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Foreign Financial Flow and Poverty Reduction in Nigeria

Adedire-Ampitan, Adetumilara Adepeju[1]* & Sonekan Wasiu Olasunkanmi[2]
[1]*Department of Banking and Finance, Gateway ICT Polytechnic, Saapade, Ogun State, Nigeria*
[2]*Department of Banking and Finance Babcock University, Ilishan Remo, Ogun State, Nigeria*
Corresponding author: adedireadetumilara@gmail.com
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Abstract
Purpose: This study examines the effect of foreign financial flows on poverty reduction in Nigeria between 1990 and 2024.
Methodology: The study used annual time series data obtained from the World Development Indicators (WDI), Central Bank of Nigeria (CBN) Statistical Bulletin, and National Bureau of Statistics (NBS), and employed the Autoregressive Distributed Lag (ARDL) technique to examine the short-run and long-run relationships among the variables. Poverty reduction was proxied by per capita income, while official development assistance (ODA), remittances, and foreign direct investment (FDI) were used as measures of foreign financial flows. Inflation and infrastructural quality were included as control variables.
Results and conclusion: The results show that ODA has a positive and significant short-run effect on per capita income, while its long-run effect is insignificant. Remittances exhibit weak and mostly negative effects on poverty reduction. FDI, however, has a positive and significant long-run effect on per capita income, indicating its contribution to welfare improvement. The study also reveals that inflation adversely affects per capita income, while infrastructural quality enhances welfare outcomes. The study concludes that foreign financial flows do not automatically reduce poverty in Nigeria, as their effectiveness depends on the nature of the inflows and the domestic economic environment.
Implication of findings: The findings highlight the need for improved management of foreign financial inflows, macroeconomic stability, and increased infrastructural development to enhance the poverty-reducing benefits of external financial resources in Nigeria.

Keywords: Foreign Direct Investment, Official Development Assistance, Remittances, Per Capita Income, Infrastructural quality

1. Introduction

Nigeria's development trajectory has remained paradoxical, as periods of economic growth have not translated into commensurate improvements in living standards for a large proportion of the population. Despite its position as one of Africa's largest economies and a major oil exporter, poverty persists at alarming levels. Nigeria accounts for one of the largest absolute populations of people living in extreme poverty worldwide, reflecting persistent challenges in translating economic growth into improved living standards (Ibrahim & Amoo, 2024; World Bank, 2023). The sluggish growth in per capita income over time suggests that economic expansion has not been sufficiently inclusive, thereby limiting its effectiveness in reducing poverty.

Global efforts to address poverty gained prominence with the adoption of the Millennium Development Goals (MDGs) in 2000, which placed poverty reduction at the forefront of the international development agenda (Britas, 2021). Nigeria implemented several reforms and programmes aimed at achieving the MDG target of halving extreme poverty by 2015. Although some progress was recorded, particularly following debt relief and macroeconomic reforms in the mid-2000s, the overall impact on poverty reduction remained limited (Eisenmenger et al., 2020). This shortfall informed the transition to the Sustainable Development Goals (SDGs) in 2015, where the eradication of extreme poverty became a central objective of the global development agenda (World Bank, 2015).

However, emerging evidence suggests that achieving this objective through economic growth alone may be insufficient. Poverty reduction increasingly depends on the inclusiveness of growth financial sector development, equitable income distribution, and the effectiveness of social and economic policies (Nadabo et al, 2024; Ismail et al, 2026; World Bank, 2022; United Nations Development Programme, 2023). Consequently, attention has shifted toward alternative and complementary sources of development financing capable of supporting domestic efforts to improve welfare outcomes and reduce poverty. Among these sources, foreign financial flows have gained increasing prominence in development discourse. These flows, which include Official Development Assistance (ODA), remittances, and Foreign Direct Investment (FDI), are expected to contribute to poverty reduction through various transmission channels such as capital accumulation, employment creation, technology transfer, productivity enhancement, and human capital development (Olowookere et al., 2021; Titiloye, 2020). By supplementing domestic resources, they can potentially stimulate economic activities and improve income levels, particularly in developing economies characterized by savings and investment gaps.

The persistence of poverty despite numerous development initiatives has renewed interest in the role of external financial resources in supporting domestic development efforts. Foreign financial flows, particularly Official Development Assistance (ODA), remittances, and Foreign Direct Investment (FDI), are widely regarded as important channels through which developing countries can improve welfare outcomes. Studies such as Olowookere et al. (2021) and Titiloye (2020) argue that these inflows contribute to poverty reduction by stimulating investment, increasing income, and promoting economic activities. Similarly, Anyanwu and Erhijakpor (2010) find that remittances enhance household welfare and reduce poverty through increased consumption and human capital development. Supporting the human capital channel, Etudaiye-Muhtar and Aliyu (2026) find that remittances significantly improve access to education in Nigeria in both the short and long run. Improved educational access enhances human capital accumulation, which can increase productivity, employment opportunities, and income levels, thereby contributing indirectly to poverty reduction.

Despite increasing inflows of ODA, remittances, and FDI, improvements in per capita income in Nigeria have remained relatively modest. This suggests that the relationship between foreign financial flows and poverty reduction remains an empirical issue. Therefore, this study examines the impact of ODA, remittances, and FDI on poverty reduction, proxied by per capita income, in Nigeria over the period 1990–2024, while controlling for inflation and infrastructural quality. The remainder of the study is organized as follows: the next section reviews the relevant literature, followed by the methodology, results and discussion, and conclusion with policy recommendations.

2. Literature review

Official Development Assistance and Poverty Reduction

Empirical studies on official development assistance (ODA) show mixed evidence regarding its effectiveness in reducing poverty, with outcomes largely dependent on institutional quality and macroeconomic conditions.

Ewubare and Okpoi (2018) find that ODA reduces poverty in Nigeria in the long run, although short-run effects are inconsistent. Similarly, Falana (2024) reports that foreign aid can stimulate economic activity and support poverty reduction in the short run, but its long-term effectiveness is weakened by corruption and weak institutional frameworks. In contrast, Katchy (2026) shows that official development assistance contributes positively to economic performance, suggesting that its welfare effects may depend on how effectively it is channelled into productive sectors. However, other evidence

indicates that aid effectiveness declines in environments characterized by poor governance and weak policy coordination. Overall, the literature suggests that the effect of ODA on poverty reduction is conditional on institutional strength, policy effectiveness, and macroeconomic stability. In line with the above findings, this study hypothesizes that:

H1: Official development assistance has no significant effect on poverty reduction in Nigeria.

Remittances and Poverty Reduction

Empirical studies on remittances consistently show that they are a major channel through which foreign financial flows influence household welfare and poverty outcomes, although the magnitude and persistence of their effects vary across contexts.

Ezenabor and Ezenekwe (2025) find that remittances significantly reduce poverty in Africa by increasing household income and improving access to basic services. Similarly, Olayungbo and Quadri (2019) report that remittance inflows contribute to income smoothing and improved living standards in developing economies, including Nigeria. Ewubare and Okpoi (2018) further show that remittances have mixed effects in the short run but may reduce poverty under certain conditions depending on usage patterns and macroeconomic stability. However, their long-run results suggest that the poverty impact of remittances is not always stable. In contrast, Olowookere et al. (2021) find evidence of a feedback relationship between remittances and poverty reduction, indicating that remittances both influence and are influenced by poverty dynamics. Overall, remittances remain an important but context-dependent determinant of poverty reduction outcomes. In line with the above findings, this study hypothesizes that:

H2: Remittances have no significant effect on poverty reduction in Nigeria.

Foreign Direct Investment and Poverty Reduction

Empirical studies show that the relationship between foreign direct investment (FDI) and poverty reduction is largely indirect, operating through economic growth, employment creation, and productivity enhancement, but constrained by structural factors in developing economies.

Nwakeze et al. (2023) find that while FDI promotes economic growth in Nigeria and Sub-Saharan Africa, its direct effect on poverty reduction is limited due to concentration in capital-intensive sectors and weak transmission mechanisms. Similarly, Titiloye (2020) reports that FDI contributes to poverty reduction in Nigeria, although its effect is insignificant in some specifications, particularly when macroeconomic instability is present. Falana (2024) further shows that foreign inflows, including FDI, support short-run economic growth but may not translate into sustained poverty reduction due to institutional weaknesses. In addition, Olowookere et al. (2021) find evidence of a long-run relationship between FDI and poverty reduction, although causality patterns suggest complex and bidirectional dynamics. Overall, the literature indicates that the effect of FDI on poverty reduction is conditional on macroeconomic stability, institutional quality, and sectoral allocation of investment. In line with the above findings, this study hypothesizes that:

H3: Foreign direct investment has no significant effect on poverty reduction in Nigeria.

Controlling Effect of Inflation and Infrastructural Quality on Poverty Reduction

Empirical literature indicates that macroeconomic stability and infrastructural development play important roles in determining how effectively foreign financial flows translate into poverty reduction outcomes.

Inflation is widely documented as a key factor that weakens welfare outcomes by eroding real income and reducing purchasing power. Falana (2024) shows that inflation worsens poverty by reducing real

income levels in Nigeria, thereby limiting the welfare gains from economic growth and external inflows. Similarly, Gani et al. (2026) examine the impact of inflation on poverty in Nigeria and find a positive and significant relationship between inflation and poverty levels, indicating that rising inflation worsens poverty by reducing real income and purchasing power. The study also establishes a long-run relationship between inflation and poverty, suggesting that persistent price instability has sustained adverse welfare effects in Nigeria. In contrast, infrastructural quality enhances productivity by reducing transaction costs, improving access to markets, and facilitating economic activities. However, weak infrastructure limits the effectiveness of both domestic and foreign financial inflows in improving welfare outcomes. Ndikumana and Boyce (2018) further note that macroeconomic distortions such as excessive external debt can crowd out public investment in infrastructure and social services, thereby weakening poverty reduction efforts. Overall, inflation and infrastructural quality significantly condition the relationship between foreign financial flows and poverty reduction outcomes.In line with the above findings, this study hypothesizes that:

H4: Inflation and infrastructural quality have no significant effect on poverty reduction in Nigeria.

Theoretical framework

The study is anchored on the Dual Gap Theory (Savings–Investment Gap Theory) and the Dependency Theory. This is because the central objective of the study is to explain how foreign financial flows influence per capita income and poverty reduction in Nigeria. The Dual Gap Theory provides the main analytical lens by explaining how deficiencies in domestic savings and foreign exchange constrain investment and growth, while external financial flows such as ODA, remittances, and FDI help bridge these gaps by increasing investible resources and supporting productive capacity. In contrast, the Dependency Theory offers a complementary perspective by explaining that the developmental impact of these inflows may be limited by structural inequalities in the global economy, where reliance on external capital can create dependence and weaken domestic productive systems. Therefore, the Dual Gap Theory provides the primary explanatory framework for understanding how foreign financial flows enhance income and welfare, while Dependency Theory explains the potential limitations of these effects in developing economies like Nigeria.

3. Methodology

This study employed an ex-post facto research design using annual time series data covering the period from 1990 to 2024. The ex-post facto design was considered appropriate because the study relied on historical and secondary data which cannot be manipulated by the researcher. The study examined the effect of foreign financial flows on poverty reduction in Nigeria. Poverty reduction was proxied by per capita income, while foreign financial flows were captured using official development assistance, remittances, and foreign direct investment. Inflation rate and infrastructural quality were included as control variables due to their influence on welfare and living standards in Nigeria.

The study utilized secondary data obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin, World Development Indicators (WDI), and National Bureau of Statistics.Descriptive statistics were employed to examine the trend and distributional characteristics of the variables, while correlation analysis was conducted to test for multicollinearity among the explanatory variables. Since the study adopted time series data, stationarity tests were conducted using the Augmented Dickey-Fuller (ADF) unit root test to determine the order of integration of the variables. In addition, the Bounds cointegration test was employed to determine the existence of long-run relationships among the variables.

The study adopted the Autoregressive Distributed Lag (ARDL) model developed by Pesaran et al. (2001) to estimate both the short-run and long-run relationships between foreign financial flows and poverty reduction in Nigeria. The ARDL approach was considered appropriate because it accommodates variables integrated of order zero I(0) and order one I(1), provided none of the variables is integrated of order two I(2). Furthermore, the ARDL technique is suitable for small sample sizes and provides efficient long-run estimates while correcting for endogeneity and serial correlation issues

The variable PCI indicates per capita income (proxy for poverty reduction), while ODA represents official development assistance, REM denotes remittances, and FDI represents foreign direct investment. Inflation (INF) and infrastructural quality (IFQ) are included as control variables to capture macroeconomic stability and structural conditions that may influence welfare outcomes. This study assumes that foreign financial flows influence poverty reduction through income and investment channels. In other words, increased inflows of external capital may enhance economic activities, improve employment opportunities, and raise household income, thereby affecting poverty levels indirectly through income improvements.Thus, equation (1) is specified as:

$$PCI=f(ODA, REM, FDI) \quad (1)$$

Where: PCI denotes per capita income; ODA represents official development assistance; REM denotes remittances; and FDI represents foreign direct investment.

However, recognizing that poverty outcomes are also influenced by macroeconomic conditions and structural factors, equation (1) is re-specified to include control variables:

$$PCI = f(ODA, REM, FDI, INF, IFQ) \quad (2)$$

Where: PCI denotes per capita income; ODA represents official development assistance; REM denotes remittances; FDI represents foreign direct investment; INF denotes inflation rate; and IFQ represents infrastructural quality.

Following the Dual Gap theoretical framework and empirical works of Anyanwu and Erhijakpor (2010), Olayungbo and Quadri (2019), Titiloye (2020), and Falana (2024), among others, the empirical model to establish the relationship between foreign financial flows and poverty reduction in Nigeria is stated as follows:

$$PCI_t = \beta_0 + \beta_1 ODA_t + \beta_2 REM_t + \beta_3 FDI_t + \mu_t \quad (3)$$

Where PCI denotes per capita income (proxy for poverty reduction); ODA is official development assistance; REM is remittances; FDI is foreign direct investment; β_0 and β_1–β_3 are parameters to be estimated; and μ is the stochastic error term, while t denotes time period.

The model is further expanded to incorporate control variables as follows:

$$PCI_t = \beta_0 + \beta_1 ODA_t + \beta_2 REM_t + \beta_3 FDI_t + \beta_4 INF_t + \beta_5 IFQ_t + \mu_t \quad (4)$$

Where INF represents inflation rate and IFQ denotes infrastructural quality; i and t represent time period (1990–2024). The disturbance term captures all other unobserved factors affecting poverty reduction that are not explicitly included in the model.

4. Results and discussion

Table 1 presents the descriptive statistics of the variables used in the study on foreign financial flows and poverty reduction in Nigeria over the period of 38 years. The mean value of per capita income (LPCIC)

is 12.511, with a minimum and maximum value of 12.207 and 12.858 respectively, indicating moderate variation in per capita income over the study period. The standard deviation of 0.246 further confirms that the variable is relatively stable. The skewness value of 0.059 suggests that the series is approximately symmetric, while the kurtosis value of 1.297 indicates a platykurtic distribution, meaning the distribution is flatter than the normal distribution. The Jarque-Bera probability of 0.100 is greater than 0.05, implying that LPCIC is normally distributed.

Table 1: Descriptive Statistics

	LPCIC	ODA	LOGREM	LOGFDI	INFR	IFQ
Mean	12.511	10.592	21.295	21.084	19.564	180.506
Median	12.510	5.268	22.476	21.281	12.942	83.388
Maximum	12.858	79.207	23.965	22.806	72.836	562.753
Minimum	12.207	0.677	14.701	18.601	5.388	0.279
Std. Dev.	0.246	14.509	2.957	1.106	17.115	191.125
Skewness	0.059	3.200	-0.936	-0.357	1.758	0.645
Kurtosis	1.297	14.907	2.690	2.289	4.886	1.967
Jarque-Bera	4.615	289.314	5.705	1.607	25.204	4.326
Probability	0.100	0.000	0.058	0.448	0.000	0.115
Sum	475.432	402.477	809.199	801.209	743.439	6859.217
Sum Sq. Dev.	2.232	7788.935	323.481	45.270	10837.550	1351566.
Observations	38	38	38	38	38	38

Source: Author's Computation (2026); where PCIC is Per capita Income; ODA is Official Development Assistance; REM is Remittance; FDI is Foreign Direct Investment; INFR is Inflation Rate; IFQ is Infrastructure Quality; LN is Logarithm.

Remittances (LOGREM) recorded a mean value of 21.295 with a standard deviation of 2.957, suggesting moderate fluctuations in remittance inflows. The minimum and maximum values of 14.701 and 23.965 respectively indicate considerable variation across the years. The skewness value of -0.936 indicates that the distribution is negatively skewed, implying that lower values are more dispersed. The kurtosis value of 2.690 is close to the normal benchmark of 3, indicating a near-normal distribution. The Jarque-Bera probability of 0.058 is slightly above 0.05, suggesting that the variable is approximately normally distributed.

Foreign Direct Investment (LOGFDI) has a mean value of 21.084 and a relatively low standard deviation of 1.106, indicating that FDI inflows were comparatively stable during the period under study. The skewness coefficient of -0.357 indicates slight negative skewness, while the kurtosis value of 2.289 suggests a platykurtic distribution. The Jarque-Bera probability of 0.448 is greater than 0.05, implying that the FDI series is normally distributed.

Inflation rate (INFR) recorded a mean value of 19.564 with a high standard deviation of 17.115, indicating substantial fluctuations in inflation over the study period. The maximum inflation rate of 72.836 and minimum value of 5.388 further confirm the unstable nature of inflation in Nigeria. The skewness value of 1.758 indicates positive skewness, suggesting that high inflation episodes occurred more frequently. The kurtosis value of 4.886 reveals a leptokurtic distribution with the presence of extreme values. The Jarque-Bera probability of 0.000003, being less than 0.05, indicates that the inflation series is not normally distributed.

Infrastructure quality (IFQ) has a mean value of 180.506 and a high standard deviation of 191.125, suggesting considerable fluctuations in infrastructure development over time. The minimum and

maximum values of 0.279 and 562.753 respectively indicate wide disparities in infrastructure quality. The skewness coefficient of 0.645 shows moderate positive skewness, while the kurtosis value of 1.967 indicates a platykurtic distribution. The Jarque-Bera probability of 0.115 exceeds 0.05, suggesting that the infrastructure quality variable is normally distributed.

Table 2: Correlation Matrix

	LPCIC	ODA	LOGREM	LOGFDI	INFR	IFQ
LPCIC	1.000					
ODA	0.447	1.000				
LOGREM	0.825	0.490	1.000			
LOGFDI	0.490	0.336	0.554	1.000		
INFR	-0.388	-0.220	-0.380	-0.204	1.000	
IFQ	0.868	0.287	0.743	0.293	-0.321	1.000

Source: Author's Computation (2026); where PCIC is Per capita Income; ODA is Official Development Assistance; REM is Remittance; FDI is Foreign Direct Investment; INFR is Inflation Rate; IFQ is Infrastructure Quality; LN is Logarithm.

Table 2 presents the correlation matrix showing the degree and direction of association among the variables used in the study on foreign financial flows and poverty reduction in Nigeria. The result shows that per capita income (LPCIC) has a positive relationship with official development assistance (ODA) with a correlation coefficient of 0.447, implying that increases in foreign aid are associated with improvements in per capita income. LPCIC also exhibits a strong positive relationship with remittances (LOGREM) at 0.825, suggesting that remittance inflows significantly improve income levels and contribute to poverty reduction in Nigeria. Similarly, LPCIC has a positive relationship with foreign direct investment (LOGFDI) at 0.490, indicating that higher FDI inflows are associated with increased per capita income. Infrastructure quality (IFQ) also shows a very strong positive relationship with LPCIC at 0.868, implying that improved infrastructure significantly enhances living standards and economic welfare. However, inflation rate (INFR) is negatively related to LPCIC with a coefficient of -0.380, suggesting that rising inflation reduces purchasing power and worsens poverty conditions.

The correlation between ODA and LOGREM is 0.490, indicating a moderate positive association between official aid inflows and remittance inflows. ODA also has weak positive relationships with LOGFDI (0.336) and IFQ (0.287), while it has a weak negative relationship with inflation (-0.220). Furthermore, remittances (LOGREM) and infrastructure quality (IFQ) have a strong positive correlation of 0.743, indicating that increases in remittance inflows may contribute to improved infrastructure development. Foreign direct investment (LOGFDI) also maintains positive associations with most variables except inflation.

Regarding multicollinearity, the correlation matrix indicates that there is no serious multicollinearity problem among the explanatory variables in the model. This is because none of the correlation coefficients among the independent variables exceeds the conventional threshold of 0.80 often used to indicate harmful multicollinearity. Although some variables such as LOGREM and IFQ have relatively high correlation (0.743), the value still falls below the critical threshold. Therefore, the explanatory variables are not excessively correlated with one another, and each variable is likely to provide distinct information in the regression model. Hence, the model is free from severe multicollinearity problems and is suitable for further econometric analysis.

Table 4: Unit Root Test

	Augmented Dickey-Fuller test			ADF
	Level	First Diff.	Critical	
LPCIC	-2.3557	-14.159	-2.9434	I(1)
ODA	-3.3807	-	-2.9434	I(0)
LOGREM	-2.0330	-6.8358	-2.9434	I(1)
LOGFDI	-2.1378	-10.6231	-2.9434	I(1)
INFR	-3.5491	-	-2.9434	I(0)
IFQ	-0.8023	-5.3265	-2.9434	I(1)

Source: Author's Computation (2026); where PCIC is Per capita Income; ODA is Official Development Assistance; REM is Remittance; FDI is Foreign Direct Investment; INFR is Inflation Rate; IFQ is Infrastructure Quality; LN is Logarithm.

Table 4: Bound Test Cointegration on Foreign Financial Flow and Poverty Reduction

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	4.647122	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: Author's Computation (2026); where PCIC is Per capita Income; ODA is Official Development Assistance; REM is Remittance; FDI is Foreign Direct Investment; INFR is Inflation Rate; IFQ is Infrastructure Quality; LN is Logarithm.

Table 4 presents the Augmented Dickey-Fuller (ADF) unit root test results used to examine the stationarity properties of the variables included in the study on foreign financial flows and poverty reduction in Nigeria. The unit root test is important because it helps determine whether the variables are stationary or non-stationary over time, thereby preventing the possibility of spurious regression results. The decision rule is that if the absolute value of the ADF test statistic is greater than the critical value of -2.9434 at 5% significance level, the null hypothesis of unit root is rejected, implying that the variable is stationary. The result shows that per capita income (LPCIC) is not stationary at level because its ADF statistic of -2.3557 is less than the critical value of -2.9434 in absolute terms. However, after first differencing, the ADF statistic becomes -14.159, which is greater than the critical value in absolute terms. This indicates that LPCIC becomes stationary after first differencing and is therefore integrated of order one, I(1).

Official Development Assistance (ODA) has an ADF statistic of -3.3807 at level, which exceeds the critical value of -2.9434 in absolute terms. This implies that ODA is stationary at level and integrated of order zero, I(0). Similarly, inflation rate (INFR) recorded an ADF statistic of -3.5491 at level, which is also greater than the critical value in absolute terms, indicating that inflation is stationary at level and integrated of order zero, I(0). Remittances (LOGREM) have an ADF statistic of -2.0330 at level, which is lower than the critical value in absolute terms, indicating non-stationarity at level. However, after first differencing, the ADF statistic improves to -6.8358, which is greater than the critical value in absolute terms. Hence, LOGREM is stationary at first difference and integrated of order one, I(1). Foreign Direct

Investment (LOGFDI) also exhibits non-stationarity at level with an ADF statistic of -2.1378, which is less than the critical value in absolute terms. At first difference, the ADF statistic becomes -10.6231, exceeding the critical value in absolute terms, indicating that LOGFDI is stationary at first difference and integrated of order one, I(1).

Table 5: Regression result of Foreign Financial Flow and Poverty Reduction

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Short Run Equation (Panel Error Correction Model)				
D(LPCIC(-1))	-0.252	0.141	-1.788	0.134
D(ODA)	0.002	0.000	4.221	0.008
D(ODA(-1))	-0.003	0.000	-6.356	0.001
D(LOGREM)	-0.010	0.007	-1.443	0.208
D(LOGREM(-1))	-0.031	0.008	-3.981	0.011
D(LOGFDI)	-0.009	0.005	-1.766	0.138
D(LOGFDI(-1))	-0.0585	0.009	-6.241	0.002
D(INFR)	0.000	0.000	1.040	0.346
D(INFR(-3))	0.002	0.000	3.848	0.012
D(IFQ)	**0.000**	0.000	0.263	0.803
D(IFQ(-1))	-0.00	0.000	-4.362	0.007
ECT (-1)*	-0.572	0.068	-8.460	0.000
Long Run Equation				
ODA	0.010	0.007	1.448	0.207
LOGREM	-0.034	0.013	-2.569	0.050
LOGFDI	0.057	0.019	2.961	0.032
INFR	-0.006	0.001	-4.231	0.008
IFQ	0.000	0.000	2.663	0.045
C	12.032	0.545	22.044	0.000
MODEL EVALUATION				
R-squared	0.937			
Adjusted R-squared	0.809			
F-statistics	5.045 (0.002)			
Diagnostics				
Normality Test	5.254 (0.072)			
Serial Correlation LM Test	0.302 (0.742)			
Heteroskedasticity Test	0.422 (0.109)			

Source: Author's Computation (2026); where PCIC is Per capita Income; ODA is Official Development Assistance; REM is Remittance; FDI is Foreign Direct Investment; INFR is Inflation Rate; IFQ is Infrastructure Quality; LN is Logarithm.

Infrastructure quality (IFQ) has an ADF statistic of -0.8023 at level, which is lower than the critical value, indicating non-stationarity. However, the first differenced value of -5.3265 exceeds the critical value in absolute terms, suggesting that IFQ becomes stationary after first differencing and is therefore integrated of order one, I(1).

The Bounds Cointegration Test result presented above examines the existence of a long-run relationship between foreign financial flows and poverty reduction in Nigeria using the Autoregressive Distributed Lag (ARDL) framework. The null hypothesis of the test states that there is no long-run (levels) relationship among the variables, while the alternative hypothesis suggests the existence of cointegration

among the variables. The result shows that the calculated F-statistic is 4.647122 compared with the critical bounds values at 5 percent significance level, the lower bound I(0) value is 2.39 while the upper bound I(1) value is 3.38. Since the computed F-statistic of 4.647122 is greater than both the lower and upper bound critical values, the null hypothesis of no long-run relationship is rejected. The result therefore confirms the existence of a stable long-run equilibrium relationship between financial flows and per capita income in Nigeria. Consequently, the confirmation of cointegration justifies the estimation of both the long-run ARDL model and the associated Error Correction Model (ECM) to capture the short-run dynamics and speed of adjustment toward long-run equilibrium.

Discussion of Findings

Hypothesis one (H1): Official Development Assistance (ODA) and Poverty Reduction

The results show that ODA has a positive but insignificant long-run effect on per capita income, while its short-run impact is positive and significant. This implies that ODA does not significantly reduce poverty in Nigeria in the long run; thus, H1 is not rejected. The short-run gains suggest temporary welfare improvements, but weak long-term effects reflect inefficiencies in aid allocation and institutional weaknesses. This finding is consistent with Falana (2024) and Katchy (2026), who argue that aid effectiveness depends on governance quality. However, it contradicts Ewubare and Okpoi (2018), who find that ODA reduces poverty in the long run in Nigeria.

Hypothesis two (H2): Remittances and Poverty Reduction

Remittances have a negative and marginally significant long-run effect on per capita income, while short-run effects are insignificant. This indicates that remittances do not significantly reduce poverty in Nigeria, leading to failure to reject H2. The result suggests consumption-oriented use of remittances rather than productive investment. However, Etudaiye-Muhtar and Aliyu (2026) find that remittances significantly improve access to education in Nigeria, indicating that some remittance inflows are directed towards human capital development. Although such investments may not produce immediate poverty-reducing effects, they can contribute to long-term improvements in welfare and income. This finding agrees with Ewubare and Okpoi (2018), who report mixed effects depending on usage patterns, but differs from Ezenabor and Ezenekwe (2025) and Olayungbo and Quadri (2019), who find that remittances significantly reduce poverty and improve household welfare.

Hypothesis three (H3): Foreign Direct Investment (FDI) and Poverty Reduction

FDI shows a negative and insignificant short-run effect but a positive and significant long-run effect on per capita income. Hence, H3 is rejected, indicating that FDI significantly reduces poverty in Nigeria in the long run. This suggests that FDI supports capital accumulation and employment generation over time. The result is consistent with Titiloye (2020) and Olowookere et al. (2021), who report a positive long-run effect of FDI on welfare. However, it contradicts Nwakeze et al. (2023), who find that FDI has limited direct impact on poverty reduction due to concentration in capital-intensive sectors.

Hypothesis four (H4): Inflation and Infrastructural Quality

Inflation has a negative and significant long-run effect on per capita income, confirming that it worsens poverty by reducing purchasing power, while infrastructure quality has a positive and significant effect, indicating its role in improving welfare outcomes. Thus, H4 is rejected. This finding is consistent with recent empirical evidence in Nigeria, which shows that inflation significantly increases poverty, although the magnitude of its effect depends on macroeconomic stability and institutional quality (Olanma, 2024).

It also aligns with Falana (2024) and Gani et al. (2026), who report that inflation worsens poverty while improved infrastructure enhances economic welfare.

5. Conclusion

The study concludes that foreign financial flows do not automatically translate into poverty reduction in Nigeria, as their effectiveness depends on utilization efficiency and macroeconomic conditions. The results show that foreign direct investment (FDI) and infrastructural quality significantly improve per capita income in the long run, while official development assistance (ODA) has only short-run benefits with no sustained long-run impact. Remittances exhibit weak and largely negative effects, suggesting limited productive use within the economy. Furthermore, inflation significantly worsens welfare outcomes by reducing real income, whereas improved infrastructure enhances economic performance and poverty reduction. The significant error correction term confirms a stable long-run relationship among the variables and indicates relatively fast adjustment to equilibrium following short-run shocks. Overall, the findings highlight that the poverty-reducing impact of foreign financial inflows in Nigeria is conditional on macroeconomic stability, institutional quality, and the strength of domestic absorptive capacity.

Based on the findings of this study, the following policy measures are recommended:

(i) Government should strengthen the institutional and regulatory framework guiding official development assistance (ODA) to ensure transparency, accountability, and effective allocation of aid resources. This will enhance the productive utilization of ODA in sectors such as health, education, and infrastructure, thereby improving its long-term contribution to poverty reduction.

(ii) Policy makers should design targeted frameworks that encourage the productive use of remittances by promoting diaspora investment in small and medium-scale enterprises (SMEs), agriculture, and housing development. This will help shift remittance inflows from consumption-oriented spending toward productive investments that generate employment and sustainable income.

(iii) Government should improve the investment climate to attract and retain foreign direct investment (FDI) in labour-intensive and high-impact sectors such as manufacturing, agriculture, and technology. This can be achieved through policy stability, reduced regulatory bottlenecks, and anti-corruption measures to ensure that FDI contributes more effectively to job creation and poverty reduction.

(iv) Monetary and fiscal authorities should prioritize macroeconomic stability through effective inflation management policies, including coordinated monetary tightening, exchange rate stability, and improved domestic production capacity. Controlling inflation is essential for protecting real incomes and ensuring that foreign financial inflows translate into real welfare improvements.

(v) Government should intensify investment in critical infrastructure such as electricity, transportation, digital connectivity, and water supply. Improved infrastructure will reduce production costs, enhance productivity, and strengthen the transmission effect of foreign financial flows on poverty reduction and economic growth.

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