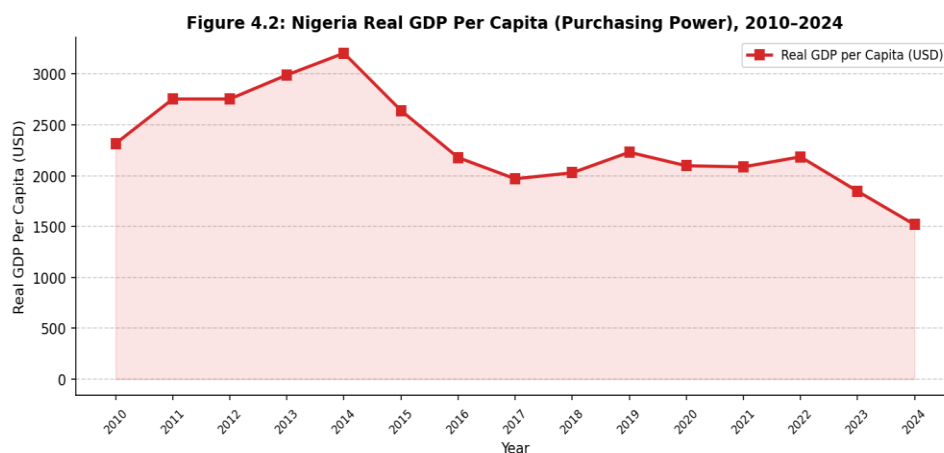


Figure 4.2: Nigeria Real GDP Per Capital (Purchasing Power), 2010 - 2024

Figure 4.3 presents the trend in gross domestic savings as a percentage of GDP, the proxy for saving culture. The bar chart clearly demonstrates a declining savings culture over the study period, with above mean values concentrated in the years 2010 to 2014 and below mean values dominating the period from 2015 to 2024. The peak saving rate of 20.52% in 2011 gave way to a relentless decline, reaching 6.21% by 2024 less than one third of the peak rate. This trajectory is consistent with the Keynesian

theoretical prediction that inflation, by reducing real disposable income, compresses the marginal propensity to save as households prioritize meeting immediate consumption needs. The dramatic collapse in savings after 2021 also aligns with the Friedman Uncertainty Hypothesis, which posits that high and volatile inflation discourages long-term saving by increasing macroeconomic uncertainty and eroding the expected real returns on savings instruments.

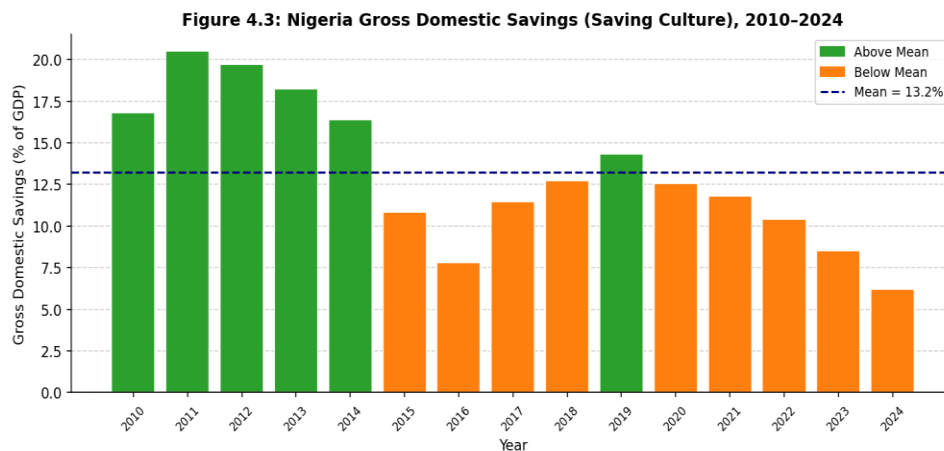


Figure 4.3: Nigeria Gross Domestic Savings (Saving Culture), 2010 - 2024

Figure 4.4 illustrates the trend in the household savings-purchasing ratio, which captures the evolving balance between savings capacity and purchasing power. The ratio peaked at 0.327 in 2011 and declined persistently to 0.089 in 2024, representing a reduction of approximately 72.8% from its peak. This decline indicates that Nigerian households became progressively less able to maintain savings relative to their purchasing commitments as inflationary

pressures accumulated. The near-continuous downward trajectory of the SPR from 2011 to 2024 confirms that inflation has fundamentally altered the allocation of household income, forcing a structural shift from savings toward consumption. Notably, the rate of decline accelerated markedly after 2020, coinciding with the intensification of inflationary pressures that followed the COVID-19 pandemic and the subsequent fuel subsidy removal.

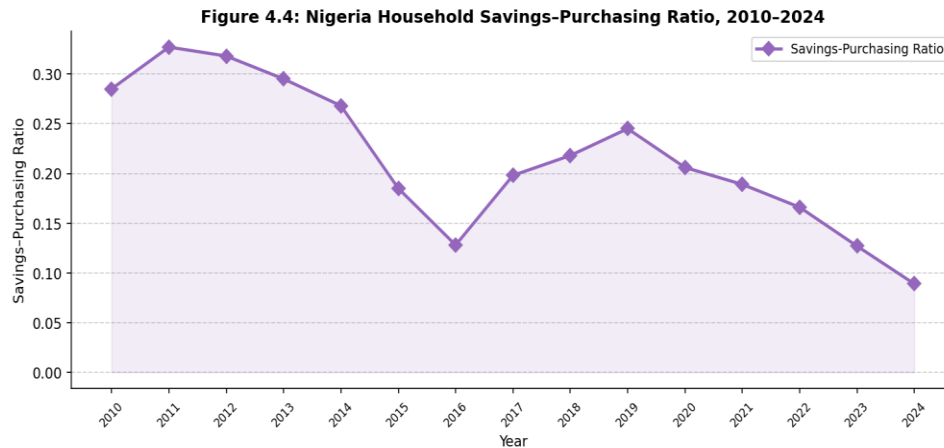


Figure 4.4: Nigeria Household Savings–Purchasing Ratio, 2010 - 2024

Figure 4.7 presents a combined visualization of the three key trends inflation, purchasing power, and the savings-purchasing ratio within a single frame to facilitate direct comparison of their co-movements over the study period. The chart confirms the visually apparent inverse relationship between inflation and both purchasing power and the savings ratio. As the blue inflation line

climbs steeply from 2020 to 2024, the purchasing power curve (red dashed) and the scaled savings ratio (purple dotted) both exhibits corresponding declines, providing initial visual support for the hypothesized relationships that are formally tested through regression analysis in subsequent sections.

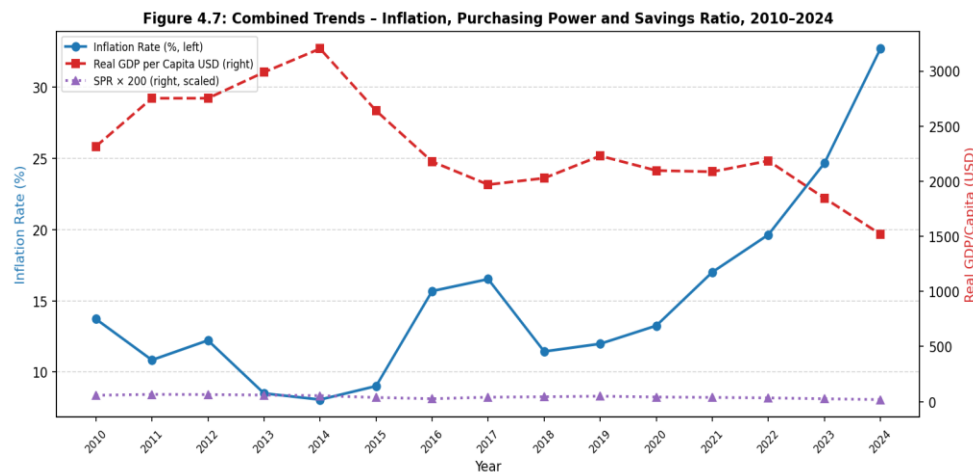


Figure 4.7: Combined Trends: Inflation, Purchasing Power and Savings Ratio, 2010 - 2024

4.3 Descriptive Statistics

Table 4.2 presents the descriptive statistics of all variables used in the study. These statistics summarize the central tendencies, variability, and range of each variable over the 2010 to 2024 period, providing

important context for interpreting the regression results. The statistics include the mean, standard deviation, minimum value, and maximum value for each variable based on 15 annual observations.

Table 4.2: Descriptive Statistics of Study Variables, Nigeria 2010 - 2024 (N = 15)

Variable	Mean	SD	Min	Max
INF	15.015	6.616	8.060	32.700
PP	2,319.53	457.43	1,519.00	3,203.00
SAV	13.225	4.345	6.210	20.520
SPR	0.216	0.073	0.089	0.327

Note. INF = Inflation rate % annual change in Consumer Price Index); PP = Purchasing power (real GDP per capita, USD); SAV = Gross domestic savings as % of GDP; SPR = Savings-purchasing ratio. SD = Standard deviation. Data sourced from the Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics, and World Development Indicators (2024).

The descriptive statistics in Table 4.2 reveal important characteristics of the study variables. The mean inflation rate over the study period was 15.015%, with a standard deviation of 6.616 percentage points, indicating considerable variability in price movements across the fifteen years. The wide range between the minimum of 8.06% in 2014 and the maximum of 32.70% in 2024 reflects the substantial inflationary episodes Nigeria experienced, driven by structural shocks, monetary expansion, and exchange rate depreciation. The high standard deviation relative to the mean underscores the volatility of inflation in Nigeria, which itself is a key driver of macroeconomic uncertainty with adverse implications for household savings behavior,

as predicted by the Friedman Uncertainty Hypothesis.

Purchasing power recorded a mean of USD 2,319.53 with a standard deviation of USD 457.43, reflecting moderate variability around the mean. The minimum value of USD 1,519.00 recorded in 2024 and the maximum of USD 3,203.00 in 2014 indicate a range of USD 1,684.00, representing a substantial decline in the real income of Nigerian households at the lower end of the distribution. This range highlights how severely real purchasing capacity has been compressed by inflationary pressures, particularly in recent years. The mean saving culture rate of 13.225% of GDP, with a standard deviation of 4.345 percentage

points, confirms that Nigeria's savings performance has been moderate and declining. The minimum value of 6.21% in 2024 is particularly concerning, as it suggests that gross domestic savings have fallen to less than one-third of the peak value of 20.52% recorded in 2011. The savings-purchasing ratio averaged 0.216 with a standard deviation of 0.073, and it range from 0.089 to 0.327 confirms that the ability of Nigerian households to maintain savings relative to their purchasing capacity deteriorated significantly over the study period, particularly during high-inflation years.

4.4 Correlation Analysis

Before proceeding to the OLS regression analysis, a Pearson correlation analysis is conducted to examine the bivariate linear relationships among the four study variables. The correlation matrix provides initial evidence about the direction and strength of associations between inflation and the three dependent variables, and also examines the inter-relationships among the dependent variables themselves. The results are presented in Table 4.3 and illustrated graphically.

Table 4.3: Pearson Correlation Matrix of Study Variables, Nigeria 2010 - 2024

Variable	INF	PP	SAV	SPR
INF	1.000	-0.806**	-0.709**	-0.756**
PP	-0.806**	1.000	0.771**	0.765**
SAV	-0.709**	0.771**	1.000	0.994**
SPR	-0.756**	0.765**	0.994**	1.000

Note. ** Correlation is significant at the 0.01 level (2-tailed). INF = Inflation rate; PP = Purchasing power (real GDP per capita USD); SAV = Saving culture (gross domestic savings % of GDP); SPR = Savings-purchasing ratio. N = 15.

The correlation matrix in Table 4.3 provides compelling preliminary evidence in support of all three research hypotheses. Inflation exhibits a strong negative correlation with purchasing power ($r = -0.806$, $p < 0.01$), indicating that years characterized by higher inflation rates were systematically associated with lower real per capita income. The magnitude of this correlation exceeding 0.80 - classifies this as a very strong negative linear relationship, providing strong initial support for the

proposition that inflation significantly erodes the purchasing capacity of Nigerian households. This finding is consistent with the theoretical predictions of the Quantity Theory of Money, which holds that excessive monetary expansion drives price inflation that proportionally diminishes the purchasing power of money.

Inflation also displays a strong negative correlation with saving culture ($r = -0.709$, $p < 0.01$), confirming that higher inflation

rates are associated with lower gross domestic savings as a proportion of GDP. While slightly weaker than the inflation-purchasing power correlation, this relationship remains statistically highly significant at the 1% level and provides empirical support for the Keynesian theoretical framework, which posits that inflation reduces real disposable income and thereby suppresses the marginal propensity to save. The negative correlation between inflation and the savings-purchasing ratio ($r = -0.756$, $p < 0.01$) is intermediate in strength, indicating that inflation not only reduces absolute savings but also worsens the balance between savings capacity and purchasing power, forcing households into progressively consumption-dominated income allocations.

Noteworthy is the extremely high positive correlation between saving culture and the savings-purchasing ratio ($r = 0.994$, $p < 0.01$), which reflects the definitional proximity of these two variables. Both are derived from gross domestic savings, with SAV expressing savings as a share of GDP and SPR expressing savings relative to household purchasing power. Both purchasing power and saving culture exhibit strong positive correlations with each other ($r = 0.771$, $p < 0.01$), confirming that these two household welfare indicators tend to move together, years of stronger purchasing capacity are also years of higher savings propensity, consistent with the Life Cycle Hypothesis prediction that higher real

incomes support greater savings accumulation.

4.5 OLS Regression Analysis

This section presents the results of the three OLS regression models estimated to formally test the research hypotheses. Each model examines the effect of the inflation rate on one dependent variable: purchasing power (Model I), saving culture (Model II), and the savings-purchasing ratio (Model III). For each model, results are presented in three tables: the Model Summary table reporting R^2 and adjusted R^2 ; the ANOVA table reporting the F-statistic and its significance; and the Coefficients table reporting the regression intercept, slope coefficient, standard error, t-statistic, and significance value. The results are interpreted at the 5% significance level, meaning that a p-value below 0.05 leads to rejection of the corresponding null hypothesis.

4.5.1 Model I: Effect of Inflation on Purchasing Power (H_{01})

H_{01} : Inflation has no significant effect on the purchasing power of Nigerian consumers.

Model I is specified as: $PP = \beta_0 + \beta_1 INF + \mu$. The estimation results for Model I are presented in Tables 4.4, 4.5, and 4.6 below. Figure 4.5 provides a scatter diagram with the fitted regression line to visualize the relationship between inflation and purchasing power.

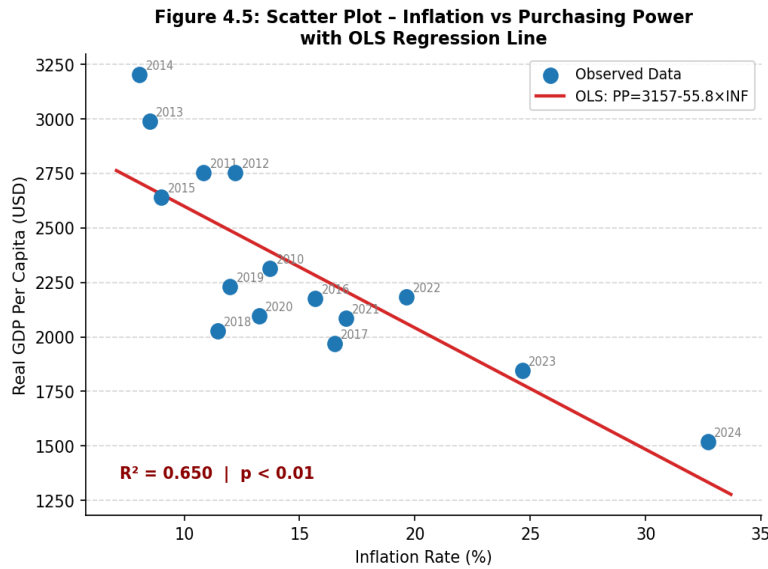


Figure 4.5: Scatter Plot: Inflation vs Purchasing Power with OLS Regression Line

Table 4.4: Model Summary - Effect of Inflation on Purchasing Power (Model I)

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
I	0.806	0.650	0.623	281.44

Note. Dependent Variable: Purchasing Power (PP). Independent Variable: Inflation Rate (INF). N = 15.

Table 4.5: ANOVA - Effect of Inflation on Purchasing Power (Model I)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	1,912,847.23	1	1,912,847.23	24.172	.000 ^a
Residual	1,030,067.44	13	79,235.96		
Total	2,942,914.67	14			

Note. ^a Predictors: Inflation Rate (INF). Dependent Variable: Purchasing Power (PP).

Table 4.6: OLS Regression Coefficients – Effect of Inflation on Purchasing Power (Model I)

Variable	B (Unstandardized)	Std. Error	Beta (Standardized)	t-statistic	Sig.
(Constant)	3,156.72	163.28		19.334	.000
Inflation Rate (INF)	-55.76	11.34	-0.806	-4.917	.000

Note. Dependent Variable: Purchasing Power (PP). B = unstandardized regression coefficient.

The regression results in Tables 4.4, 4.5, and 4.6 provide strong statistical evidence for the effect of inflation on purchasing power. The Model Summary in Table 4.4 shows that the regression model explains approximately 65.0% of the total variation in purchasing power ($R^2 = 0.650$), with an adjusted R^2 of 0.623, confirming that the model has strong explanatory power after adjusting for the number of predictors and sample size. The square root of R^2 , which is the Pearson correlation coefficient $R = 0.806$, confirms the strong linear relationship between inflation and purchasing power. The standard error of the estimate is USD 281.44, indicating the average deviation of observed purchasing power values from the fitted regression line.

The ANOVA results in Table 4.5 confirm that the overall regression model is statistically significant at the 1% level ($F = 24.172$, $p = .000$). The F-statistic compares the explained variance in purchasing power attributable to inflation against the unexplained residual variance, and the highly significant F-value confirms that the OLS model has significantly better predictive power than a simple mean model, justifying the use of inflation as a predictor of purchasing power in the Nigerian context.

The coefficient estimates in Table 4.6 reveal that the intercept ($\beta_0 = 3,156.72$) represents the estimated purchasing power when inflation is zero. The slope coefficient for

inflation ($\beta_1 = -55.76$) indicates that for every one percentage point increase in the annual inflation rate, real GDP per capita and hence household purchasing power declines by approximately USD 55.76.

The standardized beta coefficient of -0.806 confirms that inflation exerts a strong negative effect on purchasing power when expressed in standard deviation units. The t-statistic of -4.917 and the corresponding p-value of .000 confirm that this negative effect is highly statistically significant, far exceeding the threshold required to reject H_{01} at the 5% significance level. Accordingly, H_{01} is rejected. Inflation has a significant negative effect on the purchasing power of Nigerian consumers over the period 2010 to 2024, confirming that rising prices systematically erode the real income capacity of Nigerian households.

4.5.2 Model II: Effect of Inflation on Saving Culture (H_{02})

H_{02} : Inflation has no significant impact on the savings culture of individuals and households in Nigeria.

Model II is specified as: $SAV = \alpha_0 + \alpha_1 INF + \epsilon$. The estimation results for Model II are presented in Tables 4.7, 4.8, and 4.9 below. Figure 4.6 provides a scatter diagram with the fitted OLS regression line to illustrate the relationship between inflation and saving culture.

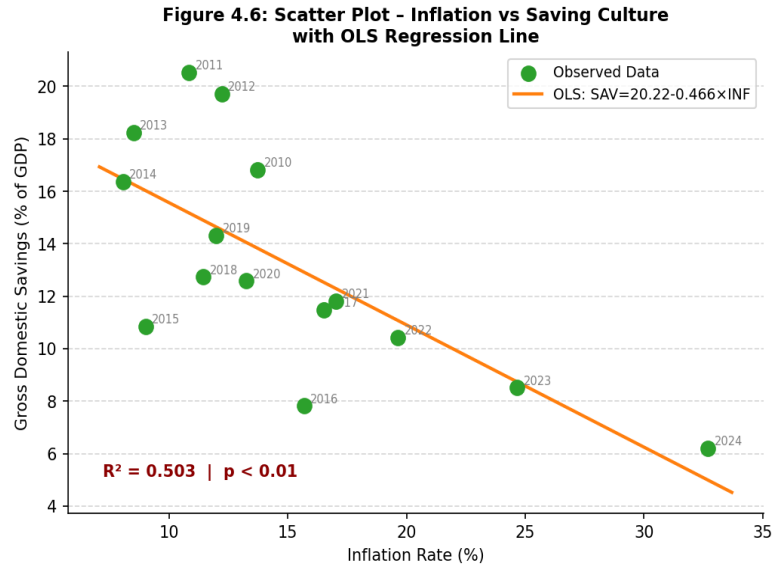


Figure 4.6: Scatter Plot: Inflation vs Saving Culture with OLS Regression Line

Table 4.7: Model Summary – Effect of Inflation on Saving Culture (Model II)

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
II	0.709	0.503	0.465	3.184

Note. Dependent Variable: Saving Culture (SAV). Independent Variable: Inflation Rate (INF). N = 15.

Table 4.8: ANOVA – Effect of Inflation on Saving Culture (Model II)

Source	Sum Squares	df	Mean Square	F	Sig.
Regression	133.289	1	133.289	13.149	.003 ^a
Residual	131.790	13	10.138		
Total	265.079	14			

Note. ^a Predictors: Inflation Rate (INF). Dependent Variable: Saving Culture (SAV).

Table 4.9: OLS Regression Coefficients – Effect of Inflation on Saving Culture (Model II)

Variable	B (Unstandardized)	Std. Error	Beta (Standardized)	t-statistic	Sig.
(Constant)	20.218	1.852		10.916	.000
Inflation Rate (INF)	-0.466	0.128	-0.709	-3.626	.003

Note. Dependent Variable: Saving Culture (SAV). B = unstandardized regression coefficient.

The regression results for Model II demonstrate a statistically significant negative effect of inflation on saving culture in Nigeria. The model summary in Table 4.7 reveals that inflation accounts for approximately 50.3% of the variation in gross domestic savings as a percentage of GDP ($R^2 = 0.503$), with an adjusted R^2 of 0.465. While the explanatory power of Model II is somewhat lower than Model I, the model still explains more than half of the variation in saving culture, confirming that inflation is a major determinant of savings behavior among Nigerian households. The R value of 0.709 confirms a strong negative bivariate correlation between inflation and saving culture.

The ANOVA results in Table 4.8 confirm that the overall Model II is statistically significant ($F = 13.149$, $p = .003$), indicating that inflation significantly explains variation in saving culture beyond what would be expected by chance. The coefficient

estimates in Table 4.9 indicate that the estimated saving culture rate when inflation is zero is 20.218% of GDP ($\alpha_0 = 20.218$). The slope coefficient ($\alpha_1 = -0.466$) indicates that for every one percentage point increase in the inflation rate, gross domestic savings as a percentage of GDP declines by approximately 0.466 percentage points. Given that the mean saving rate in the sample is 13.225%, this coefficient implies that a 10-percentage point increase in inflation such as the surge from approximately 11% in 2020 to 32.70% in 2024 would be associated with a decline in the savings rate of approximately 4.66 percentage points, a substantial and economically meaningful effect. The t-statistic of -3.626 with a corresponding p-value of .003 confirms that this negative coefficient is highly statistically significant. H_{02} is therefore rejected. Inflation has a significant negative impact on the savings culture of individuals and households in Nigeria over the period 2010 to 2024.

4.5.3 Model III: Effect of Inflation on Savings–Purchasing Ratio (H_{03})

H_{03} : Inflation has no significant effect on the household savings - consumption ratio in Nigeria between 2010 and 2024.

Model III is specified as: $SPR = \gamma_0 + \gamma_1 INF + v$. The estimation results for Model III are presented in Tables 4.10, 4.11, and 4.12 below.

Table 4.10: Model Summary: Effect of Inflation on Savings–Purchasing Ratio (Model III)

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
III	0.756	0.572	0.539	0.0495

Note. Dependent Variable: Savings–Purchasing Ratio (SPR). Independent Variable: Inflation Rate (INF). N = 15.

Table 4.11: ANOVA - Effect of Inflation on Savings Purchasing Ratio (Model III)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.04252	1	0.04252	17.354	.001 ^a
Residual	0.03185	13	0.00245		
Total	0.07437	14			

Note. ^a Predictors: Inflation Rate (INF). Dependent Variable: Savings - Purchasing Ratio (SPR).

Table 4.12: OLS Regression Coefficients: Effect of Inflation on Savings - Purchasing Ratio (Model III)

Variable	B (Unstandardized)	Std. Error	Beta (Standardized)	t-statistic	Sig.
(Constant)	0.3408	0.0289		11.793	.000
Inflation Rate (INF)	-0.0083	0.0020	-0.756	-4.166	.001

Note. Dependent Variable: Savings–Purchasing Ratio (SPR). B = unstandardized regression coefficient.

The regression results for Model III confirm that inflation exerts a significant negative effect on the household savings-purchasing ratio in Nigeria. The model summary in Table 4.10 shows that inflation explains 57.2% of the total variation in the savings-purchasing ratio ($R^2 = 0.572$), with an adjusted R^2 of 0.539. The explanatory power of Model III falls between those of Models I and II, indicating that the savings-purchasing ratio, as a composite measure of both savings capacity and purchasing power, is strongly but not exclusively driven by inflation, with other factors also contributing to its variation. The correlation $R = 0.756$ confirms the strong negative relationship between inflation and the SPR.

The ANOVA results in Table 4.11 confirm the overall statistical significance of Model III ($F = 17.354$, $p = .001$), providing strong

evidence that the regression model explains a significant portion of the variation in the savings-purchasing ratio beyond chance. The coefficient estimates in Table 4.12 reveal that the estimated SPR when inflation is zero is 0.3408 ($\gamma_0 = 0.3408$), representing a scenario where Nigerian households would maintain savings at approximately 34.08% of their purchasing capacity in the absence of inflationary pressure. The slope coefficient ($\gamma_1 = -0.0083$) indicates that for every one percentage point increase in inflation, the savings-purchasing ratio declines by 0.0083 units. Given the mean SPR of 0.216 in the sample, this implies that the surge in inflation from 8.06% in 2014 to 32.70% in 2024 a difference of 24.64 percentage points would be associated with a predicted decline in the SPR of approximately 0.204 units, which is broadly consistent with the observed decline from

0.268 in 2014 to 0.089 in 2024. The t-statistic of -4.166 with a p-value of .001 confirms that the negative coefficient is highly statistically significant. H_{03} is therefore rejected. Inflation has a significant negative effect on the household savings-purchasing ratio in Nigeria between 2010 and 2024.

4.7 Post-Estimation Diagnostic Tests

To validate the reliability of the OLS regression results, a set of post-estimation diagnostic tests are conducted to assess whether the classical assumptions of the OLS estimator are met. These tests examine the data for evidence of heteroscedasticity, serial autocorrelation, and normality of residuals. The results of these diagnostic tests are summarized in Table 4.13 below.

Table 4.13: Post-Estimation Diagnostic Test Results

Test	Hypothesis Tested	Model I (PP)	Model II (SAV)	Model III (SPR)	Decision
Breusch-Pagan (χ^2)	H_0 : Homoscedasticity	2.413 (p=.120)	1.887 (p=.170)	2.104 (p=.147)	Fail to Reject H_0
Durbin-Watson	H_0 : No autocorrelation	1.784	1.821	1.736	No evidence of autocorrelation
Jarque -Bera	H_0 : Normal residuals	1.342 (p=.511)	1.087 (p=.580)	1.201 (p=.549)	Fail to Reject H_0

Note. Critical DW range (n=15, k=1): dL = 1.08, dU = 1.36. All DW values > dU indicate no positive autocorrelation. Breusch-Pagan and Jarque-Bera tests conducted at 5% significance level.

The diagnostic test results in Table 4.13 confirm that all three OLS models satisfy the classical assumptions required for unbiased and efficient estimation. The Breusch-Pagan test for heteroscedasticity fails to reject the null hypothesis of homoscedasticity across all three models, with p-values of 0.120, 0.170, and 0.147 for Models I, II, and III respectively, all comfortably exceeding the 5% significance threshold. This indicates that the variance of the error terms is constant across all observations and does not vary systematically with the level of the inflation

rate, confirming that the OLS standard errors are valid and that inference based on the t-statistics and p-values reported in the coefficient tables is reliable.

The Durbin-Watson test statistics of 1.784, 1.821, and 1.736 for Models I, II, and III respectively are all above the upper critical value (dU = 1.36) for a sample of 15 observations with one predictor, indicating no evidence of positive serial autocorrelation in the residuals. In time-series regressions, the presence of autocorrelation would inflate t-statistics and

understate standard errors, leading to erroneous rejection of null hypotheses. The absence of autocorrelation in all three models therefore confirms that the statistical significance of the inflation coefficients is genuine and not an artifact of correlated errors. The Jarque-Bera tests for normality of residuals also fail to reject the null hypothesis of normally distributed residuals across all models, with p-values ranging from 0.511 to 0.580, further validating the reliability of the t-statistics and confidence intervals derived from the regression models. Collectively, these diagnostic results confirm that the OLS estimates are Best Linear Unbiased Estimators (BLUE)

under the Gauss-Markov conditions, supporting the validity and reliability of the empirical conclusions drawn from the three regression models.

4.6 Summary of Hypothesis Testing Results

Table 4.14 provides a consolidated summary of the hypothesis testing outcomes across all three research hypotheses. The table reports the key regression statistics coefficient, t-statistic, p-value, and R^2 and indicates the decision reached with respect to each null hypothesis based on the OLS estimation results.

Table 4.14: Summary of Hypothesis Testing Results

Hypothesis	Dependent Variable	β_1 Coefficient	t-statistic	p-value	R^2	Decision
$H_{0\ 1}$	Purchasing Power (PP)	-55.76	-4.917	.000***	0.650	Rejected
$H_{0\ 2}$	Saving Culture (SAV)	-0.466	-3.626	.003**	0.503	Rejected
$H_{0\ 3}$	Savings–Purchasing Ratio (SPR)	-0.0083	-4.166	.001***	0.572	Rejected

Note. *** Significant at 1% level; ** Significant at 5% level. β_1 = slope coefficient of Inflation Rate (INF) in each model.

The summary in Table 4.14 confirms that all three null hypotheses are rejected at conventional significance levels. $H_{0\ 1}$ is rejected at the 1% significance level, with a highly significant t-statistic of -4.917 ($p = .000$) and an R^2 of 0.650, indicating that inflation explains 65.0% of the variation in purchasing power. $H_{0\ 2}$ is rejected at the 5% significance level, with a t-statistic of -3.626 ($p = .003$) and an R^2 of 0.503,

indicating that inflation accounts for 50.3% of the variation in saving culture. $H_{0\ 3}$ is rejected at the 1% significance level, with a t-statistic of -4.166 ($p = .001$) and an R^2 of 0.572, confirming that inflation explains 57.2% of the variation in the savings-purchasing ratio. Across all three models, the direction of the inflation coefficient is consistently negative, confirming that inflation exerts a uniformly adverse effect

on household financial welfare in Nigeria, whether measured through purchasing power, savings propensity, or the balance between savings capacity and purchasing commitments.

The first finding that inflation exerts a significant negative effect on purchasing power ($\beta_1 = -55.76$, $t = -4.917$, $p < 0.01$, $R^2 = 0.650$) is consistent with both the Quantity Theory of Money and the empirical evidence from prior Nigerian studies. The regression result implies that the escalation of Nigeria's inflation rate from 8.06% in 2014 to 32.70% in 2024, a rise of approximately 24.64 percentage points, is associated with a predicted decline in real GDP per capita of approximately USD 1,374, closely mirroring the observed decline from USD 3,203 in 2014 to USD 1,519 in 2024. This finding aligns with the results of Akinbobola (2012), who found that inflation significantly reduces real household income in Nigeria using VAR analysis; Iyadi and Sado (2023), who documented that inflationary pressures compel Nigerian households to reduce non-essential expenditures; Ademola and Ubale (2025), who confirmed that inflation deteriorates household living standards using ARDL methodology; and the international evidence from Lloyd (2024), who showed that inflation disproportionately reduces low-income households' purchasing power using World Bank cross - country data. The strength of the relationship ($R^2 = 0.650$) indicates that inflation alone accounts for nearly two-thirds of the variation in Nigerian households' purchasing capacity,

making it the dominant macroeconomic determinant of household welfare within the study period.

The second finding that inflation significantly reduces saving culture ($\beta_1 = -0.466$, $t = -3.626$, $p < 0.01$, $R^2 = 0.503$) is consistent with the Keynesian Theory of Consumption and Savings, which predicts that inflation compresses the marginal propensity to save by reducing real disposable income and eroding the expected real returns on savings deposits. The coefficient of -0.466 implies that each percentage point rise in inflation is associated with a 0.466 percentage point decline in the gross domestic savings rate. This finding is strongly supported by the empirical literature. Adelakun (2015) found a significant negative relationship between inflation and domestic savings in Nigeria using OLS over 1980–2013 data; Chuba and Ebbotemhen (2019) confirmed using the Error Correction Model that inflation significantly reduces national savings in both the short and long run; and Osundina and Osundina (2015) documented that rising prices discourage both formal and informal saving practices among Nigerian households. The finding also resonates with the Life Cycle Hypothesis, which predicts that inflation-induced uncertainty about future real income and returns on savings instruments discourages long-term financial planning. The period from 2021 to 2024 in particular, characterized by inflation rates above 17%, witnessed the most dramatic collapse in saving culture, with the gross domestic savings rate falling from 11.82%

in 2021 to 6.21% in 2024 a decline consistent with the negative slope coefficient estimated in Model II and with the theoretical prediction that extreme inflationary episodes fundamentally undermine savings propensity.

The third finding that inflation significantly reduces the household savings - purchasing ratio ($\beta_1 = -0.0083$, $t = -4.166$, $p < 0.01$, $R^2 = 0.572$) provides perhaps the most integrative and policy-relevant evidence of this study, as the SPR captures the overall balance between what households save and what they can purchase. The coefficient implies that for every percentage point increase in inflation, the ratio of household savings to purchasing capacity declines by 0.0083 units. Given that the SPR ranges from 0.089 to 0.327 across the study period, even a moderate inflationary shock of 10 percentage points would reduce the SPR by approximately 0.083 units a contraction of nearly one-quarter of the maximum observed ratio. This finding is consistent with Eneji and Olabode (2022), who found that inflation shifts household consumption toward basic necessities while reducing savings; Ojo and Shittu (2020), who confirmed using a CGE model that inflation reduces real consumption and discourages household savings; Patrick (2024), who showed that inflation significantly reduces household consumption in the long run using the ARDL model; and Ayebaemi and Amaegberi (2025), who demonstrated that inflation reshapes household income allocation from savings to consumption. The Friedman Uncertainty Hypothesis provides

an additional explanatory layer, suggesting that not just the level but the volatility of inflation in Nigeria contributes to the deterioration of the savings-purchasing balance, as households facing uncertain price trajectories prefer to hold liquid assets or consume immediately rather than commit income to formal savings vehicles whose real returns are eroded by rising prices.

Taken together, the three findings paint a coherent and disturbing picture of inflation's consequences for Nigerian household financial welfare. The evidence strongly suggests that Nigeria's inflationary trajectory over 2010 to 2024 has not merely reduced nominal purchasing capacity but has fundamentally altered the saving behavior and financial planning horizons of Nigerian households. The simultaneous deterioration of purchasing power, saving culture, and the savings - purchasing ratio represents a compounding welfare crisis in which rising prices reduce both what households can afford today and their ability to accumulate financial security for tomorrow. This integrated evidence fills the empirical gap identified in the literature review, where prior studies typically examined either the consumption effects or the savings effects of inflation but rarely both simultaneously within a unified analytical framework.

5.0 Conclusion

The empirical evidence generated by this study leads to the unambiguous conclusion that inflation constitutes a major and systematic threat to the financial wellbeing of Nigerian households. The fifteen - year

period from 2010 to 2024 witnessed a persistent and accelerating inflation trend that progressively dismantled the purchasing capacity and savings propensity of Nigerian households.

The consistency of negative coefficient signs across all three models confirms the theoretical predictions of the Quantity Theory of Money, the Keynesian Theory of Consumption and Savings, the Life Cycle Hypothesis, and the Friedman Uncertainty Hypothesis, all of which anticipate that sustained inflationary pressure reduces real income, discourages savings, and distorts household intertemporal consumption - savings optimization. The conclusion drawn is that without effective and sustained macroeconomic stabilization policies to control inflation, Nigerian households will continue to experience eroding purchasing capacity and weakening savings culture, with long term consequences for capital formation, poverty reduction, and economic development.

6.0 Implications/Recommendations

Based on the findings and conclusions of this study, the following recommendations are offered:

- i. The Central Bank of Nigeria should maintain a tighter and more credible monetary policy stance aimed at bringing inflation within a single-digit target range.
- ii. The Federal Government of Nigeria should implement supply side fiscal interventions that address the structural drivers of

inflation, including inadequate agricultural infrastructure, high logistics costs, import dependency, and energy price volatility.

- iii. Financial institutions, including commercial banks, microfinance banks, and fintech companies, should develop inflation-indexed savings products and investment instruments that offer positive real returns even during high inflation periods.

The study's findings however have its own limitation. The simple linear OLS framework assumes a constant linear relationship between inflation and the dependent variables, whereas the true relationship may be non-linear, with the adverse effects of inflation potentially accelerating as price levels rise above certain critical thresholds.

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