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THE IMPACT OF EXCHANGE RATES ON FINAL CONSUMPTION EXPENDITURE OF HOUSEHOLDS IN NIGERIA: AN EMPIRICAL ANALYSIS

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ABSTRACT: The primary motive of this paper was to investigate the impact of exchange rates on the final consumption expenditure of households in Nigeria from 1981 to 2023. Annual time series data were sourced from the Central Bank of Nigeria Statistical Bulletin and the World Development Indicators. Household Consumption Expenditure (HCER) was used as the dependent variable. Exchange Rate (EXR), Trade Openness (TOP), Inflation (INF) and Interest Rate (INR) were captured as explanatory variables of the study. The paper employed Autoregressive Distributed Lag (ARDL) and other estimation techniques. Other tests demonstrated in this paper included the unit root test, descriptive statistics, lag length, the F-Bound Test, and the diagnostic Test, and collectively established the validity and reliability of the model used. All the variables were integrated of the same order 1(1) except for Household Consumption Expenditure and Inflation, which were integrated of order 1(0). The paper was anchored on the Purchasing Power Parity (PPP) theory. The results revealed that exchange rate, inflation, trade openness, and interest rate had significant negative impacts on household consumption expenditure in the long run, with only exchange rate and inflation significant in the short run. The study concluded that macroeconomic stability is crucial for sustaining household welfare and recommends that policymakers pursue exchange rate stabilization, inflation control, trade policy reforms, and interest rate adjustments to support household consumption expenditure.

Keywords: Exchange Rate, Consumption Expenditure, Inflation, Trade openness, Nigeria

INTRODUCTION

Globally, the exchange rate plays a significant role in shaping the trends of economic activities of different countries, particularly those countries that depend significantly on international trade (Boloupremo, 2025). The exchange rate as a macroeconomic variable serves as a link between the domestic and external economies. It determines the comparative prices of goods and services exchanged across different international borders. The exchange rate is defined as the price of one country's currency in terms of another, which directly impacts the cost of goods and services traded in the domestic market. Nigeria, for instance, imports account for a significant percentage of consumer goods; any fluctuation in the exchange rate has a multiplier effect on household consumption expenditure (lorember et al.,2024). Uche, Chang and Effiom (2023) asserted that

an individual consumer's purchasing power is a function of his wealth and the prices of goods and services in the economy.

However, whenever exchange rates depreciate, imported goods become more expensive, leading to inflationary pressures in the economy, which would erode household purchasing power. Similarly, exchange rate appreciation may directly reduce import prices, potentially easing inflation and improving affordability for households. However, sustained currency appreciation is rare in Nigeria due to structural economic challenges, including high import dependence, dwindling foreign reserves, and the dominance of crude oil exports (Afolabi and Lajuwomi, 2025). Ekong et all. (2020) pointed out that the sensitivity of household consumption to exchange rate volatility is predominant in the Nigerian economy than in developed countries. Inflation is a determinant of exchange rate pass-through to consumers in an economy. A growing level of inflation induced by the exchange rate raises the price level of home and foreign goods (Adetiloye, 2010).

Adamu et al. (2022) pointed out that the post-2015 period witnessed exceptional exchange rate volatility in Nigeria, accredited to a combination of deteriorating oil revenues, escalating external debt, and structural economic challenges while Emefiele et al. (2022) argued that government policies, such as multiple exchange rate regimes and frequent interventions in the foreign exchange market without the market forces added layers of complexity to Nigerian exchange rate dynamics

Furthermore, Sahoo and Sethi (2019) maintained that when exchange rate changes, foreign firms or businesses choose to pass-exchange rate changes partially or fully to their selling prices to their foreign export markets. Still, Alsamara, Mrabet and Hatemi (2020) observed that about 60 percent of exchange rate changes are passed on to import prices in low-income nations.

The volatility of exchange rates in Nigeria has become a critical concern due to its profound implications for household welfare and the broader economy. Over the years, the Nigerian economy has experienced persistent exchange rate fluctuations, driven by declining crude oil revenues, external debt burdens, and structural inefficiencies in the foreign exchange market (Adamu et al., 2022). These fluctuations have heightened inflationary pressures, increased the cost of imported goods, and reduced households' purchasing power. Consequently, the ability of households to meet their consumption needs becomes challenged, and threatening their standard of living and economic well-being (Adeleye et al.,2025). It is on this background that this paper delves into investigating the impact of exchange rates on final consumption expenditure of households in Nigeria from 1981 to 2023

This paper is clearly structured in the following ways: section one contains the introduction, section two presents the literature review, and section three presents the methodology. Section four discusses data analysis and interpretation, while section five provides the conclusion and recommendations of the study. \

LITERATURE REVIEW

This section critically presents conceptual, theoretical and empirical reviews relevant to this study.

Conceptual Review

Exchange rate

The exchange rate is a fundamental concept in macroeconomics and foreign trade. It refers to the value at which one currency can be exchanged for another. In a very clear terms, it can be defined as the price of a country's currency in relation to a currency of another country (Krugman & Obstfeld, 2018). The exchange rate serves as a fulcrum where international trade and finance revolve. It influences the cost of imports and exports, the balance of payments, and importantly, economic performance. Categorically, there are two basic kinds of exchange rates: the nominal exchange rate, which is the rate at which one currency is traded for another, and the real exchange rate, which adjusts the nominal rate for differences in price levels between countries (Frieden & Broz, 2020).

The exchange rate regimes can be generally divided into fixed, floating and managed floating systems. In a fixed exchange rate regime, a country's currency is fixed to another leading currency, such as the US dollar, and it is only the apex bank that intervenes in the foreign exchange market to maintain the fix (Musa, 2021). In a floating exchange rate system, it is determined by market forces of demand and supply without direct government or apex bank intervention, while the managed float system, which shares the elements of fixed and floating systems, is practiced in Nigeria precisely. It involves occasional interference by the apex bank purposely to stabilize the exchange rate (CBN, 2024).

Moreover, the exchange rate directly affects investor confidence, capital flows, and macroeconomic stability. Persistent depreciation or high volatility in the exchange rate may signal economic instability, leading to capital flight, decreased foreign investment, and increased pressure on domestic consumption and savings (Emefiele, Oladipo, & Ibe, 2023).

Household Consumption Expenditure

Household consumption expenditure refers to the total value of all goods and services consumed by individuals or families within a given household over a specific period of time, aiming to enhance the satisfaction of their daily needs and improve the quality of life (World Bank, 2023). As a key macroeconomic variable, it is a component of aggregate demand, household consumption expenditure and a determinant of economic performance and welfare of citizenry (Mahonye & Zengeni, 2020).

Consumption is influenced by economic factors such as income levels of consumers, interest rates, inflation, exchange rates, and consumer expectations. The Keynesian consumption function postulates that current income is the most significant determinant of consumption. As disposable income increases, household spending does not increase proportionally to that increment (Keynes, 1936). However, in Nigeria, where the income level of consumers is low and unstable, the fluctuation of inflation and exchange rate would significantly impact household consumption expenditure (Yusuf, Ojo, & Adediran, 2022).

In Nigeria, household consumption constitutes a significant portion of Gross Domestic Product (GDP), reflecting its significance in driving economic growth and development. According to the National Bureau of Statistics (NBS, 2023), household final consumption expenditure accounted for over 60% of Nigeria's GDP in recent years. This highlights the major role households play in sustaining economic and commercial activities through their consumption behavior. However, continuous macroeconomic challenges such as exchange rate depreciation, inflation and unemployment would have battered the purchasing power of households, thereby altering their consumption choices and overall welfare (Yaqub, 2025).

Inflation Rate

Generally, the inflation rate can be defined as the at which the general price level of goods and services rises, resulting in a decline in the purchasing power of a country's currency. Inflation rate is measured by the Consumer Price Index (CPI), which weighs changes in the cost of a basket of goods and services over a period of time (Mohammed and Ibrahim, 2019). Inflation directly affects consumers' cost of living, business planning, investment decisions, and government policy-making respectively.

However, inflation is driven by structural factors such as exchange rate volatility, supply chain disruptions, rising food prices, and fiscal imbalances in the economy. Inflationary pressures are aggravated by the country's overdependence on imports and vulnerability to global commodity price shocks. High inflation erodes the real income of households, remarkably, low- and middle-income earners, thereby reducing their capacity to maintain existing consumption levels (Ohemeng, Agyapong & Ofori-Boateng, 2021).

Trade Openness

Trade openness can be defined as the degree to which a country allows goods and services to move freely across its international borders or boundaries without trade barriers. It is measured as the ratio of the sum of exports and imports to GDP (Todaro & Smith, 2020). It shows how the country integrates into the global economy and how it is influenced by tariffs, trade policies, institutional frameworks and other barriers to trade.

In Nigeria, trade openness has been a strategic objective of the government since the emergence of the SAP in 1986. The primary goal of SAP is to liberalize the economy and boost non-oil exports. The proponents of SAP argue that greater openness can stimulate economic growth and development through increased access to international trade which directly exposes the economy to external shocks such as global commodity price fluctuations and exchange rate volatility. Thus, trade openness provides potential economic benefits, its impact on household consumption in Nigeria is facilitated by exchange rate stability, inflation control, and local production capacity by domestic firms (Abdurehman & Hacilar, 2019).

Interest rate

Interest rate is the cost of capital. It is the cost of borrowing money from banks or financial institutions or the return on investment for lending funds. It is normally expressed as a percentage of the principal amount per annum. It serves as one of the key monetary policy tools used by the apex bank to regulate money supply, inflation, and economic activity of a given country (Ibrahim and Suleiman, 2023). However, the interest rate has a relationship with inflation and the exchange rate. High interest rates in a domestic economy may attract foreign capital, which would stabilize the exchange rate but also suppress domestic consumption. In Nigeria, an inflation-prone environment, interest rate hikes are used to contain price increases, but this may come at the cost of reduced household consumption and economic growth (Adebayo & Olayemi, 2021).

Theoretical Review

Purchasing Power Parity (PPP) Theory

The Purchasing Power Parity (PPP) Theory was developed in 1918 by Gustav Cassel with the intention of explaining the relationship between exchange rates and price levels across different countries. According to Cassel, the exchange rate between two currencies should be equal to the ratio of the countries' price levels, indicating that identical goods should cost the same in different countries when priced in a common currency, assuming no transportation costs, tariffs, or other barriers to free trade (Cassel, 1918). This theory is anchored in the "principle of one price," which states that arbitrage will lead to price equalization for tradable goods across markets in different countries.

The fundamental of PPP theory is that exchange rate movements are primarily driven by changes in relative price levels. When a domestic inflation rate exceeds that of its trading partners, the domestic currency is expected to depreciate to restore parity in purchasing power. Invariably, a lower inflation rate in an economy leads to currency appreciation. This theoretical framework provides a long-run perspective on exchange rate determination and has been widely used to assess currency misalignments and the impact of macroeconomic fundamentals on exchange rates (Rogoff, 1996; Taylor & Taylor, 2004).

Keynesian Consumption Theory

The Keynesian Consumption Theory was developed principally by John Maynard Keynes, published in 1936 in his seminal work titled 'The General Theory of Employment, Interest, and Money'. Keynes demonstrated that consumption expenditure is determined by current income. He argued that as income increases, consumption also increases, but not proportionally; a percentage of additional income is saved rather than spent or consumed. The consumption function is given as $C = a + {}_bYd$, where consumption(C) is a function of disposable income (Yd), and a is autonomous consumption (independent of income), while b is the marginal propensity to consume (MPC), that is, the fraction of additional income that is spent on consumption. The fundamental view of this theory is that income is the primary driver of household consumption and that changes in income directly influence consumption expenditure in the short run (Keynes, 1936).

The Keynesian framework is highly relevant in the Nigerian economy. The exchange rates, inflation, and trade openness meaningfully influenced real income levels and household purchasing power. When inflation rises or the currency depreciates due to exchange rate fluctuation, real disposable income decreases proportionally, thereby reducing consumption expenditure (Adebayo & Okon, 2022; Onuorah & Igwilo, 2021).

Absolute Income Hypothesis (AIH)

The Absolute Income Hypothesis (AIH) was originally proposed by John Maynard Keynes in 1936 but later propounded by a renowned economist called Simon Kuznets during his empirical investigations into national income and consumption patterns. The hypothesis proposes that household consumption expenditure is positively related to the level of absolute income, that is, the higher the income, the greater the consumption, and vice versa. The hypothesis maintains that consumption does not increase at the same rate as income increases. AIH maintains that MPC is less than one (Keynes, 1936; Kuznets, 1946).

The AIH is based on the ground that current consumption depends on current income. Mathematically, $C = a + {}_bY$

where C = consumption

a = autonomous consumption (not dependent on income)

b = the MPC

Y = income.

The hypothesis posits that higher income increases consumption, but a portion of that income is saved.

Empirical Review

Hoang et al. (2020) conducted research on the influence of the exchange rate on inflation and economic growth in Vietnam from 2005 to 2018. The paper utilized a VAR self-regression vector model to analyze the variables employed. The VAR model factored in six endogenous variables: bilateral real exchange rate (Er), money supply (M2), exports (X), imports (IM), GDP at 2010 comparative prices (GDPR), and the consumer price index (CPI). Additionally, two exogenous variables, international price (Pw) and the US Federal Reserve interest rate (Ifed) were integrated into the model. The findings from the VAR model estimation indicated that exchange rate adjustments have an immediate effect on first-quarter inflation. However, the influence of the exchange rate on the trend in GDP at 2010 comparative prices (GDPR) remains unclear, and no definitive conclusion has been drawn regarding the impact of exchange rates on economic growth.

Nazifi and Ozovehe (2020) empirically analysed the impact of monetary policy on inflation in Nigeria from 1970 to 2018 period. The paper employed Autoregressive Distributed Lag (ARDL).

The findings of the paper indicated that is cointegration between monetary policy variables and inflation rate in Nigeria under studied period. The results equally revealed that the Monetary Policy Rate (MPR) was statistically significant in the short run, which portrayed that the monetary policy rate (MPR) has a significant impact on inflation in Nigeria in the short run.

Alsamara, Mrabet, and Hatemi (2020) studied the asymmetric response of consumer prices to import costs using a non-linear approach that examines both long- and short-run asymmetric pass-through effects. The paper makes use of quarterly data from 1990 to 2014 for the for Gulf Cooperation Council (GCC) nations and their trade partners to construct an index of import costs. The estimated non-linear autoregressive distributed lag model indicated a stronger pass-through effect of depreciation compared to appreciation. Asymmetric causality tests showed that import costs have an asymmetric causal impact on general price levels in GCC countries. These findings revealed new insights into import cost pass-through, this offered important information for consumers and policymakers.

Ahmed, et al. (2020) investigate the relationship between inflation and exports and imports within the context of the Pakistani economy. Utilizing monthly data on the Consumer Price Index (CPI), imports, and exports from July 2001 to June 2017, the study applies an error correction model to explore short-term associations and Johansen co-integration to assess long-term relationships among the variables. The Granger causality approach is used to determine causal directionality. The findings indicate that, in the long run, a 1% increase in exports and imports leads to a 0.63% and 0.57% increase in CPI respectively. The error-correction model indicates that approximately 1.18% of the deviation from the long-run equilibrium inflation rate is corrected annually. Additionally, variance decomposition analysis (VDA) reveals that exports have the greatest impact on CPI among the three variables considered. However, Granger causality and Toda-Yamamoto causality tests do not provide evidence that monthly changes in exports and imports causally affect monthly inflation changes in Pakistan.

Madesha, Chidoko, and Zivanomoyo (2019) independently examined the empirical link between exchange rate and inflation in Zimbabwe from 1980 to 2017. The Granger Causality test showed a long-run relationship between the exchange rate and inflation during the studied period, with both variables influencing each other. The findings provide insights for formulating policies that allow the exchange rate to function without causing inflation.

Abdurehman and Hacilar (2019) empirically studied the relationship between inflation and exchange rate in Turkey using data from Turkey and the United Kingdom. The paper employed Ordinary Least Squares (OLS) regression and a simple generalized autoregressive conditional heteroscedasticity (GARCH) model. The study found that PPP does not hold in Turkey. However, the presence of ARCH and GARCH indicates that deviations from PPP follow a specific pattern rather than being random.

Sek, Ooi, and Ismail (2019) independently analyzed the relationship between exchange rate and inflation targeting in three developed and three emerging Asian economies with inflation targeting (IT) regimes. The paper employed a multivariate GARCH model under BEKK specification. The paper indicated how the exchange rate affects IT performance and compares outcomes between

Asian and European economies in terms of economic structure changes and disinflation costs. The study found a significant relationship between exchange rate movements and inflation and output movements across both sub-periods. IT has notable impacts on inflation, output, and exchange rates, with increased volatility in Asian economies relative to developed economies.

Fetai et al. (2019) investigated the relationship between exchange rates and inflation in Western Balkan countries. The study used panel data, such as the fixed and random effects model and the 'Hausman-Taylor instrumental variables IV' model, to assess whether fixed exchange rates play a key role in controlling inflation or whether flexible exchange rates serve better as shock absorbers. The findings of the study showed that the exchange rate remained the principal source of inflationary pressures in Western Balkan countries.

Theoretical Framework

This study is anchored on Purchasing Power Parity (PPP) Theory, which provides how the exchange rate is determined and its impact on consumption. The PPP theory postulated that the exchange rate between two countries should reflect the relative price levels of goods and services in those countries (Krugman & Obstfeld, 2009).

RESEARCH METHODOLOGY

Model Specification

This study used the models that showed the relationship between household final consumption expenditure (HCE), exchange rate (EXR), inflation rate (INF), trade openness (TOP) and interest rate (INT) respectively. The functional form of the model is specified as:

$$HCE = f(EXR, INF, TOP, INT) \quad 3.1$$

The linear econometric form is given as:

$$HCE_t = \beta_0 + \beta_1 EXR_t + \beta_2 INF_t + \beta_3 TOP_t + \beta_4 INT_t + \mu_t \quad 3.2$$

HCE_t = Household final consumption expenditure at time *t* (dependent variable)

EXR_t = Exchange rate at time *t*

INF_t= Inflation rate at time *t*

INT_t = Interest rate at time *t*

TOP_t = Trade openness at time *t*, measured as (Exports + Imports)/GDP

β_0 =constant, β_1, β_2, and β_4 are parameters of the variables to be estimated

while μt= error term.

A priori Specification:

The expected signs of the coefficients of the explanatory variables are:

$\beta_1 = \frac{\partial HCE}{\partial EXR} < 0$ this implies that an increase in the exchange rate (i.e., naira depreciation) is expected to reduce household consumption, as imported goods become more expensive and reduce purchasing power. .

$\beta_2 = \frac{\partial HCE}{\partial INF} < 0$, this implies that higher inflation is expected to erode real income and reduce consumption expenditure.

$\beta_3 = \frac{\partial HCE}{\partial TOP} > 0$, this implies that greater trade openness may lead to increased availability of goods and services, enhancing household consumption options.

$\beta_4 = \frac{\partial HCE}{\partial INT} < 0$ this implies that higher interest rates can discourage consumer borrowing and spending, thus reducing consumption.

Types and Sources of Data

The data used is secondary data collected from the statistical bulletin of the CBN and World Development Indicators.

Method of Data Analysis

This paper employed the Autoregressive Distributed Lag (ARDL) technique, descriptive statistics, unit root test, co-integration test and test of normality respectively. E-view 12 econometric statistical software package was used.

Unit Root Tests

A unit root test is done to test if the variables under study are stationary or non- stationary, and to discover the order of integration. Augmented Dickey-Fuller (ADF) is applied as the most popular unit root test. The ADF test relies on estimating the test regression:

$$\Delta Y_t = \alpha_0 + p_1 Y_{t-1} + \sum_{i=1}^{k} \alpha_i \Delta Y_{t-1} + \mu_t \qquad 3.3$$

Where:

ΔY_t is change in Y_t, ΔY_{t-1}captures serial correlation, μ_t is the error term, t is lag trend, k is lagged value of ΔY. The unit root test is then carried out under the null hypothesis $p = 0$ against the alternative hypothesis of $p < 0$.

Decision rule:

If ADF statistics > critical value - Variable is Stationary

If ADF statistics < critical value - Variable is non-stationary

At Significant level 5% level.

ARDL Co-integration Test

The ARDL Long-run and bound test is used to investigate the long-run relationship between household consumption expenditure and other variables.

To perform the bound test for co-integration, the model employed for this study is specified as:

$$\Delta HCE_t = \alpha_{01} + \beta_{11} HCE_{t-i} + \beta_{21} EXR_{t-i} + \beta_{31} INF_{t-1} + \beta_{41} INT_{t-1} + \sum_{i=1}^{p} \alpha_{1i} \Delta HCE_{t-1} + \sum_{i=1}^{q} \alpha_{2i} \Delta EXR_{t-1} + \sum_{i=1}^{q} \alpha_{3i} \Delta INF_{t-1} + \sum_{i=1}^{q} \alpha_{4i} \Delta INT_{t-1} + \mu_{1t} \quad 3.4$$

Autoregressive Distributed Lag (ARDL)

A general ARDL equation with a deterministic trend is expressed as:

$$Y_t = \lambda_{oi} + \sum_{i=1}^{p} \alpha_i Y_{t-1} + \sum_{i=0}^{q} \beta_t^1 X_{t-i} + \mu_{it} \quad 3.5$$

Where;

Y_t is the independent variable, X_t is the dependent variable, λ is a constant, α and β are co-efficient of variable Y and X respectively, $i = 1, \ldots \ldots, k$; 'p and q are optimal lag order (where p is the optimal lag for the dependent variable, q is the optimal lag for the independent variable) and μ_{it} represents the error term.

Error Correction Mechanism (ECM)

The Error Correction Model is used to reveal the speed of adjustment from the short-run equilibrium to the long-run equilibrium state.

The error correction model for the estimation of the short-run relationship is given as:

$$\Delta HCE_t = \alpha_{02} + \sum_{i=1}^{p} \alpha_{1i} \Delta HCE_{t-1} + \sum_{i=1}^{q} \alpha_{2i} \Delta EXR_{t-1} + \sum_{i=1}^{q} \alpha_{3i} \Delta INF_{t-1} + \sum_{i=1}^{q} \alpha_{5i} \Delta INT_{t-1} + \lambda ECT_{t-1} + \mu_{2t} \quad 3.6$$

Where; $\alpha_{1i}, \alpha_{2i}, \alpha_{3i}, \alpha_{4i}$ are the short run dynamic coefficients. $\lambda = (1 - \sum_{i=1}^{p} \delta_i)$ which is the speed of adjustment parameter with a negative sign. $ECT = (HCE_{t-i} - \theta X_t)$ where θ is the long run parameter.

DATA PRESENTATION AND ANALYSIS

Table 4.1: Descriptive Statistics results

	HCE (₦)	EXR (₦ /USD)	INF (%)	TOP (%)	INT (%)
Mean	30952.65	127.9705	19.07948	0.265247	17.24726
Median	7386.643	118.5667	13.00697	0.278678	16.90390
Maximum	141696.8	645.1941	72.83550	0.462255	31.65000
Minimum	13.60023	0.617708	5.388008	0.023721	8.916667
Std. Dev.	42068.95	142.7848	16.28122	0.103095	4.785759
Skewness	1.217626	1.548338	1.867414	-0.648278	0.396544
Kurtosis	3.137150	5.554952	5.472970	3.187395	3.635158
Jarque-Bera	10.65910	28.87663	35.94894	3.074808	1.849745
Probability	0.004846	0.000001	0.000000	0.214938	0.396582
Sum	1330964.	5502.731	820.4177	11.40560	741.6321
Sum Sq. Dev.	7.43E+10	856275.4	11133.28	0.446400	961.9466
Observations	43	43	43	43	43

Source: Author's computation with Eviews, 2025

Table 1 presents the descriptive statistics for the variables under Study-Household Consumption Expenditure (HCE), Exchange Rate (EXR), Inflation (INF), Trade Openness (TOP), and Interest Rate (INT) which are computed using annual data from 1981 to 2023. The household consumption expenditure (HCE) is expressed in Nigerian currency, the exchange rate is presented in US dollars, while the remaining variables are analyzed in percentages. The summary statistics revealed that the mean values of (HCE), (EXR), (INF), (TOP), and (INT) are 30952.65, 127.9705, 19.07948, 0.265247, and 17.24726, respectively. These figures present the average levels of the variables over the study period. The standard deviation reported in Table 1 is 42068.95 (HCE), 142.7848 (EXR), 16.28122(INF), 0.103095 (TOP), and 4.785759 (INR). These measures displayed the degree of variability around the mean for each variable over the 42-year period. The high standard deviation of HCE (42068.95) and EXR (142.7848) suggested significant fluctuations of the exchange rate and its impact on household consumption expenditure, while the lower standard deviations of the remaining variables indicated relatively stable patterns.

In summary, the Jarque-Bera test indicated that all variables, except trade openness and interest rate, significantly deviate from normality, pointing toward the presence of volatility and extreme values in exchange rates, inflation, and consumption expenditure under the study period.

Figure 4.1: Trend Analysis

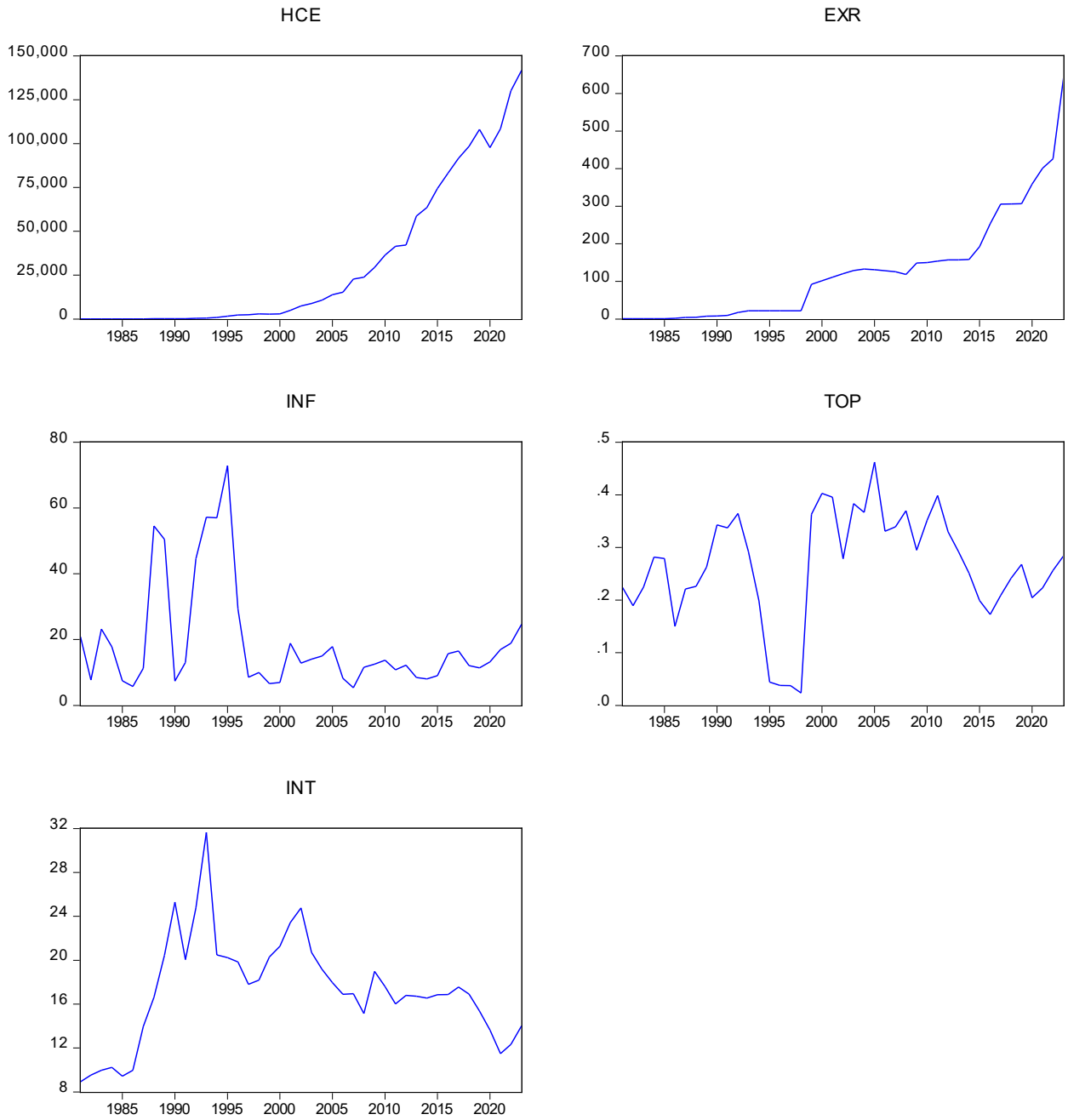

Figure 4.1: Trend movement of the Variables of the research paper

Source: Author's computation with Eviews, 2025

Household Consumption Expenditure (HCE)

From 1981 to 2023, household consumption expenditure showed a strong upward trend. it grows steadily, with notable acceleration *reflecting rising household spending possibly due to inflation, economic growth, and population increases.*

Exchange Rate (EXR):

The exchange rate displays a clear pattern of depreciation over the years, with the Naira weakening significantly against foreign currencies reflecting persistent pressure on the Naira due to inflation, external shocks, and policy shifts.

Inflation Rate (INF):

Inflation shows high volatility throughout the period linked to economic instability and reforms. The upward spike in the early 2020s suggests renewed inflationary pressures possibly due to supply shocks or monetary factors.

Trade Openness (TOP):

Trade openness started low in the early stage, reflecting a more closed economy; the economy was not integrated into the global economic activities. It increases somewhat in the later time but remains volatile, influenced by Nigeria's fluctuating trade policies and global economic conditions.

Interest Rate (INT):

Interest rates demonstrate a general downward trend from 1981 to 2023. Rates spike intermittently during periods of economic adjustment and high.

Table 4.2: ADF Unit Root Test Results

At Level			At First Difference		
Variables	**T-stat**	**P-value**	**T-stat**	**P-value**	**Order of Integration**
LNHCE	-3.2978	0.0213			I(0)
EXR	-1.9333	0.3144	-5.5031	0.0000	I(1)
INF	-3.0824	0.0356			I(0)
TOP	-2.7128	0.0803	-6.3519	0.0000	I(1)
INT	-2.4334	0.1390	-5.5377	0.0000	I(1)

Source: Author's computation with Eviews, 2025

The results indicate that household consumption expenditure (LNHCE) and inflation (INF) are stationary at levels, and they are integrated of order zero, I(0). However, exchange rate (EXR), trade

openness (TOP), and interest rate (INT) are non-stationary at levels but become stationary after first differencing, they are integrated of order one, I(1).

Table 4.3: Lag Selection Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-348.4014	NA	32.48371	17.67007	17.88118	17.74640
1	-167.2106	308.0244*	0.013334*	9.860530*	11.12719*	10.31851*
2	-142.4144	35.95455	0.014321	9.870718	12.19293	10.71036
3	-121.7831	24.75754	0.020989	10.08915	13.46691	11.31044

Source: Author's computation with Eviews, 2025

Using several measures, including the Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn (HQ), the optimal lag length for the model was known. The findings displayed that the first lag (lag 1) is preferred, as it minimizes the AIC value at 9.86 from the table above, which is lower than the values for higher lags. Additionally, the likelihood ratio test supports this choice with a significant value

Table 4.4: F-Bound Test Result

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	16.19345	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Author's computation with Eviews, 2025

The calculated F-statistic of 16.19 is significantly higher than the upper critical bounds at all conventional significance levels (1%, 2.5%, 5%, and 10%) as indicated in Table 4.4 above, where the highest upper bound is 4.37 at 1%. Since the F-statistic exceeds these critical values, the null hypothesis is rejected, indicating the presence of a stable long-run relationship among the variables.

Table 4.5: ARDL Short Run Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.*	Remarks
LNHCE(-1)	0.948581	0.061941	15.31415	0.0000	*Significance*
EXR	-0.291006	0.110554	-2.632261	0.0127	*Significance*
EXR(-1)	0.309989	0.102156	3.034473	0.0046	*Significance*
INF	0.984161	0.047253	20.82749	0.0000	*significance*
INF(-1)	-0.003036	0.002253	-1.347328	0.1868	*Insignificance*
TOP	0.051684	0.323512	0.159760	0.8740	*Insignificance*
INT	0.004837	0.009495	0.509463	0.6137	*Insignificance*
CointEq(-1)*	-0.177047	0.028100	-6.300515	0.0000	*significance*
Adjusted R-squared	0.796511				
F-statistic	1673.690	Durbin-Watson stat		2.306349	
Prob(F-statistic)	0.000000				

Source: Author's computation with Eviews, 2025

From the table above, a 1% increase in exchange rate would lead to about 29% decrease in household consumption expenditure. This finding is attributed to Nigeria's high dependence on imported goods, currency depreciation, increase import prices, reduction in households' purchasing power and reduction in consumption expenditure. This finding supports the Purchasing Power Parity (PPP) theory adopted in this study, which postulated that exchange rate fluctuations affect domestic prices and consumption behavior of individuals. The findings agreed with Musa (2021) and Hoang et al. (2020), who analyzed that exchange rate volatility impacts inflation and household consumption expenditure in an import dependent economy. The lagged exchange rate (EXR (-1)) shows a positive coefficient of 0.31, implying that the immediate effect of depreciation reduced consumption.

Inflation (INF) displayed a strong positive and statistically significant impact on household consumption in the short run. A 1% increase in inflation would lead to approximately a 98% increase in household consumption. Households spend more in the present to avoid future price increases. This behavior is explained under the Absolute Income Hypothesis (AIH) where consumption decisions depend on current income and expectations. This movement is noticeable in high-inflation economies where saving is unattractive, and spending is unavoidable. The result agreed with the work of Rizal et al. (2024). The lagged inflation variable (INF (-1)) is statistically insignificant, indicating that past inflation rates do not significantly influence current consumption in the short run.

Trade openness (TOP) is found to be statistically insignificant in the short run, with a negligible positive coefficient. This implies that a 1% increase in trade openness would bring about 5% increase in household consumption expenditure. This means that the ratio of trade (exports + imports) to GDP does not have a direct short-run impact on household consumption. This finding contrasts with the work of Adeleye et al. (2025

Similarly, the interest rate (INT) is statistically insignificant, showing a very small positive coefficient. This implies that 1% increase in interest rate would bring about 04%, in the short run, variations in interest rates do not have a noticeable impact on household consumption expenditure in Nigeria. This result supports Ibrahim and David (2022), who found that monetary policy tools such as interest rates are ineffective at controlling inflation. It supports the impression that in developing economies with limited access to credit, interest rate changes have a very insignificant impact on household consumption patterns.

Finally, the error correction term (CointEq(-1)) is negative with a coefficient of -0.177. This confirms the presence of a long-run equilibrium relationship between household consumption expenditure and the macroeconomic variables in the model. It also aligns with the PPP theory, emphasizing long-term adjustments to price and currency misalignments.

The model demonstrates a strong explanatory power, as indicated by the adjusted R-squared of approximately 80% of the variation in household consumption expenditure is explained by the independent variables in the model. The F-statistic value of 1673.69 from the table is highly significant. (p-value = 0.000), confirming that the overall model is statistically significant and the independent variables jointly have an impact on consumption expenditure. The Durbin-Watson statistic of 2.31 suggests that there is no serious autocorrelation problem in the residuals, as it is close to the ideal value of 2. These statistical figures displayed a well-fitted and reliable model.

Table 4.6: ARDL Long-run Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.	Remarks
EXR	-0.025076	0.012064	-2.078640	0.0485	*significance*
INF	-0.023695	0.011216	-2.112670	0.0452	*significance*
TOP	-0.014780	0.006537	-2.261046	0.0331	*significance*
INT	-0.165633	0.064754	-2.557903	0.0173	*significance*
C	9.848805	5.852344	1.682882	0.1016	*significance*

Source: Author's computation with Eviews, 2025

Starting with the exchange rate (EXR), a 1% increase in the exchange rate would bring about 3% decrease in household consumption expenditure. The depreciation of the Nigerian naira led to a sharp decline in household consumption expenditure in the long run. This finding demonstrated that currency depreciation undermines the real purchasing power of households, especially in import-dependent economies like Nigeria. It is in line with the Purchasing Power Parity (PPP) theory, which postulates that in the long run, exchange rate fluctuation impacts household consumption. This result agreed with Adeleye et al. (2025) and Musa (2021

A 1% increase in inflation would result in a 2.3% decrease in household consumption expenditure. Inflation (INF) exerts an inverse relationship with household consumption, but it is statistically insignificant. Unlike the short-run impact observed earlier, this finding demonstrated the long-term

reduction in the value of real incomes and savings due to inflation, particularly in developing countries where wage adjustments lag far behind price increases during the period of inflation. The result is agreeing with the work of Pham et al. (2023) and Liu & Ma (2023), who conducted long-term inflationary pressures as a major limitation to household welfare in Asian economies.

Trade openness (TOP) exhibits a negative relationship with consumption in the long run, with a coefficient of -0.0148. This suggests that a 1% increase in trade openness resulted in about 1.5% decline in household consumption. This finding may reflect the reality that trade liberalization, while potentially beneficial for growth, does not always translate into improved household welfare in economies where local industries are underdeveloped or where trade gains are not evenly distributed. In Nigeria's case, trade openness might be associated with increased imports of consumer goods and exposure to global price shocks, which could suppress domestic consumption. This analysis agreed with the work of Yaqub (2025.

The interest rate (INT) in the long-run has an impact on consumption, with a relatively negative coefficient of -0.166. This implies that a 1% increase in interest rates leads to a 17% decline in household consumption. Higher interest rates typically raise the cost of borrowing, reduce disposable income, and encourage saving. This finding agreed with the Absolute Income Hypothesis (AIH) and Keynesian theory.

Table 4.7: Diagnostic Test Results Summary

Test	Statistic	d.f.	Probability	Remark
Normality Test (Jarque-Bera)	JB = 1.518719	—	0.467966	Residuals are normally distributed (accept H_0)
Breusch-Godfrey Serial Correlation LM	F = 0.559116	(2, 32)	0.5772	No serial correlation in residuals
	Obs*R^2 = 1.418123	(2)	0.4921	No serial correlation in residuals
Heteroskedasticity (BPG)	F = 1.021089	(7, 34)	0.4344	No evidence of heteroskedasticity
	Obs*R^2 = 7.295688	(7)	0.3988	Homoskedasticity assumed
	Scaled ESS = 8.622008	(7)	0.2809	Homoskedasticity assumed
Ramsey RESET	F = 0.106875	(1, 33)	0.7458	Model is correctly specified (no omitted variable bias)

Source: Author's computation with Eviews, 2025

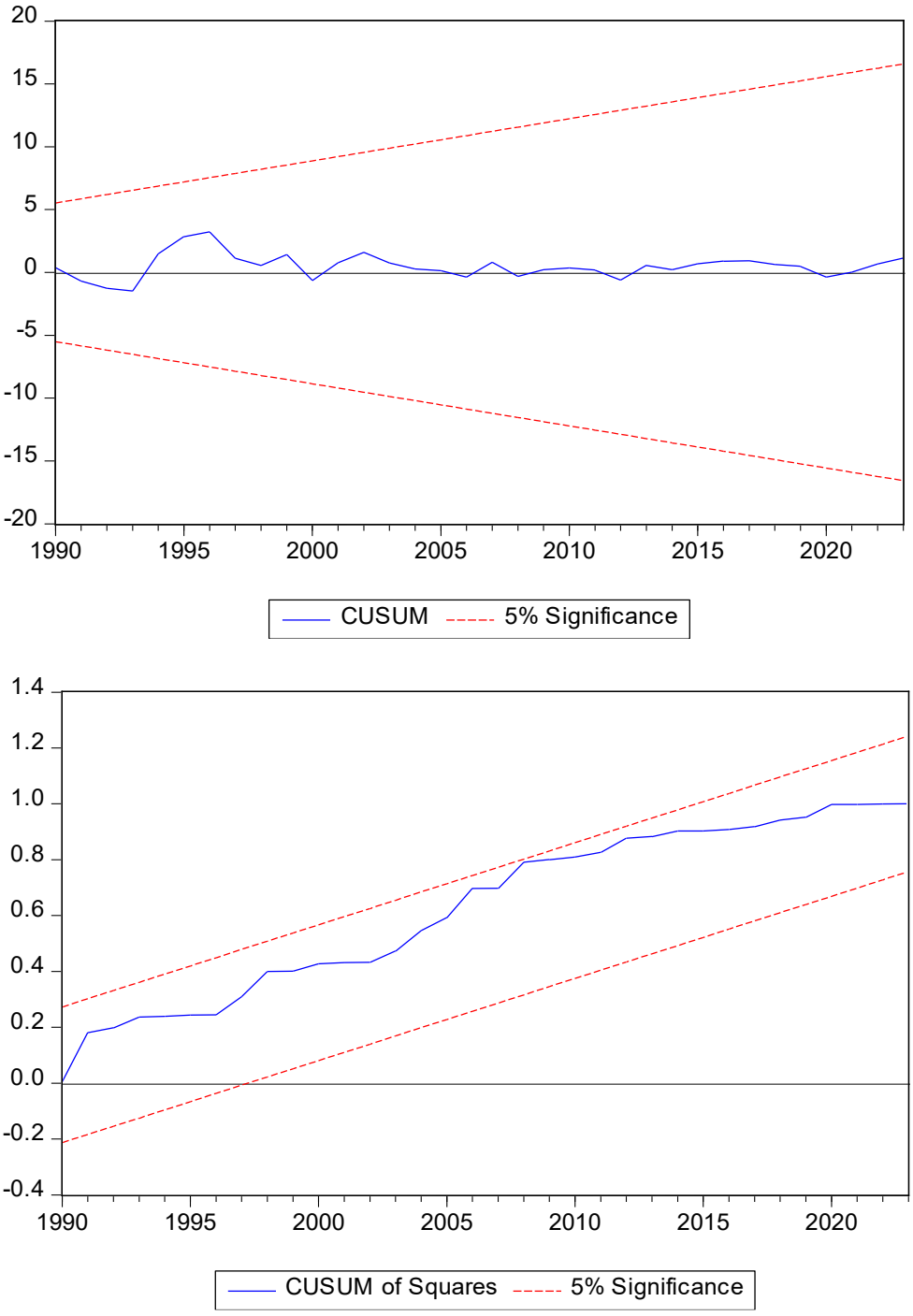

Figure 4.2: CUSUM Test Result

The CUSUM and CUSUMSQ in figures remained within the 5% critical region, meaning the constancy and stability of the regression estimates throughout the study period by this paper.

Conclusion

This research paper investigated the impact of exchange rates on final consumption expenditure of households in Nigeria. The study investigated the long-run and short-run impact of key macroeconomic variables, such as exchange rate, inflation, trade openness, and interest rate, on household consumption expenditure between 1981 and 2023. The study is anchored on the Purchasing Power Parity (PPP) theory and supported by the Keynesian Consumption Theory and the Absolute Income Hypothesis. The primary objectives were to investigate how exchange rate fluctuation, inflation rate, and trade openness and interest rate influence household consumption in Nigeria. The study employed the ARDL model, stationarity tests (ADF), and other estimation

The results revealed that exchange rate, inflation, trade openness, and interest rate all exhibited significant negative impacts on household consumption expenditure in the long run, with only inflation and exchange rate showing significance in the short run. The error correction term was negative and statistically significant, indicating a stable adjustment process toward long-run equilibrium. Diagnostic checks confirmed that the model was well-specified, with normally distributed residuals, no serial correlation, absence of heteroskedasticity. The Adjusted R-squared (0.7965) and Durbin-Watson statistic (2.31) established the goodness-of-fit and absence of autocorrelation.

The paper concludes that macroeconomic instability such as exchange rate and inflation pose a significant threat to household consumption expenditure in Nigeria. These findings of the study highlight the pressing need for exchange rate management and inflation control together with strategic trade policies that will boost domestic welfare in Nigeria.

Recommendations

Based on the findings of this study, the following recommendations were suggested:

Stabilize the Exchange Rate through Monetary and Fiscal Policies

The negative impact of exchange rate fluctuations on household consumption expenditure in Nigeria, the CBN and fiscal authorities should pursue consistent exchange rate policies through reducing dependence on imports, increasing foreign exchange reserves, and promoting exports.

Implement Effective Inflation-Targeting Frameworks

Inflation significantly reduces household consumption in both the short and long runs. The

government should adopt inflation-targeting frameworks. This involves monetary transmission mechanisms, maintaining a stable macroeconomic environment, and curbing excess liquidity in the economy.

Review Trade Openness Strategies to Protect Domestic Consumption

Trade openness negatively affects household consumption suggesting the need for more balanced trade policies. Policymakers should promote import-substitution industries and encourage the consumption of locally produced goods to safeguard households from the volatility of global trade.

Lower Interest Rates for Credit Accessibility

There is a need to make credit more accessible and affordable to households. The monetary authorities should work to reduce the lending rates and encourage commercial banks to offer consumer-friendly loan products. Expanding financial inclusion and access to affordable financing can enhance household spending.

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