Review Article

INCOME AND HOUSEHOLD CONSUMPTION EXPENDITURE IN NIGERIA (1986 – 2020)

ABSTRACT

The correlation between household consumption expenditure and income in Nigeria was examined using annual time series data (1986–2020). The objectives of the study were achieved using some econometrics tools like the error correction model, the Johansen co-integration test, and the Granger causality test. There is a long-run relationship between income and household consumption expenditure, as revealed by the Johansen co-integration test. The errors that arose in the short run were corrected in the long run using the error correction model. There is a direct and significant relationship between household consumption expenditure and income, while other variables, except inflation, exhibit the same relationship. Inflation shows an indirect relationship. Since there was a long-term relationship between household consumption expenditure and income, the study recommended that the government enhance its welfare activities to improve the citizens' ability to buy goods and services. The interest rate should be reduced to encourage both potential and existing investors. The monetary authorities should embark on policies that will ensure a reduction in inflation rates and also ensure price stability. This would increase the value of each household's income and lead to an increase in household consumption.

Keywords: Consumption, Income, Interest rate, Inflation, Monetary authority and Price Stability

INTRODUCTION

Macroeconomics examines aggregate consumption, which is determined by the amount of real income. Aggregate demand has two dynamic components—investment and consumption—with consumption making up the biggest percentage of the gross domestic product in most nations. It plays a significant part in developing a nation's economy. Access to finance sources and subsistence activities are highly essential in influencing overall consumption. Numerous factors influence an individual's consumption pattern, including their age, gender, family size, current income, and the overall economy. However, when an individual's current income is affected by unexpected gains, their overall consumption patterns are based on the long-term outlook for their financial situation rather than on their current finances. For example, a person may realize that his financial situation could be adjusted to better forecast his spending and savings behaviour.

Generally, consumer behaviour reflects a nation's degree of economic well-being and poverty. To know the changing patterns in household consumption spending, it is critical to measure consumption expenditure over time in every economy. Through such analysis, it is possible to discover the distribution of individual standards of living and the degree of disparity. In the third and fourth quarters of 2020, household consumption grew by 6.1 per cent and 16.59 per cent, respectively, over the previous year. In 2020, the annual rate of growth in real household consumption expenditure was 0.81 per cent, compared to a decrease of 1.06 per cent in the preceding year (NBS, 2020). Identifying and adjusting for economic, social, and clashing ideologies in standards of living is crucial to assessing household expenditure and consumption trends. The government, when setting its fiscal policies, looks at consumer expenditure because it is the main component of the Gross Domestic Product (GDP). In 2020, GDP was 152.32 trillion nairas or more than 400 billion USD. From October till the end of the year 2020, Nigeria's GDP reached 43.56 trillion nairas (NBS, 2020).

The importance of consumption is especially notable in economic literature due to its relevance to consumer welfare. In Nigeria, it represents around two-thirds of the country's GDP. Household consumption spending patterns represent a way in which a community makes use of its resources for survival, comfort, and recreation, which may be described using words like quality, quantity, act, and tendency. As a result, it is important to conduct

research that examines the correlation between income and consumption as well as other factors, like equitable distribution of income and goods and services, so the government and policymakers can use these factors to assess the country's consumption habits while establishing the country's social and economic policies.

As Keynes famously noted, few individuals would change their way of life due to a decline in interest rates. Therefore, the contemporary theory of consumption theory started with his general theory, which held that "man is disposed of, as a rule, and on the average, to increase his consumption as his income increases, but not by as much as the increase in his income" (Keynes, 1936:96). A postulate of Keynes states that, overall, families will enhance their welfare by acquiring more of the commodities and services that have been created and will be produced in the future. This key element of collective demand enables them to improve their well-being. Economists have examined in-depth the probable drivers of the aggregate consumption function since this is of importance to an understanding of the aggregate consumption function. Numerous thoughts on consumption exist, but there is no single theory that accounts for all economies. The primary goals of this research are to investigate the relationship between income and consumption expenditure in Nigeria, as well as to assess the impact of macroeconomic variables such as inflation, gross fixed capital, and exchange rate on household consumption expenditure.

THEORETICAL LITERATURE REVIEW

Many theories on consumption have been identified and debated by prominent economists. Such theories include Duesenberry's Relative Income Hypothesis, Keynes' Absolute Income Hypothesis, Modigliani's Life-Cycle Hypothesis, and Friedman's Permanent Income Hypothesis. However, this study is underpinned by the Keynes Absolute Income Hypothesis due to its emphasis on current income as the primary cause of consumption.

2.1.1 Keynes' Absolute Income Hypothesis

In his general theory, Keynes is credited with pioneering the modern theory of consumption by assuming that aggregate consumption is a function of aggregate current disposable income. This postulation was based on his psychological law of consumption, which argues that increases in consumption lead to increases in income, but by a lesser increase in income

than vice versa. In the short run, there exists a non-coincidence between the average propensity to consume (APC) and the marginal propensity to consume (MPC). Rather, MPC<APC and 0<MPC<1. Though this theory has successfully modelled consumption in the short run, efforts made to apply this model over a longer time frame have been less successful. This contradictory result with Keynes prompted the development of other consumption theories based on factors other than income that are important in determining consumption. Some of the factors, as stated by Tobin (1951), are the increase in asset holdings, the advent of new household consumer goods, increased urbanization, and the percentage increase of elderly people tending to shift consumption.

2.1.2 Duesenberry's Relative Income Hypothesis

The James Duesenberry (1949) Relative Income Hypothesis, though short-lived, stands as a major challenge to the key assumptions of the Keynes consumption theory. He postulates that consumption is based on relative income rather than absolute income. He argued that the consumption behaviour of an individual is interdependent on the behaviour of others and that consumption relationships are not reversible in time. He claimed that the individual's utility index as a consumer depends on the ratio of their consumption to a weighted average of others' consumption. Based on this, he arrived at two conclusions: firstly, in line with time-series evidence, the aggregate saving rate is not dependent on aggregate income; and secondly, in line with cross-sectional evidence, an individual's propensity to save is an aggregate function of their percentile position in the income distribution (Alimi 2013).

2.1.3 Friedman's Permanent Income Hypothesis

In 1957, Milton Friedman proposed the Permanent Income Hypothesis (PIH). This theory is intended to resolve the seeming conflict between a proportional long-run consumption function and a non-proportional short-run consumption function. He asserted that current income should not be the primary determinant of consumption, but rather long-term expected income should be. Furthermore, he posited that consumption and income should be divided into permanent and transitory components. Permanent income is the amount of money a worker expects to earn over a specified period of time, and it can fluctuate proportionately with the actual level of income. Transitory income, on the other hand, is a non-permanent and unstable income received by a worker, the amount of which is determined by his luck and effort. Friedman's PIH was specific about people's desires to maximize their lifetime utility

while being constrained by their ability to spend all of their lifetime resources. Therefore, consumers' plan their spending based on long-run expectations of their lifetime accrued resources.

2.1.4 Modigliani's Life-Cycle Hypothesis

This theory was developed by Franco Modigliani and Richard Brumberg (1954). The notion of this theory is based on the fact that the consumption behaviour of an individual should be based on their lifetime expected income rather than their current income. People make choices at an early stage of their lives on the level of expenditure they plan to spend. However, they are constrained by the resource inflow through their existence. He also emphasized a number of factors that define the consumption of an individual. These factors are available resources centred on capital returns, spending decisions, and the present age at which the plan is made. In the end, the main aim of all consumers is to maximize their satisfaction in their lifetime, and this is mostly dependent on how much or little their available resources are throughout their existence. This shows the possibility of an inverse relationship between income and consumption spending, by way of saving for future consumption.

2.2 Empirical Literature

Amin (2011) examined the causal relationship between consumption expenditure and economic growth in Bangladesh using a bivariate framework and annual data from 1976 to 2009. He employed the Johansen and ARDL cointegration tests, which showed that there was a long-run cointegration between the variables. The presence of a long-run unidirectional causal relationship between economic growth and consumption expenditure was also discovered using the Granger causality test. This proves that the Keynesian consumption functions are valid for the study.

Alimi (2013) tested the Keynesian Absolute Income Hypothesis and analysed the Kuznets Paradox for Nigeria, estimating the Marginal Propensity to Consume (MPC) and the Average Propensity to Consume (APC) parameters for short-run and long-run time series. The results showed MPC is in conformity with Keynes' proposition that MPC is less than one, however unstable, and the autonomous consumption value is negative in the long run. Also, contrary to Keynes' inference, the APC did not vary systematically with income. The resultant effect

of this is that the consumption income elasticity is not in line with Keynes' expectations because there are other significant factors that determine consumption apart from income.

Using time-series data from 1980 to 2013, Santos (2015) estimated the consumption function for Nigeria and South Africa using the Permanent Income Hypothesis. He employed Cagan's adaptive expectation model and the result showed that there is a long-run relationship between consumption and income for Nigeria and SA. The study showed clearly that the consumption behaviour of a Nigerian consumer based on future expected income conforms to the Permanent Income Hypothesis, while that of a South African consumer exhibits the Relative Income Hypothesis, where current income is affected by past consumption.

Ezeji and Ajudua (2015) used a derived model from the Keynesian consumption function to explore the determinants of aggregate consumption expenditure in Nigeria. The Augmented Dickey-Fuller and Johansen Co-integration tests were conducted to test for stationarity and long-run equilibrium relationships among the variables. The findings established a positive relationship between consumption expenditure and income and proved that the Nigerian consumption function is Keynesian in nature. It also revealed that variables other than current income, such as interest rate, price level, and exchange rate, were important in explaining Nigerian consumption behaviour.

In their study, Onanuga et al. (2015) factually applied the Keynesian Absolute Income Hypothesis in estimating the consumption function for Nigeria. The model formulated showed the short- and long-run consumption function relationship using the Granger representation theorem. The outcome revealed the short-run consumption function was not proportional, i.e., MPC (0.78) was less than APC (0.88), which conforms with the AIH.

Ayeni and Akeju (2017) used the Habit Persistence and Permanent Income hypotheses to determine the dynamic relationship between consumption expenditure and income in Nigeria. The former revealed that individuals' consumption habits adjust rapidly to changes in disposable income in the short run at 0.5569, whereas the latter revealed that the long-run multiplier effect of marginal propensity to consume out of permanent income is 0.2953, an indication that consumers spend less than they save.

Ekong and Effiong (2020) used global data to show that gross national income and inflation rate have a large and positive effect on household consumption expenditure in West Africa,

while savings and interest rates have a significant but negative effect. This finding reaffirmed the validity of the absolute income hypothesis for West Africa.

Iheonu and Nwachukwu (2020) conducted a study on the macroeconomic determinants of household consumption in selected West African countries for the period 1989 to 2018. Using the panel augmented mean group procedure, the findings showed that household consumption in West Africa was positively influenced by the exchange rate, GDP per capita, domestic credit to the private sector, and personal remittances, while inflation had a negative impact on it.

Osuji (2020) employed the use of the ordinary least square econometric method to study the effect of inflation on household final consumption expenditure in Nigeria covering the period 1981 to 2018. The result indicated that there is a long-term positive relationship between inflation and household consumption expenditure in Nigeria.

Habanabakize (2021) examined the responsiveness of South Africa's household consumption expenditure to petrol prices, exchange rate volatility, and disposable income. He examined the co-integration and the short-run relationship between the variables, using time series data from 2002 to 2020 and the Auto Regressive Distributed Lag (ARDL) technique. The findings of this study showed a long-term relationship among the examined variables. All independent variables had a positive long-run impact on household expenditure.

RESEARCH METHODOLOGY

3.1 Preamble

This chapter is deduced from a theoretical framework that acts as the foundation for the reviewed work. The method of data analysis and the methodology's limitations are discussed in this chapter. The primary objective of this research work is to examine the relationship between household consumption expenditure and income in Nigeria.

3.2 Model Specification

$$HCON = f(GDP, GFC, INF\ EXG) \quad \text{(3.1)}$$

$$HCON = GDP^{a_1} GFC^{a_2} INF^{a_3} EXG^{a_4} \quad \text{(3.2)}$$

$$logHCON = a_0 + a_1 logGDP_t + a_2 logGFC_t + a_3 logINF_t + a_4 logEXG_t + \mu_t \ldots \quad (3.3)$$

Where:

HCON =Household Consumption Expenditure,

GDP = Real Gross Domestic Product,

GFC=Gross Fixed Capital Formation,

INF=Inflation,

EXG=Exchange Rate

3.3 Source of Data

The data source process involves a variety of activities, beginning with the search person in libraries extracting information from the volumes of materials available as regards the research work. This study utilized annual time series data for the period 1986–2020 obtained from the statistical bulletin of the Central Bank of Nigeria (CBN).

3.4 Variable Description and Measurement

Household Consumption Expenditure: the proxy measures the household's expenditure on goods and services.

Gross Domestic Product (GDP): is the monetary value of a country's final outputs.

Gross Fixed Capital: it shows how much of the new value-added in the production process is reinvested rather than consumed. It represents a component of the expenditure on the GDP.

Inflation rate: is the persistent increase in the general price level in an economy measured at a particular point in time.

The exchange rate: is the rate at which one country’s currency is exchanged for another.

3.4.1 A-priori Expectation

This refers to the relationship that exists between the explained and explanatory variables of the model as postulated by the endogenous theory. Here, the researcher determines whether

the variable conforms to expectations or whether there is a deviation. The table below summarizes the a-priori expectations of the parameters:

Table 1 A-priori expectation of the Independent Variables in the Model

SYMBOL	VARIABLES	EXPECTED SIGNS
GDP	Gross Domestic Product	Positive
GFC	Gross Fixed Capital	Positive
EXG	Exchange Rate	Positive/Negative
INF	Inflation Rate	Negative

Source: Author's Computation

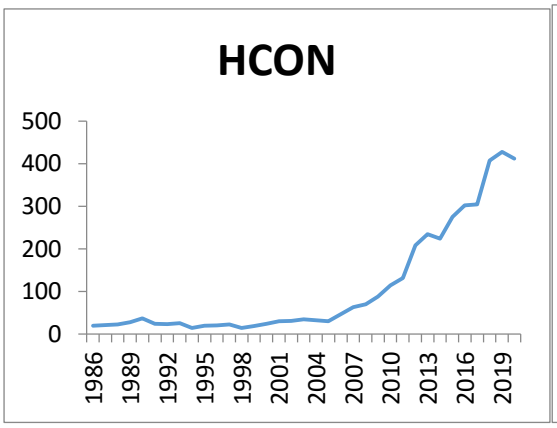
RESULTS AND DISCUSSIONS

4.1 Trend Analysis

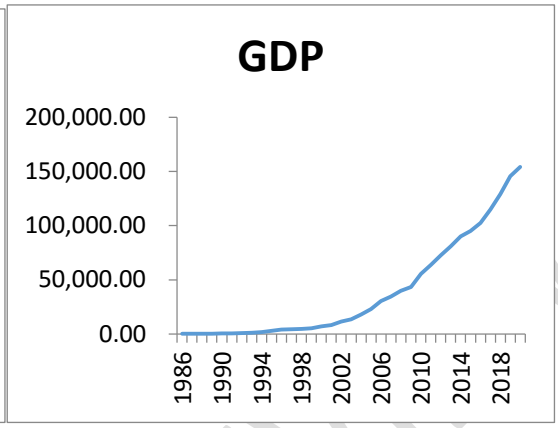
This section shows the trend of the various variables used in this analysis over the reviewed years in Nigeria. The outcome of the study is achieved by using regression analysis with the aid of a statistical software package.

Figure 1: Variables and Trend (1986-2020)

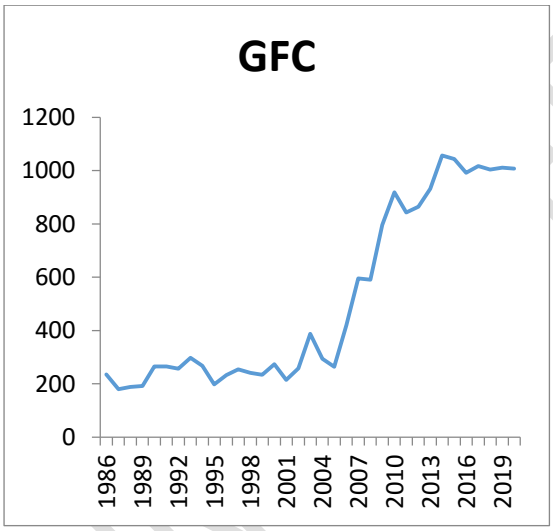
1a: HCON



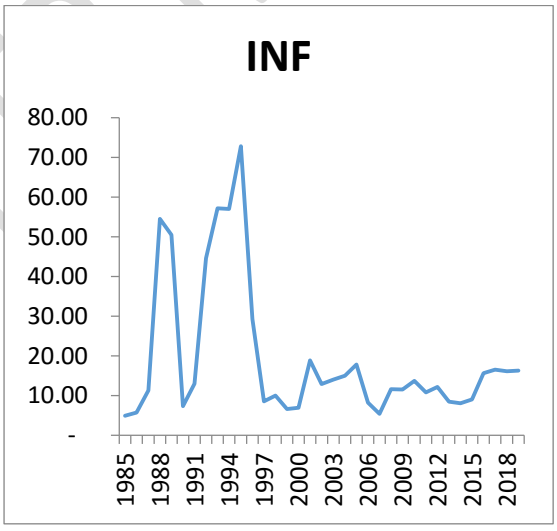
1b: GDP



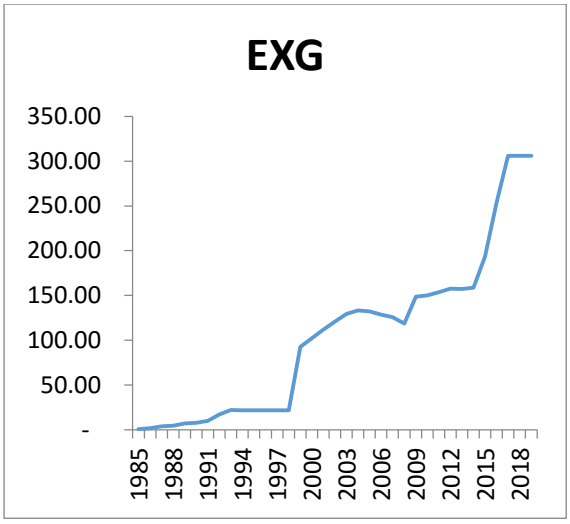
1c: GFC



1d: INF



1e: EXG



Source: Author's Computation, 2021

The trend in Household Consumption (HCON)

Fig 4.1a above shows a steady movement of household consumption expenditure from 1986 to 2020. The graph shows that Nigeria has witnessed a huge rise in consumption expenditure due to an increase in the population.

The trend in Gross Domestic Product (GDP)

4.1c the movement of the gross fixed capital formation was steady from 1986 to 2004, and a very sharp increase was experienced from 2005 to 2016, after which it showed a steady decline from 2017.

The trend in Inflation (INF)

From figure 4.1d above, the inflation rate has witnessed a huge swing in recent years. This has made the monetary authorities focus on the variable due to its potential danger.

The trend in the Exchange Rate (EXG)

Figure 4.1e above represents the trend of the exchange rate in Nigeria during the review period. A glance at the graph indicates that the economy has witnessed challenges in the foreign exchange market. Between 1986 and 2014, the exchange rate increased steadily from 2015 to 2018.

4.2 Descriptive Statistics

Table 2: Result of Descriptive Statistics

	HCON	GDP	GFC	EXG	INF
Mean	108.3177	38934.60	516.8438	113.6414	19.84376
Maximum	427.5680	154252.3	1057.174	306.0802	76.75887
Minimum	13.62600	198.1232	179.8576	2.020575	0.223606
Std. Dev.	130.2294	47123.31	338.4021	96.29075	18.43513
Observations	35	35	35	35	35

Source: Author's Computation, 2021

The descriptive statistics presented in table 2 above establish the relationship between national income and its impact on household consumption expenditure in Nigeria. According to the evidence, the means of household consumption, gross domestic product, gross fixed capital formation, exchange rate, and inflation rate are 108.3177, 38934.60, 516.8438, 113.6414, and 19.84376 in that order, while the standard deviations are 130.2294, 47123.31, 338.4021, 96.29075, and 18.43513.

4.3 Correlation Matrix

Table 3 Correlation Analysis

	LOGHCON	LOGGFC	LOGGDP	LOGEXG	INF
LOGHCON	1.000000	0.949510	0.823923	0.725391	-0.373381
LOGGFC	0.949510	1.000000	0.870942	0.765975	-0.377504
LOGGDP	0.823923	0.870942	1.000000	0.960118	-0.475402

LOGEXG	0.725391	0.765975	0.960118	1.000000	-0.433570
INF	-0.373381	-0.377504	-0.475402	-0.433570	1.000000

Source: Author's Computation, 2021

Analysis of the outcome from the correlation analysis as depicted in the table above shows that a positive correlation exists between household consumption expenditure and gross domestic product. This is indicated in the correlation coefficient (r) result as (0.823). This result basically implies that as gross domestic product increases, household consumption expenditure rises as well, showing direct movement in the trend of association between the variables. Furthermore, results from the table further illustrates the fact that a positive correlation does exist between household consumption expenditure and gross fixed capital formation. This result is shown in the correlation coefficient (r) result of (0.949). Relatively, the study also observed that a positive relationship exists between household consumption expenditure and the exchange rate in Nigeria. This is also depicted in the correlation coefficient (r) result of 0.725. The study also observed that the relationship between household consumption expenditure and inflation rate shows a negative relationship of (-0.373), which indicates that the higher the inflation rate, the lower the household consumption expenditure.

4.4 Unit Root Examination

The pre-estimation result is presented as the stationarity test. Augmented Dickey-Fuller unit root tests showed that all the variables are stationary at the first difference, i.e., I (1). See Table 4 below.

Table 4 Result of Stationarity (Unit Root) Test

Variable	**ADF Statistic**	**1% Critical Values**	**5% Critical Values**	**10% Critical Values**	**Order of Integration**	**p-Value**

Log HCON	-6.274697	-3.646342	-2.954021	-2.615817	I(1)	0.0000
Log GDP	-3.104001	-3.646342	-2.954021	-2.615817	I(1)	0.0360
Log GFC	-3.053075	-3.661661	-2.960411	-2.619160	I(1)	0.0410
Log EXG	-5.764964	-3.646342	-2.954021	-2.615817	I(1)	0.0000
INF	-5.043733	-3.670170	-2.963972	-2.621007	I(1)	0.0003

Source: Author's Computation, 2021

4.5 Co-Integration Test

The Johansen co-integration test was used to check if the variable has a long-run relationship or not. The result is presented in Table 5.

Table 5: Results of the Johansen Co-integration Test

TRACE TEST				
Hypothesized No. of CE(s)	**Value**	**Statistic**	**0.05 Critical Value**	**Prob.****

None *	0.759436	100.5898	69.81889	0.0000
At most 1 *	0.627456	53.57241	47.85613	0.0132
At most 2	0.328145	20.98823	29.79707	0.3584
At most 3	0.135663	7.863723	15.49471	0.4801
At most 4	0.088352	3.052551	3.841466	0.0806

MAXIMUM EIGEN VALUE

Hypothesized No. of CE(s)	Value	Statistic	0.05 Critical Value	Prob.**
None *	0.759436	47.01743	33.87687	0.0008
At most 1 *	0.627456	32.58418	27.58434	0.0104
At most 2	0.328145	13.12451	21.13162	0.4409

At most 3	0.135663	4.811173	14.26460	0.7655
At most 4	0.088352	3.052551	3.841466	0.0806

Trace test indicates 2 co-integrating equations at the 0.05 level

Max-eigen-value test indicates 2 co-integrating equations at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Author's Computation, 2021

Table 5 represents the trace and the maximum Eigen-value statistics, which indicate two co-integrating equations that confirm the existence of a long-run relationship between household consumption expenditure and the independent variables.

4.6 Normalized Co-Integrating Coefficients

Table 6: Results of Normalized Co-Integrating Coefficients

Variable	**Log HCON**	**Log GDP**	**Log GFC**	**Log EXG**	**INF**
Co-efficient Value	1.0000	0.659599	1.012429	-2.681831	-0.233037
Standard Error		(1.17505)	(0.92010)	(0.99622)	(0.02718)
t-statistics		0.56133	1.10035	-2.69200	-8.57384

Source: Author's Computation, 2021

In table 6, the t-value of all variables indicates a significant result. The table also shows that a stable equilibrium relationship exists among the variables, and the value of HCON confirms the normalized results. The result of the coefficients is interpreted as follows: A 1% increase in the gross domestic product (GDP) leads to a 0.6596% increase in household consumption expenditure in the long run. A 1% increase in gross fixed capital formation (GFC) leads to a 1.0124% increase in household consumption expenditure in the long run. A 1% increase in the exchange rate (EXG) leads to a 2.6818% increase in household consumption expenditure in the long run, and a 1% increase in the inflation rate (INF) leads to a 0.2330% increase in household consumption expenditure in the long run.

4.7 Granger Causality

Table 7: Pair-wise Granger Causality Tests

Null Hypothesis:	**Obs**	**F-Statistic**	**Prob.**
LOGGFC does not Granger Cause LOGHCON	33	1.15657	0.3291
LOGHCON does not Granger Cause LOGGFC		2.50417	0.0999

LOGGDP does not Granger Cause LOGHCON	33	1.90029	0.1683
LOGHCON does not Granger Cause LOGGDP		3.47467	0.0449
LOGEXG does not Granger Cause LOGHCON	33	1.72881	0.1959
LOGHCON does not Granger Cause LOGEXG		3.93349	0.0312
INF does not Granger Cause LOGHCON	33	0.50103	0.6112
LOGHCON does not Granger Cause INF		0.78333	0.4666
LOGGDP does not Granger Cause LOGGFC	33	1.65483	0.2093
LOGGFC does not Granger Cause LOGGDP		0.53968	0.5889

LOGEXG does not Granger Cause LOGGFC	33	0.88957	0.4221
LOGGFC does not Granger Cause LOGEXG		0.25656	0.7755
INF does not Granger Cause LOGGFC	33	1.28297	0.2930
LOGGFC does not Granger Cause INF		0.90472	0.4162
LOGEXG does not Granger Cause LOGGDP	33	3.74338	0.0362
LOGGDP does not Granger Cause LOGEXG		2.82013	0.0766
INF does not Granger Cause LOGGDP	33	4.02256	0.0291
LOGGDP does not Granger Cause INF		5.04070	0.0135

INF does not Granger Cause LOGEXG	33	3.69140	0.0378
LOGEXG does not Granger Cause INF		5.30222	0.0112

Source: Author's Computation, 2021

The focus of the current study is on the causal relationship between household consumption expenditure and income levels in Nigeria. The null hypothesis states that LOG GDP does not cause LOG HCON and LOG HCON does not cause LOG GDP. The probabilities for the causal variables, household consumption expenditure and gross domestic product, are 0.1683 and 0.0449. That is, there is a significant causal direction from household consumption expenditure to gross domestic product, while the direction from gross domestic product to household consumption expenditure is not significant. Hence, there is a one-way (uni-directional) causality between the core variables of the study.

4.8 Income Error Correction Mechanism and its Effect on Household Consumption Expenditure in Nigeria

Table 7 presents the parsimonious model of the error correction regression with their standard errors and t-values extracted from the estimated ECM technique. An error correction model estimates the speed of adjustment to equilibrium in a co-integrating relationship. Here, the Error Correction Term (ECT), derived from the Levels Equation earlier, is included among the regressors and is denoted as ECT (-1). The coefficient associated with this regressor is typically the speed of adjustment to equilibrium in every period. Since the distribution of this test is the -value provided in the regression output, this distribution is used as the evidence and any inference must be conducted using the P-value.

Table 7 Error Correction Model

Dependent Variable: D(LOGHCON)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGHCON(-1))	0.037575	0.167882	0.223821	0.8247
D(LOGHCON(-2))	0.253410	0.156785	1.616287	0.1186
D(LOGGDP)	0.619314	0.313792	1.973641	0.0596
D(LOGGDP(-2))	-0.651259	0.338731	-1.922645	0.0660
D(LOGGFC)	0.675969	0.219249	3.083111	0.0049
D(INF)	-0.007961	0.002749	-2.896116	0.0077
ECT(-1)	-0.251193	0.115618	-2.172603	0.0395

R-squared	0.416284	**Mean dependent var**	0.090744
Adjusted R-squared	0.276193	**S.D. dependent var**	0.242935

S.E. of regression	0.206682	**Akaike info criterion**	-0.124635
Sum squared resid	1.067932	**Schwarz criterion**	0.195995
Log likelihood	8.994161	**Hannan-Quinn criter.**	-0.018355
Durbin-Watson stat	2.131586		

Source: Author's Computation, 2021

4.9 Discussion of Findings

In the table above, the coefficient of determination (R2) value of 0.416284 implies that about 42 per cent of the total variation in household consumption expenditure is explained by changes in the exogenous variables, while 58% is unexplained due to the error term. The coefficients of the different explanatory variables are explained below.

Household Consumption Expenditure: The coefficient of the lagged value of the dependent variable is positively signed. This shows that the variable has a direct relationship with the current household consumption expenditure. The value of the coefficient is 0.0375, which implies that a 1 unit increase in the lagged value of household consumption expenditure will lead to a 0.0375 unit increase in the current household consumption expenditure in Nigeria. The variable is not statistically significant at 5 per cent with a probability value of 0.8247.

Gross Domestic Product: The coefficient of the gross domestic product is positive. This shows that the variable has a direct relationship with household consumption expenditure. The value of the coefficient is 0.619, which implies that a one-unit increase in the value of gross domestic product will lead to a 0.619-unit increase in household consumption expenditure in Nigeria. The variable is not statistically significant at 5 per cent with a probability value of 0.0596.

Gross Fixed Capital Formation: The coefficient of gross fixed capital formation is positive signed. This shows that the variable has a direct relationship with household consumption expenditure. The value of the coefficient is 0.676, which implies that a 1 unit increase in the value of gross fixed capital formation will lead to a 0.676 unit increase in household consumption expenditure in Nigeria. The variable is statistically significant at 5 per cent with a probability value of 0.0049.

Inflation Rate: The coefficient of the variable is negatively signed. This shows that the variable has an indirect relationship with household consumption expenditure. The value of the coefficient is -0.0079, which implies that a 1 per cent increase in the rate of inflation will lead to a 0.0079 per cent decrease in household consumption expenditure in Nigeria. The variable is statistically significant at 5 per cent with a probability value of 0.0077.

Error Correction Term: The speed of adjustment does conform to the a-priori expectation of the error correction term, which is negative and statistically significant at 5%. The coefficient of the lagged error term or equilibrium error correction model (-0.251193) is negative and significant, confirming that a long-run (co-integrating) relationship exists between household consumption expenditure and the set of explanatory variables. The size of this coefficient implies that adjustment to disequilibria towards long-run equilibrium via the correction term is relatively strong, as 25.12% of disequilibrium in a given year is corrected in the following year. As a result, it takes about a year to eliminate 25.12% of the difference between actual and equilibrium household consumption expenditure as determined by the fundamentals.

CONCLUSION, RECOMMENDATIONS, AND SUMMARY

5.1 Final remarks

The findings from this research show that there exists a positive and significant relationship between household consumption expenditure and income in Nigeria. A rise in income leads to a rise in household consumption expenditure. This is in line with the Keynesian consumption model. The findings also show that there is a direct relationship between household consumption expenditure and other independent variables such as gross fixed capital formation and the exchange rate, but that the inflation rate has an indirect relationship.

An increase in household consumption expenditure leads to a rise in the level of output and the growth of the economy.

5.2. RECOMMENDATIONS

The following recommendations were made:

1. As a result of the nature of the relationship between household consumption expenditure and income, the government should improve its welfare programs in order to boost the purchasing power of the citizenry.
2. Interest rates should be reduced to encourage both potential and existing investors.
3. The monetary authorities should embark on policies that will ensure a reduction in inflation rates and also ensure price stability. These will add more value to the income received by each household and will lead to an increase in household consumption.

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