SAHEL INTERNATIONAL JOURNAL OF ADMINISTRATION AND GOVERNANCE
Volume 1 | Issue 1 | January-June 2026

Impact of Inflation on Household Consumption Expenditure in Nigeria (1990-2024)

Adamu Ibrahim, PhD[1] and Vahylla Peter Vandi[2]

[1] Directorate of General Studies, Federal University Dutse, Jigawa State, Nigeria
[2] Department of Economics, Adamawa State University, Mubi, Adamawa State, Nigeria
Emails: tabtakhong@gmail.com | Corresponding author: Vahyllav@gmail.com

Abstract

This study examined the impact of inflation on household consumption expenditure in Nigeria over the period 1990 to 2024. Specifically, the study determined the effect of the Consumer Price Index on household consumption expenditure and established the causal relationship between the two variables. An explanatory research design was adopted, using annual time-series data obtained from the Central Bank of Nigeria, the National Bureau of Statistics, and the World Bank. Household consumption expenditure was specified as the dependent variable, while inflation rate, real gross domestic product per capita, interest rate, and exchange rate were specified as the explanatory variables. The Ordinary Least Squares estimation technique was employed, supported by the Augmented Dickey-Fuller unit root test, a correlation matrix, and the Variance Inflation Factor to guard against spurious regression and multicollinearity. The results show that exchange rate and real GDP per capita exert positive and statistically significant effects on household consumption expenditure, while interest rate exerts a negative and statistically significant effect. Inflation exerts a positive but statistically insignificant effect on nominal household consumption expenditure. The model returned an R-squared of approximately 0.748, indicating that the explanatory variables jointly account for about 74.8 percent of the variation in household consumption expenditure. The study concludes that exchange-rate stability, household income growth, and moderate interest-rate conditions are important determinants of household consumption expenditure in Nigeria, and that although inflation was not a statistically significant driver of nominal expenditure, it remains economically capable of eroding real purchasing power. The study recommends the pursuit of exchange-rate stability, the improvement of household income and economic opportunities, the maintenance of moderate interest rates, the strengthening of measures against inflation, and the protection of vulnerable households.

Keywords: Inflation; Household consumption expenditure; Ordinary Least Squares; Exchange rate; Nigeria

1.0. Introduction

Inflation remains one of the most persistent and destabilizing macroeconomic problems confronting both developed and developing economies. It is generally defined as a sustained and continuous increase in the general price level of goods and services in an economy over a given period (Mankiw, 2018). When inflation occurs, the purchasing power of money declines, so that a given amount of money buys fewer goods and services than before, an erosion that affects consumers, producers, savers, and investors, and thereby shapes overall economic performance (Fischer, 1981; Barro, 1995). Inflation is commonly measured using the Consumer Price Index, which tracks changes in the prices of a representative basket of goods and services consumed by households (National Bureau of Statistics, 2023) and serves as a key indicator for policymakers in assessing price stability and designing monetary and fiscal policy.

In macroeconomic theory, inflation is explained from different perspectives. The monetarist view associated with Friedman (1968) holds that inflation is always and everywhere a monetary phenomenon, resulting from excessive growth in the money supply relative to output, while the Keynesian perspective emphasizes demand-pull and cost-push factors as primary causes. Household consumption expenditure, the largest component of aggregate demand in most economies, refers to total household spending on goods and services intended to satisfy needs and wants. Keynes (1936) held that consumption is primarily determined by disposable income through the marginal propensity to consume, although modern analysis recognizes that inflation, interest

rates, expectations, credit availability, and wealth also shape consumption decisions (Campbell & Mankiw, 1989; Carroll, 1997).

In Nigeria, inflation has been a recurring macroeconomic challenge, with several inflationary episodes triggered by structural imbalances, exchange-rate depreciation, fiscal deficits, fuel-subsidy removals, insecurity affecting agricultural production, and external shocks such as global oil-price volatility (Central Bank of Nigeria, 2023; Soludo, 2004). Persistent inflation directly affects household consumption expenditure by reducing real income: when prices rise faster than income, households are compelled to reduce consumption or substitute cheaper alternatives, and in extreme cases inflation may depress savings and living standards (Deaton, 1992). Given that household consumption expenditure accounts for a substantial share of Nigeria's gross domestic product, fluctuations in inflation carry important implications for economic growth and macroeconomic stability, while the level of real income available to households, proxied here by real GDP per capita, remains an important determinant of consumption capacity that can partly offset the erosive effect of rising prices (Deaton, 1992).

Despite various monetary-policy interventions by the Central Bank of Nigeria, including interest-rate adjustments, open-market operations, and liquidity-control measures, inflation remains relatively high (Central Bank of Nigeria, 2023), and persistent inflation continues to reduce the purchasing power of households, distort consumption patterns, and heighten economic uncertainty (Barro, 1995; Bruno & Easterly, 1998). Existing studies on inflation and household consumption expenditure in Nigeria report mixed and somewhat inconclusive findings regarding the magnitude and direction of the relationship, and limited empirical attention has been paid to the causal relationship between the two variables using contemporary data that reflect recent exchange-rate volatility, fuel-subsidy reforms, and food-supply disruptions. This creates a gap in knowledge that the present study addresses by examining the impact of, and causal relationship between, inflation and household consumption expenditure in Nigeria over 1990–2024.

Studies such as Olufemi (2012), Obioma and Onuoha (2018), and Akanni and Olaniyi (2015) have shown that rising inflation tends to weaken household purchasing power and alter consumption patterns in Nigeria, while Alimi and Omotosho (2020) observed that inflationary pressures significantly affect consumption behaviour and welfare conditions among households. Examining the relationship between inflation and household consumption expenditure is therefore essential for effective policy formulation and economic planning in Nigeria, particularly as recent data continue to show sustained increases in food prices, transportation costs, housing, and energy, compounded by exchange-rate depreciation and structural supply constraints (National Bureau of Statistics, 2023). Despite various monetary-policy interventions by the Central Bank of Nigeria, households are often forced to reduce real consumption or shift toward cheaper and lower-quality goods and services in order to cope with rising prices (Deaton, 1992), underscoring the practical urgency of understanding how inflation interacts with the other macroeconomic conditions that shape household spending.

Accordingly, the broad objective of the study is to examine the impact of inflation on household consumption expenditure in Nigeria. The specific objectives are to examine the impact of the Consumer Price Index on household consumption expenditure in Nigeria, and to determine the causal relationship between the Consumer Price Index and household consumption expenditure in Nigeria. Correspondingly, the study tests the null hypotheses that the Consumer Price Index has no significant impact on household consumption expenditure in Nigeria, and that there is no significant causal relationship between the Consumer Price Index and household consumption expenditure in Nigeria.

The study is significant to the Central Bank of Nigeria and fiscal authorities in designing monetary and fiscal policies aimed at controlling inflation, stabilizing prices, and improving household welfare, and it contributes empirical evidence to the literature on inflation and household consumption behaviour in developing economies. It is also expected to serve as reference material for students, researchers, and economic planners seeking to understand how rising prices influence consumption behaviour and household welfare in Nigeria, and to provide households, development agencies, and

economic planners with a clearer understanding of how macroeconomic conditions shape consumption behaviour, thereby supporting more informed economic planning.

The study is limited to Nigeria over the period 1990–2024 and does not extend to cross-country analysis; the focus on Nigeria is informed by the country's persistent inflationary experience and by the centrality of household consumption expenditure to aggregate demand and economic activity. The study uses annual secondary time-series data on household consumption expenditure, inflation rate, real GDP per capita, interest rate, and exchange rate obtained from the Central Bank of Nigeria, the National Bureau of Statistics, and the World Bank.

2.0. Literature Review

2.1 Conceptual and Theoretical Issues

Household consumption expenditure denotes the total value of goods and services acquired by households to satisfy current needs, and is widely treated as the largest and most stable component of aggregate demand (Blanchard, 2017). Inflation, proxied in empirical work by the Consumer Price Index, denotes a sustained rise in the general price level that erodes the real value of income and, by extension, the volume of goods and services a given naira income can command (Mankiw, 2018). Several theories of consumption inform the relationship examined in this study. Keynes's (1936) absolute income hypothesis holds that current consumption is a stable function of current disposable income. Dusenbery's (1949) relative income hypothesis emphasizes social comparison and the ratchet effect, whereby consumption levels resist downward adjustment even when income falls. Modigliani and Brumberg's (1954) life-cycle hypothesis and Friedman's (1957) permanent income hypothesis both argue that consumption responds to expected long-run income rather than to transitory fluctuations, implying that households attempt to smooth consumption over time provided they can borrow and save freely. The quantity theory of money, formalized by Fisher (1911) and restated by Friedman (1968), explains the monetary origins of inflation through the equation of exchange, MV = PQ, and complements the consumption theories by explaining why prices rise in the first place.

Modigliani and Brumberg's (1954) life-cycle hypothesis extend this reasoning by proposing that individuals plan consumption over their entire life span, borrowing in youth, saving during peak earning years, and drawing down savings in retirement, so as to maintain a relatively stable standard of living. The hypothesis assumes stable employment prospects, predictable future income, and efficient financial markets that allow free borrowing and saving; in practice, many Nigerian households face income instability arising from unemployment, underemployment, and dependence on informal economic activity, while limited access to formal financial institutions constrains long-term consumption and saving plans (Soludo, 2004; Deaton, 1989). Persistent inflation compounds these constraints by reducing the real value of income and savings, weakening households' ability to maintain stable consumption over time, so that observed Nigerian consumption behaviour often departs from the smooth life-cycle path the theory predicts.

This study is anchored on Friedman's (1957) permanent income hypothesis because it directly addresses how income uncertainty and price instability, both characteristic of the Nigerian economy, disrupt household consumption planning. Under the hypothesis, consumption depends on permanent rather than transitory income; persistent or unpredictable inflation reduces the real value of current income and complicates the formation of stable income expectations, so that a nominal wage increase that appears to raise permanent income may in fact be quickly offset by rising prices, leaving the real effect on consumption minimal or even negative. In an economy where formal credit access is limited and incomes are often irregular, as documented for Nigeria (Soludo, 2004; Deaton, 1989), the theory's assumption of freely functioning capital markets does not hold fully, so its predictions require the qualification that liquidity constraints may prevent households from smoothing consumption even where expectations of future income are favorable. The theory nonetheless remains a useful lens for understanding the channels through which inflation affects household consumption expenditure in Nigeria: by eroding real income directly, by increasing uncertainty around future prices and income and so complicating the formation of permanent-income expectations, and by weakening the savings

and credit access that would otherwise permit consumption smoothing. The Quantity Theory of Money, formalized by Fisher (1911) and restated by Friedman (1968) as the foundation of monetarist economics, complements this consumption-side framework by explaining the monetary origins of inflation through the equation of exchange, MV = PQ, where M is the money supply, V is the velocity of money, P is the general price level, and Q is real output; assuming relatively stable velocity and output in the short run, the theory predicts that changes in the price level are proportional to changes in the money supply, a mechanism Friedman (1968) summarized in the assertion that inflation is always and everywhere a monetary phenomenon. The theory is particularly relevant to Nigeria, where inflationary episodes have frequently been linked to expansionary monetary policy and deficit financing (Central Bank of Nigeria, 2023), although its assumption of stable velocity is weakened by the size of the informal sector, and it places comparatively little emphasis on structural and cost-push sources of inflation such as exchange-rate depreciation, supply-chain disruption, insecurity in food-producing regions, and fuel-price shocks that are widely recognized as significant drivers of Nigerian inflation (Soludo, 2004; Todaro & Smith, 2020).

2.2 Empirical Review

A substantial body of Nigerian empirical literature links inflation to household welfare and consumption outcomes, generally employing cointegration and error-correction techniques. Bawa et al. (2016), using a Vector Error Correction Model over 1970–2012, found that money supply growth, exchange-rate depreciation, and fiscal deficits significantly drove inflation and weakened household welfare. Using Ordinary Least Squares regression on Central Bank of Nigeria data, related work on inflation and household welfare similarly reports that inflation exerts a significant negative effect on household welfare and consumption expenditure, concluding that rising prices reduce the real income available for consumption. Studies applying the Autoregressive Distributed Lag approach to the inflation-growth relationship in Nigeria likewise find that persistent inflation reduces real income and weakens household spending capacity, and conclude that inflation constitutes a major threat to economic welfare.

Studies focused directly on household spending patterns report that increases in food prices and transportation costs significantly reduce household consumption expenditure and living standards, while error-correction estimates of the inflation–consumption relationship indicate that inflation significantly reduces household purchasing power and real consumption expenditure, underscoring the importance of price stability for household welfare. Vector Autoregression evidence on the dynamics of inflation in Nigeria shows that inflationary shocks negatively affect household welfare through declining purchasing power, while cointegration and error-correction estimates of the macroeconomic determinants of household welfare find that inflation exerts a negative and significant impact on household welfare and consumption expenditure, concluding that reducing inflation would improve household living conditions.

Further Ordinary Least Squares and cointegration evidence on inflation and public expenditure growth indicates that rising inflation reduces the effectiveness of household income and lowers real consumption expenditure, generating welfare losses among households, while descriptive and multiple-regression analysis of household consumption response to economic changes shows that inflation significantly influences household spending decisions, particularly among low-income earners, reducing access to essential goods and services. Ordinary Least Squares estimates of inflation and household consumption reveal a negative relationship between the two variables and conclude that inflation reduces household welfare through declining purchasing power, a conclusion echoed by Error Correction Model estimates of inflation and living standards, which find that sustained inflation negatively affects household welfare and consumption levels.

Cointegration and error-correction evidence on price stability and household welfare shows that inflation significantly reduces household expenditure on non-essential goods, while Ordinary Least Squares estimates of inflationary trends and consumer spending indicate that inflation causes households to substitute expensive goods with cheaper alternatives, altering consumption patterns rather than simply reducing total spending. Johansen cointegration and Vector Error Correction Model

estimates of inflation and economic welfare similarly find that inflation significantly reduces real household expenditure and welfare, while Autoregressive Distributed Lag estimates of household consumption and inflation dynamics show that inflation exerts a significant negative effect on household consumption expenditure in both the short run and the long run, concluding that controlling inflation would improve household purchasing power and living standards. Descriptive and econometric evaluation of the 2008–2009 global financial crisis and its transmission to the Nigerian economy similarly found that rising inflation reduced household purchasing power and constrained consumption expenditure, underscoring the importance of price stability for household welfare (Ajakaiye & Fakiyesi, 2009).

At the same time, a related strand of literature examines inflation alongside broader macroeconomic performance. Doguwa (2012) and Anochiwa and Maduka (2015) investigated threshold effects of inflation on economic growth in Nigeria and found that inflation beyond a critical threshold undermines growth, with implications for household income and spending capacity. Umaru and Zubairu (2012), applying Ordinary Least Squares and Granger causality techniques to data spanning 1970–2010, found that inflation negatively affected economic performance and reduced the real income available for household consumption. Cross-country evidence, including Barro (1995) and Bruno and Easterly (1998), similarly associates high and persistent inflation with weaker growth and eroded welfare, lending broader support to the Nigerian findings, while Easterly and Fischer (2001) show, using cross-country household survey data, that inflation disproportionately harms the real incomes of the poor, who hold fewer inflation hedges than wealthier households.

2.3 Research Gap

Although the reviewed literature offers useful insight into the inflationary process and its welfare implications in Nigeria, many prior studies focus on the general inflation growth nexus or on broad welfare measures rather than directly on household consumption expenditure, and several rely on data that predate recent inflationary developments associated with exchange-rate volatility, fuel-subsidy reform, and food-supply disruption. Furthermore, comparatively few studies model household consumption expenditure jointly with income, interest-rate, and exchange-rate conditions within a single parsimonious specification supported by unit-root and multicollinearity diagnostics, and fewer still extend the sample period to 2024 to capture the exchange-rate and subsidy reforms of the mid-2020s. This study addresses these conceptual, methodological, and temporal gaps by examining the impact of inflation on household consumption expenditure in Nigeria using the Ordinary Least Squares technique and data extending to 2024.

3.0. Methodology

3.1 Study Area, Research Design, and Data

The study focuses on Nigeria, a sovereign country in West Africa lying between latitudes 4°N and 14°N and longitudes 3°E and 15°E, with a land area of approximately 923,768 square kilometers and an estimated population exceeding 220 million, making it one of the largest consumer markets on the continent. Nigeria operates a mixed economy in which agriculture, industry, and services all contribute significantly to output, and household consumption expenditure constitutes a substantial share of aggregate demand, spent predominantly on food, housing, transportation, healthcare, and education. The country's persistent inflationary experience, driven by exchange-rate depreciation, rising energy costs, expansionary monetary policy, insecurity in food-producing regions, and supply-chain disruption, together with the central role of household spending in the economy, makes Nigeria an appropriate setting for examining the impact of inflation on household consumption expenditure.

The study adopted an explanatory research design within a quantitative time-series framework, appropriate for establishing the direction, magnitude, and statistical significance of the relationship between inflation and household consumption expenditure in Nigeria. Annual secondary data covering 1990–2024 (35 observations) were used. Data on household consumption expenditure and real GDP per capita were sourced from the World Bank World Development Indicators, while data on inflation rate, interest rate, and exchange rate were obtained from the Central Bank of Nigeria

Statistical Bulletin and publications of the National Bureau of Statistics. Data collection involved the extraction and compilation of the relevant macroeconomic series from published reports, statistical bulletins, annual reports, and the online databases maintained by these institutions.

3.2 Model Specification

The functional form of the model is expressed as:

$$HCE = f(INF, GDPPC, INR, EXR) \quad \ldots\ldots (1)$$

The econometric model, estimated using Ordinary Least Squares, is specified as:

$$HCE_t = \beta_0 + \beta_1 INF_t + \beta_2 GDPPC_t + \beta_3 INR_t + \beta_4 EXR_t + \mu \quad \ldots\ldots (2)$$

where HCE is household consumption expenditure, INF is the inflation rate, GDPPC is real gross domestic product per capita (proxying household income), INR is the interest rate, EXR is the exchange rate, β_0 is the constant term, β_1–β_4 are the parameters to be estimated, μ is the stochastic error term, and t denotes the time period. A priori, inflation and interest rate are expected to relate negatively with household consumption expenditure ($\beta_1 < 0$, $\beta_3 < 0$), real GDP per capita is expected to relate positively ($\beta_2 > 0$), and exchange-rate depreciation is expected, on theoretical grounds, to relate negatively with real household consumption ($\beta_4 < 0$).

3.3 Estimation Technique

Descriptive statistics were first computed to characterize the mean, median, maximum, minimum, standard deviation, skewness, and kurtosis of each series, providing a preliminary understanding of the behaviour of the variables prior to estimation. The stationarity properties of the variables were then examined using the Augmented Dickey-Fuller unit-root test, with lag length selected automatically by the Schwarz Information Criterion, to guard against the problem of spurious regression that commonly arises when Ordinary Least Squares is applied to non-stationary time-series data; where a variable was found to be non-stationary at level, it was appropriately transformed through differencing before inclusion in the model. A correlation matrix and the Variance Inflation Factor were used to examine the degree of association among the explanatory variables, confirming that inflation rate, real GDP per capita, interest rate, and exchange rate were not excessively correlated with one another and thereby minimizing the risk of multicollinearity in the estimated model.

The model parameters were estimated by Ordinary Least Squares, which, under the assumptions of the Classical Linear Regression Model, yields the Best Linear Unbiased Estimator and remains the most widely applied and readily interpretable technique for estimating the direct, linear relationship between household consumption expenditure and its determinants, allowing the estimated coefficients, their signs, magnitudes, and levels of statistical significance to be directly compared with the a priori expectations stated in Section 3.2. To ensure the reliability and validity of the estimated model, a series of post-estimation diagnostic tests were conducted: the Breusch-Godfrey Serial Correlation LM Test to examine the presence of autocorrelation in the residuals, the Breusch-Pagan-Godfrey Heteroskedasticity Test to determine whether the variance of the residuals remained constant, and the Jarque-Bera Normality Test to ascertain whether the residuals were normally distributed. Model stability was further examined using the Cumulative Sum of Recursive Residuals and the Cumulative Sum of Squares of Recursive Residuals tests, which assess the stability of the estimated coefficients over the study period. All hypotheses were tested at the 5 percent level of significance, and estimation was carried out in EViews 10.

4.0. Results and Discussion

4.1 Descriptive Statistics

Household consumption expenditure (HCE) and exchange rate (EXR) exhibit pronounced positive skewness and, for EXR, very high kurtosis, reflecting the sharp naira depreciation of recent years, while GDP per capita (GDP) is close to symmetric. The Jarque-Bera statistics indicate that HCE, EXR, and INF depart significantly from normality at the 5 percent level, whereas GDP and INR do not,

a pattern consistent with the structural break associated with exchange-rate liberalization and the removal of subsidies in the review period.

Table 4.1 Descriptive Statistics (EViews output)

	HCE	EXR	GDP	INF	INR
Mean	2.77E+13	198.8671	790727.8	18.70559	10.80113
Median	8.88E+12	131.2743	813656.3	13.00697	10.10833
Maximum	1.08E+14	1478.965	1041104.	72.83550	23.24167
Minimum	8.27E+10	8.038285	559850.3	5.388008	0.000000
Std. Dev.	3.56E+13	263.6575	172601.4	15.86930	4.644399
Skewness	1.138118	3.509628	-0.078237	2.071452	0.371315
Kurtosis	2.867938	17.16925	1.405535	6.495683	3.542138
Jarque-Bera	7.581426	364.6382	3.743256	42.85088	1.232896
Probability	0.022579	0.000000	0.153873	0.000000	0.539859
Sum	9.70E+14	6960.348	27675474	654.6957	378.0396
Sum Sq. Dev.	4.30E+28	2363520.	1.01E+12	8562.376	733.3949
Observations	35	35	35	35	35

Source: Author's computation, EViews 10 (2026).

Household consumption expenditure averaged approximately ₦2.77E+13 over the period, with a median of ₦8.88E+12 substantially below the mean, a maximum of ₦1.08E+14, and a minimum of ₦8.27E+10, reflecting the enormous nominal growth in household spending across 35 years of inflation and currency depreciation. The exchange rate averaged ₦198.87 per US dollar, with a maximum of ₦1,478.97, capturing the scale of naira depreciation particularly in the later years of the sample, and its very high kurtosis (17.17) and skewness (3.51) reflect this concentration of large values toward the end of the period. Real GDP per capita averaged ₦790,727.8, ranging narrowly between ₦559,850.3 and ₦1,041,104, consistent with its near-symmetric distribution (skewness of -0.078). The inflation rate averaged 18.71 percent, with a minimum of 5.39 percent and a maximum of 72.84 percent, illustrating the volatility of Nigerian inflation across the review period, while the interest rate averaged 10.80 percent, ranging from 0.00 to 23.24 percent.

4.2 Unit Root Test

Because Ordinary Least Squares applied to non-stationary time series risks spurious regression, the Augmented Dickey-Fuller test was applied to each series prior to estimation, with lag length selected automatically by the Schwarz Information Criterion. The output for HCE is reproduced below; the remaining series were tested in the same manner and were confirmed suitable for the level's specification adopted.

Table 4.2 Augmented Dickey-Fuller Unit Root Test (HCE)

			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			-3.394791	0.0206
Test critical values:	1% level		-3.711457	
	5% level		-2.981038	
	10% level		-2.629906	

Variable	Coefficient	Std. Error	t-Statistic	Prob.
HCE(-1)	-0.703776	0.207310	-3.394791	0.0037
D(HCE(-1))	0.445012	0.217609	2.045011	0.0577
D(HCE(-2))	0.469081	0.255740	1.834214	0.0853

D(HCE(-3))	1.331845	0.292504	4.553254	0.0003
R-squared	0.827895	Mean dependent var		4.10E+12
Adjusted R-squared	0.731086	S.D. dependent var		4.23E+12
S.E. of regression	2.19E+12	Akaike info criterion		59.95511
Sum squared resid	7.70E+25	Schwarz criterion		60.43899
Log likelihood	-769.4164	Hannan-Quinn criter.		60.09445
F-statistic	8.551844	Durbin-Watson stat		2.334636
Prob(F-statistic)	0.000126			

Source: Author's computation, EViews 10 (2026).

The ADF statistic of -3.394791 carries a probability value of 0.0206, which is below the 5 percent significance level, and is more negative than the 5 percent critical value of -2.981038. The null hypothesis that HCE has a unit root is therefore rejected, indicating that household consumption expenditure does not carry a unit-root problem that would render the regression relationship automatically spurious, and supporting the use of Ordinary Least Squares subject to the remaining diagnostic checks.

4.3 Regression Results

The Ordinary Least Squares output for the model HCE = f (INF, GDPPC, INR, EXR) is reproduced directly below in the format generated by the estimation software.

Table 4.3 Ordinary Least Squares Regression Output

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
EXR	6.73E+10	1.67E+10	4.026764	0.0003
GDP	45285521	11270233	4.018153	0.0003
INF	1.30E+11	2.28E+11	0.571881	0.5715
INR	-2.17E+12	7.53E+11	-2.881028	0.0071
R-squared	0.747960	Mean dependent var		2.77E+13
Adjusted R-squared	0.723569	S.D. dependent var		3.56E+13
S.E. of regression	1.87E+13	Akaike info criterion		64.06367
Sum squared resid	1.08E+28	Schwarz criterion		64.24143
Log likelihood	-1117.114	Hannan-Quinn criter.		64.12504
Durbin-Watson stat	0.708157			

Source: Author's computation, EViews 10 (2026).

The exchange-rate coefficient of 6.73E+10 carries a probability value of 0.0003, which is below 0.05, indicating a statistically significant positive relationship with household consumption expenditure. Because HCE is measured in nominal terms, this positive coefficient should be read with care: naira depreciation raises the domestic prices of imported goods and inputs, so households spend more naira without necessarily acquiring more goods, which explains why the sign departs from the a priori expectation of a negative relationship with real consumption.

Real GDP per capita has a coefficient of 45,285,521 with a probability value of 0.0003, confirming a positive and statistically significant relationship consistent with the a priori expectation: higher real income and purchasing capacity raise households' ability to purchase goods and services.

Inflation has a coefficient of 1.30E+11 and a probability value of 0.5715, which exceeds 0.05, so the effect of inflation on nominal household consumption expenditure is positive but statistically

insignificant in this model. This does not imply that inflation is economically unimportant; rather, because HCE is measured in nominal terms, rising prices can increase the naira amount households spend even as the real quantity of goods and services obtained falls, so the insignificant coefficient reflects the distinction between nominal expenditure and real consumption rather than an absence of economic effect.

Interest rate has a coefficient of -2.17E+12 and a probability value of 0.0071, confirming a statistically significant negative relationship consistent with the a priori expectation: higher borrowing costs discourage credit-financed consumption and encourage saving over spending.

The R-squared of 0.747960 indicates that the four explanatory variables jointly explain approximately 74.8 percent of the variation in household consumption expenditure, with the adjusted R-squared of 0.723569 confirming that this explanatory power holds after accounting for the number of regressors. The Durbin-Watson statistic of 0.708157 is relatively low, suggesting the possibility of positive serial correlation in the residuals and indicating that the result should be interpreted alongside supplementary serial-correlation diagnostics.

4.4 Correlation Analysis

Table 4.4 Correlation Matrix

	HCE	EXR	GDP	INF	INR
HCE	1.000000	0.795642	0.678968	-0.083719	-0.691365
EXR	0.795642	1.000000	0.472356	0.020367	-0.640095
GDP	0.678968	0.472356	1.000000	-0.362276	-0.636295
INF	-0.083719	0.020367	-0.362276	1.000000	0.313921
INR	-0.691365	-0.640095	-0.636295	0.313921	1.000000

Source: Author's computation, EViews 10 (2026).

Household consumption expenditure correlates strongly and positively with exchange rate (0.7956) and moderately with GDP per capita (0.6790), while it correlates weakly and negatively with inflation (-0.0837) and moderately negatively with interest rate (-0.6914). The correlation between HCE and exchange rate, though strong, does not establish causation; it may partly reflect the fact that exchange-rate depreciation raises the naira prices of goods and thereby increases nominal household expenditure. The weak correlation between HCE and inflation is consistent with the OLS finding that inflation was not statistically significant, although correlation alone cannot determine whether a relationship is statistically significant or causal. Among the explanatory variables themselves, exchange rate and GDP per capita correlate at 0.4724, exchange rate and inflation at only 0.0204, GDP per capita and inflation at -0.3623, and interest rate correlates negatively with both exchange rate (-0.6401) and GDP per capita (-0.6363). These bivariate associations are broadly consistent with the regression results, particularly for GDP per capita and interest rate, and the modest pairwise correlations among the explanatory variables themselves do not indicate excessive multicollinearity, corroborating the Variance Inflation Factor diagnostic conducted alongside the correlation matrix.

4.5 Discussion of Findings

The results indicate that exchange rate and real GDP per capita exert positive and statistically significant effects on household consumption expenditure in Nigeria, while interest rate exerts a negative and statistically significant effect, and inflation exerts a positive but statistically insignificant effect on nominal expenditure. Taken together, these findings suggest that household spending in Nigeria over 1990–2024 responded most strongly to income conditions, exchange-rate movements, and the cost of credit, while the direct statistical link between inflation and nominal consumption spending was comparatively weak, a pattern that is nevertheless consistent with the theoretical distinction between nominal and real consumption emphasized under the permanent income hypothesis: households may raise nominal spending simply to keep pace with rising prices, without any corresponding improvement, and indeed with a possible deterioration, in the real quantity of goods and services consumed.

The finding that inflation was statistically insignificant departs from several Nigerian studies reviewed above, which generally report a significant negative relationship between inflation and household consumption or welfare (Ogunmuyiwa, 2014; Olowookere & Adebiyi, 2016). This divergence is attributable, at least in part, to differences in how consumption is measured: studies that use real or welfare-adjusted consumption measures are more likely to detect the erosive effect of inflation than a model, such as the present one, that uses nominal expenditure as the dependent variable. The positive and significant exchange-rate coefficient and the negative and significant interest-rate coefficient are, by contrast, consistent with the broader empirical literature and with the theoretical expectation that currency depreciation raises the naira cost of consumption while higher borrowing costs suppress it.

Read through the lens of the permanent income hypothesis, these findings are coherent rather than contradictory. Nominal household expenditure in Nigeria appears to track exchange-rate movements and income growth closely, consistent with households adjusting nominal spending to changing prices and to changes in real purchasing capacity, while the muted direct role of the inflation-rate variable is consistent with the theory's prediction that households distinguish, however imperfectly, between transitory price movements and sustained changes in permanent income. The relatively low Durbin-Watson statistic nonetheless signals that the residuals may not be fully white noise, and the result should therefore be read as an association established at the 5 percent significance level rather than as a complete structural account of household consumption behaviour; it points toward, without exhausting, the macroeconomic channels through which Nigerian households are affected by inflation, exchange-rate movements, income growth, and the cost of credit.

5.0. Conclusion and Recommendations

5.1 Summary of Findings

Based on the descriptive statistics, unit-root test, correlation analysis, and regression results presented in Section 4, the following major findings were established:

i. Exchange rate has a positive and statistically significant effect on household consumption expenditure in Nigeria (coefficient 6.73E+10, p = 0.0003). Exchange-rate movements significantly influence household consumption expenditure, with the positive coefficient reflecting the increase in domestic prices that follows naira depreciation.

ii. Real GDP per capita has a positive and statistically significant effect on household consumption expenditure (coefficient 45,285,521, p = 0.0003), indicating that improvements in income and economic output per person raise households' ability to purchase goods and services.

iii. Inflation has a positive but statistically insignificant effect on household consumption expenditure (coefficient 1.30E+11, p = 0.5715). The study does not find sufficient statistical evidence of a significant direct effect of inflation on nominal household consumption expenditure, although this does not imply that inflation is economically unimportant, since households can spend more money during periods of rising prices while purchasing fewer goods and services.

iv. Interest rate has a negative and statistically significant effect on household consumption expenditure (coefficient -2.17E+12, p = 0.0071), indicating that higher interest rates significantly reduce household consumption expenditure by raising the cost of borrowing and encouraging saving over spending.

v. The explanatory variables jointly provide a strong explanation of household consumption expenditure, with an R-squared of approximately 74.8 percent, demonstrating that macroeconomic conditions play an important role in determining household consumption expenditure in Nigeria.

With respect to the study's hypotheses, the null hypothesis that the Consumer Price Index has no significant impact on household consumption expenditure in Nigeria is not rejected at the 5 percent level, since the inflation-rate coefficient carried a probability value of 0.5715 in the estimated nominal-expenditure model. The significant coefficients obtained for exchange rate, real GDP per capita, and interest rate, together with the model's R-squared of 0.748, nonetheless confirm that the broader set

of macroeconomic conditions surrounding inflation, income, and credit costs is significantly associated with household consumption expenditure, providing indirect support for the view that inflationary conditions are systematically linked to household spending behaviour even where the direct inflation-rate coefficient itself is not statistically significant.

5.2 Conclusion

The study examined the impact of inflation on household consumption expenditure in Nigeria over 1990–2024 using the Ordinary Least Squares technique, supported by unit-root, correlation, and multicollinearity diagnostics. The results show that exchange rate and real GDP per capita have positive and statistically significant effects on household consumption expenditure, interest rate has a negative and statistically significant effect, and inflation has a positive but statistically insignificant effect on nominal household consumption expenditure, with the model explaining approximately 74.8 percent of the variation in expenditure.

The study concludes that macroeconomic conditions, particularly exchange-rate stability, household income levels, and interest-rate conditions, are important determinants of household consumption expenditure in Nigeria. Although inflation was not a statistically significant driver of nominal expenditure in the estimated model, the evidence and the underlying theory both indicate that persistent price increases can still erode real purchasing power and alter household consumption behaviour; increases in nominal spending may therefore reflect rising prices rather than genuine improvement in the quantity of goods and services households can afford. Sustaining macroeconomic stability, in this light, remains important for protecting household welfare and consumption in Nigeria.

5.3 Recommendations

On the basis of these findings, the study recommends the following:

i. Government and monetary authorities should pursue policies that promote greater exchange-rate stability, since excessive naira depreciation raises the domestic cost of imported goods and production inputs and increases the amount households must spend on basic necessities.

ii. Policies aimed at raising real household income should be strengthened, including support for employment generation, productive investment, and improved economic productivity, given the positive and significant effect of GDP per capita on household consumption expenditure.

iii. Monetary authorities should maintain interest-rate policies that balance the need to control macroeconomic instability with the need to preserve affordable access to credit, given the significant negative effect of interest rate on household consumption expenditure.

iv. Notwithstanding the statistically insignificant coefficient obtained in the nominal-expenditure model, government should strengthen measures that address food-price pressures, transportation costs, and other supply-side sources of inflation, since persistent price increases remain capable of eroding household purchasing power.

v. social protection measures should be extended to vulnerable, low-income households, who are least able to absorb the effects of currency depreciation and rising prices on their real consumption.

References

Ajakaiye, O., & Fakiyesi, T. (2009). *Global financial crisis discussion series: Nigeria*. Overseas Development Institute.

Akinbobola, T. O. (2012). The dynamics of money supply, exchange rate and inflation in Nigeria. *Journal of Applied Finance and Banking*, *2*(4), 117–141.

Anochiwa, L. I., & Maduka, A. (2015). Inflation and economic growth in Nigeria: Empirical evidence. *Journal of Economics and Sustainable Development*, *6*(20), 113–121.

Attanasio, O. P., & Weber, G. (1993). Consumption growth, the interest rate and aggregation. *Review of Economic Studies*, *60*(3), 631–649.

Ayunku, P. E., & Etale, L. M. (2015). An empirical estimate of inflation and economic growth: Evidence from Nigeria. *International Journal of Advances in Social Science and Humanities*, *3*(2), 1–10.

Barro, R. J. (1995). Inflation and economic growth. *Bank of England Quarterly Bulletin*, *35*(2), 166–176.

Bawa, S., Abdullahi, I. S., & Ibrahim, A. (2016). Analysis of inflation dynamics in Nigeria (1981–2015). *CBN Journal of Applied Statistics*, *7*(1), 255–276.

Blanchard, O. (2017). *Macroeconomics* (7th ed.). Pearson Education.

Bruno, M., & Easterly, W. (1998). Inflation crises and long-run growth. *Journal of Monetary Economics*, *41*(1), 3–26.

Campbell, J. Y., & Mankiw, N. G. (1989). Consumption, income, and interest rates: Reinterpreting the time series evidence. *NBER Macroeconomics Annual*, *4*, 185–246.

Carroll, C. D. (1997). Buffer-stock saving and the life cycle/permanent income hypothesis. *Quarterly Journal of Economics*, *112*(1), 1–55.

Central Bank of Nigeria. (2023). *Statistical bulletin* (Vol. 34). Central Bank of Nigeria.

Central Bank of Nigeria. (2024). *Annual report and statement of accounts*. Central Bank of Nigeria.

Deaton, A. (1989). Saving in developing countries: Theory and review. *Proceedings of the World Bank Annual Conference on Development Economics*, 61–96.

Deaton, A. (1992). *Understanding consumption*. Oxford University Press.

Deaton, A., & Zaidi, S. (2002). *Guidelines for constructing consumption aggregates for welfare analysis*. World Bank.

Doguwa, S. I. (2012). Inflation and economic growth in Nigeria: Detecting the threshold level. *CBN Journal of Applied Statistics*, *3*(2), 99–124.

Duesenberry, J. S. (1949). *Income, saving and the theory of consumer behavior*. Harvard University Press.

Easterly, W., & Fischer, S. (2001). Inflation and the poor. *Journal of Money, Credit and Banking*, *33*(2), 160–178.

Ezirim, C. B., Muoghalu, M. I., & Elike, U. (2008). Inflation versus public expenditure growth in Nigeria: An empirical investigation. *African Journal of Accounting, Economics, Finance and Banking Research*, *3*(3), 1–15.

Fischer, S. (1981). Towards an understanding of the costs of inflation: II. *Carnegie-Rochester Conference Series on Public Policy*, *15*, 5–41.

Fisher, I. (1911). *The purchasing power of money*. Macmillan.

Friedman, M. (1957). *A theory of the consumption function*. Princeton University Press.

Friedman, M. (1968). The role of monetary policy. *American Economic Review*, *58*(1), 1–17.

Hall, R. E. (1978). Stochastic implications of the life cycle-permanent income hypothesis: Theory and evidence. *Journal of Political Economy*, *86*(6), 971–987.

Keynes, J. M. (1936). *The general theory of employment, interest and money*. Macmillan.

Mankiw, N. G. (2018). *Principles of economics* (8th ed.). Cengage Learning.

Meichenbaum, M., Hansen, L. P., & Singleton, K. J. (1988). A time series analysis of representative agent models of consumption and leisure choice under uncertainty. *Quarterly Journal of Economics*, *103*(1), 51–78.

Mishkin, F. S. (2019). *The economics of money, banking and financial markets* (12th ed.). Pearson Education.

Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. In K. Kurihara (Ed.), *Post-Keynesian economics* (pp. 388–436). Rutgers University Press.

National Bureau of Statistics. (2023). *Nigerian gross domestic product report*. National Bureau of Statistics.

National Bureau of Statistics. (2024). *Consumer price index and inflation report*. National Bureau of Statistics.

Ogunleye, E. O., Owolabi, O. A., Sanyaolu, O. A., & Lawal, O. A. (2018). Inflation and household welfare in Nigeria. *International Journal of Economics and Financial Issues*, *8*(4), 125–132.

Ogunmuyiwa, M. S. (2014). Inflation and standard of living in Nigeria. *Journal of Economics and Sustainable Development*, *5*(28), 146–154.

Okonjo-Iweala, N. (2015). *Reforming the unreformable: Lessons from Nigeria*. MIT Press.

Oladipo, O. S., & Akinbobola, T. O. (2011). Inflation and economic welfare in Nigeria. *Journal of Economics and International Finance*, *3*(9), 527–535.

Olowookere, J. K., & Adebiyi, M. A. (2016). Household consumption and inflation dynamics in Nigeria. *Nigerian Journal of Economic and Social Studies*, *58*(2), 201–220.

Parker, J. A. (1999). The reaction of household consumption to predictable changes in social security taxes. *American Economic Review*, *89*(4), 959–973.

Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, *16*(3), 289–326.

Soludo, C. C. (2004). *Consolidating the Nigerian banking industry to meet the development challenges of the 21st century*. Central Bank of Nigeria.

Todaro, M. P., & Smith, S. C. (2020). *Economic development* (13th ed.). Pearson Education.

Umaru, A., & Zubairu, A. A. (2012). The effect of inflation on the growth and development of the Nigerian economy: An empirical analysis. *International Journal of Business and Social Science*, *3*(10), 183–191.

World Bank. (2023). *World development indicators*. World Bank.

World Bank. (2024). *World development report 2024: Middle-income trap*. World Bank.