



## HOUSEHOLD CONSUMPTION EXPENDITURE AND REMITTANCES IN NIGERIA

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### ABSTRACT

*The study examined the impact of remittances on household consumption expenditure in Nigeria. The study was based on expo facto design through utilising secondary data sourced from World Development Indicators and the CBN's Statistical Bulletin. The Auto Regressive Distributed Lag (ARDL) technique was employed to analyze both short- and long-term dynamics. The ARDL bound test showed a long-run relationship among the variables. The long-run and short-run coefficients indicated that remittances positively and significantly influenced household consumption expenditure. The implication of the findings is that there will be significant improvements in the short-term and long-term consumption patterns of households who receive remittances in Nigeria as compared to those who do not. Based on the findings, it was recommended that more focus should be placed on the future benefits that can be obtained from remittances rather than on short-term gains. This is because when focus is placed on long-term gains, remittances can serve as an avenue for poverty reduction, through providing a stable source of livelihood to households.*

**Keywords:** Remittances, Household Consumption Expenditure; Durable Goods; Nigeria; ARDL.



## **1. Introduction**

Household consumption expenditure is one of the major factors that drives economic growth and reflects the welfare of the population of countries. Being the largest component of aggregate demand and representing a significant portion of a country's GDP, household consumption expenditure is a key indicator of overall economic health and development. According to Demurger and Wang (2016), in most countries, household consumption expenditure has a figure of around 60% of contribution to Gross Domestic Product, indicating that changes in household spending patterns for consumption can have a large impact on the overall economy. According to Adeseye (2021), household consumption expenditure refers to the total spending by households on goods and services (including food and beverages, housing, clothing and personal care, education, transportation and debt repayment amongst others). Household consumption expenditure has been considered a major indicator of cost of living (Castaldo & Reilly, 2007), standard of living (Parinduri & Thangavelu, 2008), and economic well-being (Demurger & Wang, 2016). Given the significant role of household consumption expenditure in the overall development of an economy, it is important to evaluate factors which influences it, and one major factor is foreign remittances.

Foreign remittances have become a critical component of economic growth and development in many low and middle-income countries such as Nigeria (Iyemifokhae & Folawewo, 2019). As pointed out by Akhimien and Osifo (2021), foreign remittances refer to the transfer of money from individuals or businesses in one country to recipients in another country and commonly done by different categories of individuals, including migrant workers, expatriates or businesses that operate internationally. The inflows of foreign remittances serve as an essential source of foreign exchange earnings, contributes to poverty reduction, and support household welfare (Eggho et al., 2019). By providing foreign exchange earnings, foreign remittances help countries to effectively balance their foreign trade engagements, as well as helping to safeguard the value of the currency, thereby facilitating economic development (Abiodun & Ologunwa, 2017). Also, by providing



income to families and communities, foreign remittances have been known to be capable of leading to job creation and providing employment to the teeming population, particularly, of Nigeria.

In Nigeria, remittances have increased significantly in the last past decades. For example, in 2018, Nigeria received \$24 billion in remittances, which was a 14% increase from the previous year (Businessday, 2024). Also, in 2022, Nigeria received \$25 billion in remittances which was 6.1% of its Gross Domestic Product (GDP) (Punch, 2024). Recent statistics have also shown that in 2023, Nigeria marginally edged Egypt with around \$23 million to become the highest recipient of international remittances in Africa (World Bank, 2024). The growth of remittances in Nigeria has been stimulated mostly by the increase in emigration of its citizen to other countries (African Center for Strategic Studies, 2024). Commonly considered as the “Japa” trend, the growth in emigration in Nigeria between 2020 and 2023, has been a major factor stimulating remittances inflow into the country (Businessday, 2024). For example, according to data from the Migration Information and Data Analysis System (MIDAS), approximately 2,115,139 people emigrated from Nigeria in 2022 due to the “Japa” trend, which refers to a mass exodus of Nigerians seeking better opportunities abroad (Businessday, 2024). Such has been responsible for the continuous growth of remittances, as resources are always remitted back home by those who emigrated.

Despite the importance of remittances, debates persist on their long-term impact on household spending behaviour. Some argue that remittances lead to increased consumption and improved living standards (Abdulai, 2023; Adeseye, 2021; Makina, 2024), while others suggest that they create dependency and discourage productive economic activity (El Hamma, 2018; Parinduri & Thangavelu, 2008). Given this dichotomy, it becomes important to understand the relationship between foreign remittances and household consumption expenditure in Nigeria, in order for policy makers to know the right policies to adopt in maximising the developmental benefits of these inflows. Therefore, this study contributes to existing literature by evaluating the

impact of remittances on household consumption expenditure, in light of the recent increase in remittance inflows into Nigeria.

The rest of this paper is organised as follows: the next section provides the literature review; section 3 entails the methodology, while results and discussions are presented in section 4. Section 5 provides the concluding statements and recommendations based on the study's discoveries.

## **2. Literature Review**

### **2.1. Theoretical Review**

The permanent income hypothesis (PIH) is a prominent theory that explains the relationship between household consumer expenditure and remittances. Milton Friedman developed the PIH, an economic theory that contends that a person's consumption is influenced by both their present and anticipated long-term (permanent) income (Castaldo & Reilly, 2007). According to Parinduri and Thangavelu (2008), the PIH proposes that people smoothen their consumption overtime, rather than making drastic changes in response to temporary income fluctuations. The PIH is based on the assumptions that income is divided into two parts, including permanent income and transitory income (Demurger & Wang, 2016). The permanent income is the average, long-term expected income that individuals consider stable overtime such as regular salary and expected career earnings, while the transitory income refers to the temporary fluctuations in income due to bonuses, lottery winnings, or unexpected economic conditions (Chami et al., 2005).

Linking the PIH to the impact of remittances on household consumption expenditure (HCE), if a household expects remittances to be stable and long-term, they are more likely to treat them as permanent income. In this case, they will increase their regular consumption spending on necessities, such as food, housing and healthcare and possibly durable goods such as appliances and education (Chami et al., 2005). Therefore, remittances can improve living standards as they become a reliable source of household income. However, if remittances are considered transitory income, households will not significantly increase consumption but instead save or invest

a portion of the funds (Parinduri & Thangavelu, 2008). In such case, households, may use remittances for future security, such as investing in land, education or small business, which will ensure that there is smoothing of consumption overtime, and there is avoidance of drastic changes due to short-term income gains (Chami et al., 2005). Overall, the PIH has an advantage of pointing to the fact that people adjust their spending based on expectations about future earnings rather than short-term fluctuations.

## **2.2. Empirical Review**

### **Nigeria**

Discussions regarding how remittances affect consumption expenditure have changed over time, moving from mainly negative to more favorable perspectives. Adeseye (2021) investigated migrants' remittances and household expenditure pattern in Nigeria. The study was based on primary data and data was observed using questionnaire and the adoption of convenient and random sampling techniques. A sample of 166 questionnaire was utilised for analysis and descriptive statistics, including frequency tabulation, simple percentage compilation and Chi-Square statistics were utilised in analysing data. The findings indicate that remittances significantly impact consumption and investment expenditure of households in Nigeria. Nevertheless, while the study was able to demonstrate with the use of primary data how remittances impacts household expenditure, it failed to demonstrate whether such impact was observed in the short-term or in the long-term.

Iyemifokhae and Folawewo (2019) investigated how remittances affected household investment in Nigeria. The study concentrated on how households' investments in Nigeria were impacted by several transfer kinds, including cash, food, aggregate, and other remittances. The Ordinary Least Square (OLS) technique was used to estimate the model using data from the Harmonised Nigerian Living Standard Survey of 2009/2010, and Probit regression was used as a robustness check of the OLS estimate. The results show that remittances in the form of cash, food, and other items have a major influence on investments in Nigeria's different geopolitical zones as well as in rural and urban areas.



In a more recent time, Mohammed *et al.* (2025) examined the effect of remittances on household consumption expenditure in Nigeria. The study made use of time series annual data from 1985 to 2023 and Autoregressive Distributed Lag (ARDL) for adopted for analysis. The findings indicate that remittances significantly impacts household consumption expenditure in Nigeria. The study was of the belief that policymakers should make effort to enhance remittance inflows through reducing taxes or charges on remittances and their channels of transfers, as well as improve financial payment system. The study is of the belief that remittances can serve as a key factor for enhancing standard of living in Nigeria.

### **Other Developing Countries**

Essentially, attempts have been made by several studies in other developing countries to evaluate how remittances impact consumption expenditure and the kind of consumption expenditure it impacts, whether consumption on food and housing or on education and productive ventures. For instance, Castaldo and Reilly (2007) assess the impact of remittances on household expenditure in Albania using the OLS estimator. Compared to families without remittances, those who receive external remittances allocate a larger percentage of their overall spending on durable goods and a smaller part on food. The potential endogeneity of remittances is not discussed in the paper. As a result, parameter estimates of how remittances affect household expenditure may be biased and contradictory.

Demurger and Wang (2016) investigated how remittances affect Tajikistani's households spending both internally and externally. They discovered that remittances have a positive effect on household consumption levels and a negative effect on household investment spending, while households primarily use internal remittances for consumption and less for education and family businesses. According to the survey, remittances are not being used effectively.

Makina (2024) examined the long-run relationship between remittances and household consumption focusing on Lesotho. The study covered a period between 1991 and 2019 and the techniques adopted were Johansen  
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cointegration technique and Engle-Granger Residual Approach. The findings of the study revealed that a positive long-run equilibrium relationship exists between household consumption and remittances in Lesotho. However, the finding indicates that remittances negatively affect household consumption in the short-run. This shows that higher remittances in the short-run leads to decline in household consumption expenditure. One major strong point of the study was that it was effective in indicating why household consumption expenditure declines in the short-run due to increase in remittances. However, the study failed to provide adequate explanation for such decrease in house consumption expenditure when remittances increase, given that such does not align with theoretical underpinnings. For example, following the permanent income hypothesis households are rational beings and their consumption expenditure will increase for any increase in income.

Overall, these studies show conflicting results on how remittances impact household consumption expenditure. For example, the review of literature indicates that there is no consensus yet on the specific effect of remittances on household consumption expenditure This is because, while most of the studies discovered a positive impact of foreign remittances on household consumption expenditure in the short-run (Demurger and Wang, 2016), others discovered a negative impact (Makina, 2024). Also, the studies have adopted various techniques, including the use of primary and secondary data. It could be that the differences in techniques may have brought about conflicting results from the various studies. Given the above established gap in literature, this study seeks to examine the impact of remittances on household consumption expenditure utilising data that reflects recent changes in the socio-political space of the country.

### **3. Methodology**

Permanent income hypothesis proposed by Milton Friedman in 1957 serves as the foundation for this study's theoretical framework. To examine the effect of remittances on household consumption expenditure, this study is guided by the model specified by Abiodun and Ologunwa (2017) with little modifications. The model involves remittances, exchange rate, interest rate and investment rate. Exchange rate is a major determinant of

the amount of remittances, given that high exchange rate will increase the amount of remittances in the local economy, while low exchange rate will reduce it. Interest rate determines whether household will prefer to consume in the short-term or save. If interest rate is high, household may desire to save, which makes household consumption expenditure to decline, and if interest rate is low, they will prefer to consume. Investment rate is similar with savings, as in economics, savings is equal to investment, indicating that the higher the investment rate, the lower will be household consumption expenditure. The model's functional form is specified as:

$$HCE = f (REM, EXR, ITR, INV) \quad (1)$$

The econometric presentation of the model is given below;

$$HCE_t = \alpha_0 + \alpha_1 REM_t + \alpha_2 EXR_t + \alpha_3 ITR_t + \alpha_4 INV_t + \mu_t \quad (2)$$

Where:

$HCE_t$  is household consumption expenditure;  $REM_t$  is remittances;  $EXR_t$  is exchange rate;  $ITR_t$  is interest rate and  $INV_t$  is investment rate;  $\mu$  is the error term,  $\alpha_0$  is the intercept,  $t$  is the time period and  $\alpha_1, \alpha_2 \dots \alpha_4$  represent the parameter estimates. The a-priori expectation is expressed mathematically as  $\alpha_1 > 0$ ,  $\alpha_2 < 0$ ,  $\alpha_3 < 0$ , and  $\alpha_4 < 0$ .

The table below provides the explanation and measurement of each variable based on literature insights;

Table 1 Variables, measurements and sources of data

Variable	Descriptions	Symbol	Measurement	A-priori expectation	Sources
Household Consumption Expenditure	The total amount of money spent by households on goods and services	HCE	Final household consumption expenditure & of GDP		World Development Indicators (WDI)
Remittances	Transfer of money from one country to another, typically by individuals working abroad sending funds back to their families or communities in their home country.	REM	Personal remittances received % of GDP.	+	WDI
Exchange Rate	This is the price of one country's currency in terms of another country's currency.	EXR	Official exchange rate in %	-	WDI
Interest Rate	The cost of borrowing money	ITR	Lending rate in %	-	WDI
Investment Rate	Total amount invested in assets	INV	Gross Fixed Capital Formation & of GDP	-	WDI

**Source: Author's Compilation**

From the above, the study made use of secondary time series data on key variables for the period of 1986 to 2023. The data were obtained from World Development Indicators (2024). To analyses data, the study made use of descriptive statistics, unit root test, correlation matrix and Autoregressive Distributed Lag (ARDL) technique. The study also utilised diagnostics tests including Serial Correlation, Normality and Heteroskedasticity tests in evaluating the reliability of estimates.

### 3.1. Results and Discussion of Findings

The descriptive statistics of variables utilised in the study are described in table 2 below. The descriptive statistics covered mean, median, maximum and minimum values amongst others, and the variables include HCE, REM, EXR, ITR and INV. As summarized in the table, EXR has the highest mean value (151.60), while INV has the lowest mean value (0.239). Also, EXR has the highest maximum value (907.110), while INV has the lowest maximum value (0.354). ITR has the highest minimum value (9.959), while REM has the lowest minimum value (0.005). For standard deviation value indicates that EXR has the highest standard deviation (171.924), while HCE has the lowest standard deviation value (0.085). The results further indicates the standard deviation values of HCE, REM, ITR and INV are low and shows that there are no extreme values in the observation. However, EXR, with a high standard deviation value shows that there are extreme values in its

distribution. The table shows that all the variables are positively skewed and the Kurtosis values show that the distribution have high tails. The probability value of Jarque-Bera indicates that EXR and ITR are normally distributed given P-value below 0.05, while that of HCE, REM and INV are not normally distributed.

Table 2 Summary Statistics

	HCE	REM	EXR	ITR	INV
Mean	0.622	2.972	151.605	18.251	0.239
Median	0.605	2.928	127.229	17.569	0.223
Maximum	0.799	8.334	907.110	31.650	0.354
Minimum	0.472	0.005	1.754	9.959	0.138
Std. Dev.	0.085	2.524	171.924	4.132	0.087
Skewness	0.616	0.231	2.447	0.817	0.123
Kurtosis	2.586	1.717	10.921	4.630	1.243
Jarque-Bera	2.678	2.945	137.281	8.434	4.983
Probability	0.262	0.229	0	0.015	0.083
Sum	23.645	112.928	5760.971	693.526	9.070
Sum Sq. Dev.	0.268	235.649	109	631.849	0.282
Observations	38	38	38	38	38

**Source: Author’s Computation**

To evaluate the nature of association between the variables the correlation matrix is presented in table 3. From the table it can be seen that HCE is positively correlated with REM (0.386) which aligns with the a-priori expectation and EXR (0.146) which aligns with a-priori expectation. However, HCE is positively correlated with ITR (0.010) which does not align with a-priori expectation. The reason for such could be as a result of the undeveloped financial system in Nigeria, which makes households prefer to consume whether interest rate is high or low. HCE was negatively correlated with INV (-0.419) which aligns with a-priori expected. Similarly, REM is positively correlated with EXR (0.559), but negatively correlated with ITR (-0.387) and INV (-0.710). Nonetheless, EXR is negatively correlated with ITR (-0.449) and INV (-0.686), while ITR was positively correlated with INV (0.497). Overall, the findings show that there are positive and negative correlations amongst the variables, but the correlations are all below 0.8 (whether negative or positive). Such is an indication that there is no high or perfect straight line relationships amongst the variables, indicating the absence of multicollinearity. Therefore, the variables are suitable for carrying out statistical inferences.

**Table 3 Correlation Matrix**

Variables	HCE	REM	EXR	ITR	INV
HCE	1				
REM	0.386	1			
EXR	0.146	0.559	1		
ITR	0.010	-0.387	-0.449	1	
INV	-0.419	-0.710	-0.686	0.497	1

**Source: Author’s Computation**

Both the Phillips-Perron (P–P) and Augmented Dickey-Fuller (ADF) unit root tests were used to assess the stationarity of the variables in this investigation; the findings are shown in Table 4. The results show that the variables have a mixed order of integration and are first difference indicating I(1) series and level indicating I(0) series. This demonstrates that the ARDL used in this investigation is appropriate.

**Table 4 Unit Root Test**

Variable	ADF t-Statistic Critical Value	Prob.	Phillips-Perron t-Statistic Critical Value	Prob.	Level of Integration
HCE	-3.1248	0.033	-3.0876	0.0362	I(0)
REM	-6.1116	0.000	-7.1782	0.0000	I(1)
EXR	-4.4526	0.0011	-5.6690	0.0000	I(1)
ITR	-3.067	0.0379	-3.3496	0.0196	I(0)
INV	-4.7887	0.001	-7.831	0.000	I(1)

**Source: Author’s Computation**

Bounds test is carried out to ascertain the existence of a long run relationship between remittances and household consumption expenditure in Nigeria. The result of the test is summarized in table 5. The result shows that the F- statistic value (7.447) exceeds the lower bound critical value (2.56) and the upper bound critical value (3.49) at 5% level of significance. Therefore, the result implies that there exists a long run relationship between household consumption expenditure and other explanatory variables. This also implies that remittances can be used as a policy tool in the future for stimulating household consumption expenditure in the country and as such adequate attention should be put towards effective management and utilization of remittances.

Table 5 Bounds Test

Test Statistics	Value	K
F-statistic	7.447	4
Significance	1(0) Bound	1(1) Bound
10%	2.2	3.09
5%	2.56	3.49
1%	3.29	4.37

**Source: Author’s Computation**

Consequently, based on the existence of a long-run relationship between remittances and HCE, the results of the long-run coefficients are presented in table 6 and it indicates that the intercept term (0.608) was significant at the 5% significance value (P-value < 0.05). This indicates that when the independent variables (REM, EXR, ITR and INV) are zero, the average value of HCE will be 0.608. The results also indicate that REM and EXR had statistically significant long-run impact on HCE. With the value of 2.860, and a corresponding P-value of 0.002, a percent increase in REM will result in 2.860 increase in HCE in the long-run. Also, with the value of -2.929, and a corresponding P-value of 0.002, a percent increase in EXR will result in 2.929 percent decrease in HCE in the long-run. However, ITR and INV do not have any statistically significant long-run impact on HCE given P-values which are greater than the 5% significance value. Overall, the finding aligns with that of Castaldo & Reilly (2007) who found that remittances positively impacts household expenditure in the long-term.

**Table 6 Long-run Coefficients  
Dependent Variable: HCE**

Variable	Coefficient	Std. Error	t-Statistics	Probability value
Intercept	0.608	0.082	7.421	0.000
REM	2.860	0.659	4.336	0.002
EXR	-2.929	0.622	-4.713	0.001
ITR	-0.001	0.003	-0.219	0.831
INV	-0.075	0.162	-0.461	0.654

**Source: Author’s Computation**

Similarly, the ARDL error correction model (ECM) result is presented in table 7 below. It can be observed that with an estimate 0.023 and a corresponding P-value of 0.012, REM has a positive and significant impact on HCE. This implies that a percent increase in REM will result in 0.023 percent increase in HCE. This shows that remittances positively influences HCE in the short-run. This is in addendum with the study of Parinduri and

Thangavelu (2008) who found that remittances have a positive short-run impact on household expenditure. Nonetheless, the lagged value of REM (REM(-1)), was positive (0.013) but statistically insignificant at the 5% level (P-value > 0.05). This shows that the lagged value of REM does not significantly influence HCE in Nigeria. Also, both the current estimate of EXR (-0.001) and its lagged estimate (-0.001) had significant negative short-run impact on HCE. This shows that increases in EXR reduces HCE in the current period and lagged period. Other variables (ITR and INV) had P-values lower than 5%, and negative estimates, indicating that a percent increase in ITR will result in 0.005 percent decrease in HCE, while a percent increase in INV resulted in 2.420 percent decrease in HCE. The lagged estimate of INV (-2.860) also significantly and negatively impacts HCE, indicating that a percent increase in lagged INV will bring about a 2.860 percent decrease in HCE at the 5% significance.

At the 5% level of significance (P-value < 0.05), the Error Correction coefficient (ECM(-1)) is significant and has the correct sign, which is negative (-1.942). This suggests that in the event of any disequilibrium, the system will correct itself from the short-run towards approaching long-run equilibrium at a speed rate of 194.2 percent every year, confirming the evidence of a long-term relationship among the variables.

Consequently, table 7 also shows that the dynamic model fits well. This is due to the fact that the R<sup>2</sup> value of 0.853, or roughly 0.85, shows that the independent variables account for about 85% of the variation in HCE. Stated differently, the independent variables in the model account for 85% of the variation in HCE, with the error term accounting for the remaining 15%. When bias is taken into account, the adjusted R<sup>2</sup> shows that the independent variables in the model only account for 79.6% of the variation in HCE. Likewise, the Durbin Watson (DW) score of 1.939, which falls between 1.6 and 2.4, indicates that there is no autocorrelation or serial correlation in the model.

**Table 7 ECM Result**  
**Dependent Variable: D(HCE)**

Variable	Coefficient	Std. Error	t-Statistics	Probability value
D(REM)	0.023	0.007	3.058	0.012
D(REM(-1))	0.013	0.007	1.795	0.103
D(EXR)	-0.001	7.592	-1.775	0.106
D(EXR(-1))	-0.001	0.001	-2.851	0.017
D(ITR)	-0.005	0.002	-2.895	0.016
D(INV)	-2.420	0.303	-7.998	0.000
D(INV(-1))	-2.860	0.487	-5.870	0.000
ECM(-1)	-1.942	0.237	-8.187	0.000

$R^2 = 0.853$ ; Adj.  $R^2 = 0.796$ ; Durbin-Watson = 1.939

Source: Author's Computation

The post estimation tests of serial correlation, Heteroskedasticity and Normality are carried out and presented in table 8 below. To determine if the residuals are normally distributed, the Jarque-Bera normality test is used. The model is normally distributed since the p-value (0.7493) is higher than the 5% significance level. The residuals are not serially correlated when the Breush-Godfrey serial correlation, with a p-value of 0.3897, is higher than the 5% significance level. Similar to this, the Breush Pagan Godfrey test reveals no indication of heteroskedasticity because the model's p-value of 0.8580 is higher than the 5% significance level. Overall, the findings demonstrate that the variables from the regression model pass the required diagnostic tests for heteroskedasticity, serial correlation, and error term normality.

**Table 8 Summary of Diagnostic Tests**

Test	F-Statistics	Probability Value
Breush-Godfrey LM test for serial correlation	1.0627	0.3897
Heteroskedasticity Test: Breusch-Pagan-Godfrey	0.5894	0.8580
Jarque-Bera Normality Test	0.5773	0.7493

Source: Author's Computation

#### 4. Conclusion

The findings of the study have shown that remittances significantly influence household consumption expenditure in Nigeria. The study's finding has also indicated that household consumption expenditure



increases both in the short-run, as well as in the long-run due to any increase in remittances. This implies that remittances, just like other forms of transitory income, increases consumption of households. This shows that as money is sent from other countries into the country, it increases the immediate consumption of recipients and later also impacts how they spend in the long-term. The result is an indication that households tend to also benefit from such remittances even in the long-run, as the spending they make from the remittances in the short-term could impact their health, education and skills in the longer term. For example, when households receive remittances inflow, they could eat better food, which contributes to their overall health and ability to engage in productive activities.

## **5. Recommendations**

Overall, based on the study's findings, it is recommended that households in Nigeria develop forward-looking behaviour in the utilisation of remittances. More focus should be placed on the future benefits that can be obtained from remittances rather than on the short-term gains. This is because when focus is placed on long-term gains, remittances can serve as an avenue for poverty reduction, through providing a stable source of livelihood to households. It can also ensure that remittances are utilised in fostering sustainable development through investments in human capital development such as education, healthcare and infrastructure.

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