

Determinants of Poverty and Economic Growth Nexus in Nigeria

Soje, Esther Abimbola
Department of Economics, Federal University Lokoja
esemeje606@gmail.com

Dr Peter C. Uzomba
Department of Economics, Federal University Lokoja

Olaoluwa, Babatunde Olamide
Department of Economics, Federal University Lokoja

Abstract

This study examined the relationship between poverty determinants and economic growth in Nigeria, addressing the persistent challenge of sluggish growth despite various policy interventions. The key objectives were to assess the impacts of consumer price index (CPI), unemployment (UNE), capital formation (CFO), industrial progress (IPR) and per capita income (PCI) on Nigeria's GDP growth from 1981 to 2023. The Autoregressive Distributed Lag (ARDL) approach was used to analyse the long- and short-run relationships between the poverty rate and economic growth in Nigeria. The findings reveal that per capita income and capital formation have a positive and significant influence on GDP growth, while unemployment has a negative long-term impact. Conversely, inflation and industrial progress showed no significant effect on economic growth within the study period. Based on these findings, the study recommends policies to enhance income generation, job creation and investment promotion while emphasising the need for effective inflation management to ensure economic stability and sustained growth.

Keywords: Capital formation, Economic growth, Inflation, Poverty, Unemployment, Nigeria.

JEL Codes: E24, O40, C32, I32, I23.

1.0 Introduction

Nigeria, Africa's largest economy by GDP, continues to grapple with deep-rooted economic challenges that have persisted across decades. These include volatile growth patterns, high unemployment, inflationary pressures, low capital formation and sluggish improvements in per capita income (World Bank, 2023; National Bureau of Statistics, 2023). Between 1981 and 2023, Nigeria's Gross Domestic Product (GDP) growth has fluctuated significantly, from a peak of 10.9% in 2004 to a contraction of -1.62% in 2016. In 2023, GDP growth slowed to 2.86%, a slight dip from 3.25% in 2022 (World Bank, 2023). These fluctuations were partly

driven by major macroeconomic shocks such as the global financial meltdown of 2008–2010, which weakened external demand, reduced oil revenues and slowed domestic investment. Similarly, the COVID-19 pandemic between 2019–2021 disrupted global supply chains, reduced oil prices and triggered nationwide lockdowns, collectively worsening growth outcomes. These shocks not only constrained GDP performance but also intensified socioeconomic vulnerabilities reflected in key welfare indicators. Over the same period, the unemployment rate surged from 6.1% in 1981 to 33.3% in 2023 (National Bureau of Statistics, 2023) and inflation, particularly post-2020, has frequently exceeded 18%. Per capita income remained stagnant, hovering below \$2,000, a figure that reflects not just economic strain but rising poverty levels. As of 2023, over 40% of Nigerians lived below the national poverty line (World Poverty Clock, 2023).

This persistent socioeconomic imbalance highlights a critical issue: the intertwined nature of poverty and economic growth in Nigeria. While growth is often cited as a tool for poverty reduction, Nigeria's experience suggests a more complex relationship, one where economic expansion has not translated into broad-based poverty alleviation. This raises key questions: To what extent does poverty influence economic growth and how do macroeconomic indicators mediate this relationship? Conversely, does growth actually reduce poverty in Nigeria's current structural conditions?

Though existing studies (e.g., Saungweme, 2021; Olurin et al., 2024) have explored select macroeconomic factors like inflation and government expenditure, there remains a gap in the literature regarding the multidimensional interplay between poverty and growth. In particular, variables such as the consumer price index (CPI), unemployment (UNE), capital formation (CFO), industrial progress (IPR) and per capita income (PCI) have not been holistically examined as joint determinants of both poverty and its relationship with economic growth. While prior works have isolated effects, for instance, on inflation's impact on GDP (Kareem & Yusuf, 2024), few have studied how these variables together influence the poverty–growth nexus in Nigeria. This paper therefore aims to fill that gap by investigating the determinants of poverty and how they shape and are shaped by, Nigeria's economic growth trajectory. Specifically, it examines how CPI, unemployment, capital formation, industrial development and per capita income interact with poverty levels and GDP growth. In doing so, the research

advances our understanding of whether growth in Nigeria is inclusive and poverty-reducing, or merely expansion without equity.

Theoretically, this study draws on Amartya Sen’s Capability Approach, which broadens the lens of poverty beyond income, emphasising access to education, healthcare and freedoms that enable individuals to live meaningful lives. This approach supports a more nuanced analysis of how macroeconomic growth does or does not translate into human development. Practically, the findings are intended to inform policymakers, development partners and investors, offering insights that could shape more targeted and inclusive economic strategies. By identifying the macroeconomic variables that reinforce or weaken the poverty–growth link, the study seeks to guide interventions that both spur economic development and meaningfully reduce poverty. Thus, this research provides both empirical and policy-relevant contributions to the ongoing discourse on sustainable and inclusive growth in Nigeria.

2.0 Literature Review

2.1 Theoretical Review

Amartya Sen’s Capability Approach, initially articulated in the late 1970s and further developed in works such as “*Equality of What?*” (1979) and *Commodities and Capabilities* (1985), provides a comprehensive theoretical basis for understanding poverty and its effects on economic growth in Nigeria. Unlike income-based views, this framework emphasises enhancing individuals’ substantive freedoms and capabilities, the real opportunities people have to live the lives they value.

A conceptual model is proposed as:

$$Capabilities_i = f(CPI_i, UNE_i, PCI_i, CFO_i, GDP_i, IPR_i) \quad 2.1$$

where Consumer Price Index (CPI), Unemployment (UNE), Per Capita Income (PCI), Capital Formation (CFO), Gross Domestic Product (GDP) and Industrial Progress (IPR) collectively influence individual capabilities and the ability to overcome poverty.

Accordingly, poverty is modeled as a function of capabilities:

$$Poverty_i = f(Capabilities_i) \quad 2.2$$

or equivalently:

$$Poverty_i = f(CPI_i, UNE_i, PCI_i, CFO_i, GDP_i, IPR_i) \quad 2.3$$

Sen views development as expanding human freedom, the removal of material hardships and social constraints such as oppressive norms or fatalistic views about poverty. Development,

therefore, is about enlarging real choices and reducing barriers, linking poverty reduction directly to freedom enhancement (Todaro & Smith, 2009).

2.2 Empirical Review

Recent studies have extensively analysed the macroeconomic determinants of poverty and their impacts on economic growth, focusing on Nigeria and other developing regions. Uzodigwe et al. (2025) used a Nonlinear Autoregressive Distributed Lag (NARDL) model covering 1970–2023 to examine inflation, FDI, trade openness, exchange rates and growth effects on poverty in Nigeria. They found that Foreign Direct Investment FDI, trade openness and economic growth reduced poverty short-term, while GDP per capita drove long-term poverty alleviation. Inflation and exchange rate depreciation had mixed, often negative, long-term effects, highlighting the need for stable macroeconomic policies.

Madueke et al. (2025) applied multiple regression to evaluate poverty alleviation expenditure, domestic investment, FDI, Small and Medium Enterprises SME credit and per capita income effects on GDP (1999–2023). Poverty alleviation, domestic investment, small and medium enterprises (SME) credit and per capita income (PCI) positively impacted growth, but foreign direct investment (FDI) showed a negative relationship, signaling challenges in its utilisation. Mbodj and Laye (2025) employed quantile regression across developing economies, confirming that financial inclusion and development significantly reduce poverty by improving credit access and economic participation. They advocated policies enhancing financial services and institutional quality.

Philips and Aworinde (2025) analysed five West African countries (1990–2023) using panel data and Feasible Generalized Least Squares (FGLS) finding poverty and exchange rate volatility harm economic growth, whereas government spending on education positively influences it. CPI effects were positive but not significant, emphasising poverty reduction, education and macroeconomic stability for growth.

Ibrahim and Abubakar (2024) used ARDL models to show that higher per capita income fosters sustainable development in West Africa by improving environmental and social outcomes. Ogbonna and Okeke (2024) applied dynamic panel data models to Southeast Asia, revealing capital formation's positive role in sustainable development through infrastructure and social

services. Ademola and Ojo (2023) found capital formation boosts economic development indicators like education and health across African countries (2000–2021).

Onyemaechi and Chinedu (2023) confirmed a positive long-term relationship between capital formation and GDP growth in Nigeria (1980–2021). Opadeji et al. (2023), using Johansen co-integration and a Vector Error Correction Model VECM (1991–2021), observed that while capital formation lacked significant effects on Nigerian economic development, infrastructure played a key positive role.

Akinlo and Olayiwola (2023) demonstrated a strong positive correlation between per capita income and human development indices across African countries, emphasising income growth for improved health and education. Bassey and Usen (2023) linked higher per capita income with reduced poverty and better education access in Nigeria (2000–2021). Adelowokan (2023) showed that inclusive economic growth reduces poverty when it promotes employment and productive opportunities, using ARDL analysis on Nigerian data (1981–2020).

Niken, Haile and Berecha (2023) studied Ethiopia's economy (1980–2020) with VAR, ECM and ARDL models, finding minimal long-term impacts of inflation and unemployment on growth, but a notable inverse relationship between inflation and unemployment over time. Ali, Sardar and Latif (2023) analysed Pakistan (1987–2021) via ARDL, finding education boosts economic growth, while poverty and population growth slow it.

Collectively, these empirical findings underscore the complex, multifaceted relationships between macroeconomic variables, poverty, capital formation and economic growth. They highlight the critical need for tailored policies promoting stable macroeconomic environments, financial inclusion, education and investments in infrastructure to foster sustainable development and poverty reduction.

3.0 Methodology

This study employs a quasi-ex-post-facto (quasi-experimental) research design. Secondary data for the analysis were sourced from the World Development Indicators (WDI) and United Nations Conference on Trade and Development UNCTAD (2022). This study utilises time series data spanning from 1981 to 2023 to achieve its research objectives.

3.1 Model Specification

The study is grounded in Sen’s Capability Approach, which emphasises evaluating poverty through the lens of individuals’ functionings and capabilities (Todaro & Smith, 2009). Based on this framework, the model is specified to examine the determinants of poverty and their effects on economic growth and development in Nigeria.

The functional form of the model is expressed as:

$$GDP = f(CPI, UNE, CFO, IPR, PCI) \quad 3.1$$

Where:

GDP = Gross Domestic Product growth rate, measured as; $\frac{GDP_t - GDP_{t-1}}{GDP_{t-1}}$

CPI = Consumer Price Index; UNE = Unemployment rate; CFO = Capital Formation; IPR = Industrial Progress; PCI = Per Capita Income

The explicit econometric form of the model is:

$$GDP_t = \alpha_0 + \alpha_1 CPI_t + \alpha_2 UNE_t + \alpha_3 LN(CFO)_t + \alpha_4 LN(IPR)_t + \alpha_5 PCI_t + \mu_t \quad 3.2$$

Where α_0 is the intercept, α_1 to α_5 are coefficients and μ_t is the error term.

3.2 Method of Data Analysis

The Autoregressive Distributed Lag (ARDL) model, developed by Pesaran et al., is employed to estimate both long-run and short-run relationships between variables. The model incorporates lags of dependent and independent variables, making it appropriate for variables integrated at levels I(0) or first difference I(1) (Greene, 2008). While stationarity tests are not strictly necessary for ARDL, they are performed here to ensure none of the variables are integrated at the second difference I(2), which could lead to spurious regression results (Maduka, Madichie, & Eze, 2017).

Autoregressive Distributed Lag (ARDL) Approach

The study adopts the Autoregressive Distributed Lag (ARDL) approach due to its flexibility in handling variables that are integrated at levels I(0), first difference I(1), or a combination of both. The ARDL framework is also suitable for small sample studies and allows for simultaneous estimation of both short-run and long-run dynamics.

The baseline ARDL (p, q, r, s, t, u) model is specified as follows:

$$GDP_t = \alpha_0 + \sum_{i=1}^p \beta_{1i} GDP_{t-i} + \sum_{i=1}^q \beta_{2i} CPI_{t-i} + \sum_{i=1}^r \beta_{3i} UNE_{t-i} + \sum_{i=1}^s \beta_{4i} CFO_{t-i} + \sum_{i=1}^t \beta_{5i} IPR_{t-i} + \sum_{i=1}^u \beta_{6i} PCI_{t-i} + \varepsilon_t \quad 3.3$$

Error Correction Mechanism (ECM)

Once a long-run relationship is confirmed through the ARDL bounds test, the Error Correction Mechanism (ECM) is derived to capture the speed at which the system returns to long-run equilibrium following short-run shocks. The coefficient of the lagged error-correction term ECT_{t-1} is expected to be negative and statistically significant, indicating convergence toward equilibrium. A positive or insignificant coefficient suggests divergence or weak adjustment, thereby undermining the long-run relationship.

The short-run ECM representation is given as:

$$\Delta GDP_t = \alpha_{02} + \sum_{i=1}^p \alpha_{1i} \Delta GDP_{t-1} + \sum_{i=1}^q \alpha_{2i} \Delta CPI_{t-1} + \sum_{i=1}^r \alpha_{3i} \Delta UNE_{t-1} + \sum_{i=1}^s \alpha_{4i} \Delta CFO_{t-1} + \sum_{i=1}^t \alpha_{5i} \Delta IPR_{t-1} + \sum_{i=1}^u \alpha_{6i} \Delta PCI_{t-1} + \lambda ECT_{t-1} + \mu_{2t} \quad 3.4$$

Where:

$\alpha_{1i}, \alpha_{2i}, \alpha_{3i}, \dots$ represent short-run dynamic coefficients.

$\lambda = (1 - \sum_{i=1}^p \delta_i)$ is the adjustment parameter expected to carry a negative sign.

$ECT_{t-1} = (GDP_{t-i} - \theta X_t)$, where θ represents the long-run parameters derived from the ARDL model.

ARDL Co-integration Test

The long-run relationship between the variables is examined using the ARDL long-run and bound test. This method investigates the null hypothesis that no co-integration exists between the variables. To determine this relationship, F-statistics are utilised. The lower bound $I(0)$ and the upper bound $I(1)$ serve as two asymptotically established critical values against which the F-statistics are compared. There is a long-term relationship between the variables if the F-statistics value is greater than the upper bound critical value; however, if it is lower than the lower bound critical value, there is no such relationship; and if it falls between the lower bound and upper bound critical values, the long-term relationship is inconclusive (Salisu, Umar & Yakubu, 2015). To perform the bound test for co-integration, the model for this study is specified as:

$$\Delta GDP_t = \alpha_{01} + \beta_{11} GDP_{t-i} + \beta_{21} CPI_{t-i} + \beta_{31} UNE_{t-1} + \beta_{41} CFO_{t-1} + \beta_{51} IPR_{t-1} + \beta_{61} PCI_{t-1} + \sum_{i=1}^p \alpha_{1i} \Delta GDP_{t-1} + \sum_{i=1}^q \alpha_{2i} \Delta CPI_{t-1} + \sum_{i=1}^r \alpha_{3i} \Delta UNE_{t-1} + \sum_{i=1}^s \alpha_{4i} \Delta CFO_{t-1} + \sum_{i=1}^t \alpha_{5i} \Delta IPR_{t-1} + \sum_{i=1}^u \alpha_{6i} \Delta PCI_{t-1} + \mu_{1t} \quad 3.4$$

Hypotheses:

H_0 (longrun relationship does not exists): $\beta_{1i} = \beta_{2i} = \dots = \beta_{6i} = 0$

H_1 (longrun relationship does exists): $\beta_{1i} \neq \beta_{2i} \neq \dots \neq \beta_{6i} \neq 0$ ($i = 1, 2, \dots$)

Hence, the lack of co-integration shows that a variable has no long-run relationship.

Post Estimation Diagnostic Checks

To ensure the reliability and validity of the estimated regression model, a series of post-estimation diagnostic checks were conducted. These include tests for serial correlation to detect autocorrelation in the error terms, heteroscedasticity to assess the consistency of error variance and normality to confirm that residuals follow a normal distribution. Additionally, the specification test, using the Ramsey RESET, was applied to verify model adequacy, while CUSUM and CUSUMSQ tests were employed to assess the structural stability of the model over time. Collectively, these diagnostics confirm the robustness of the model and the reliability of the results.

Model Justification

The study adopts the Autoregressive Distributed Lag (ARDL) model due to its strength in capturing both short-run and long-run dynamics between GDP growth and macroeconomic indicators such as inflation, unemployment, capital formation, industrial progress and per capita income. The ARDL model is particularly appropriate for the dataset, which includes variables integrated at different orders (I(0) and I(1)) and for the long-time span (1981–2023) under consideration. Its flexibility and efficiency in handling mixed data make it well-suited for analyzing the poverty–growth relationship in Nigeria.

4.0 Results and Discussions

Table 1: Descriptive Statistics Results

	GDP	CPI	UNE	CFO	IPR	PCI
Mean	3.445702	18.90245	3.486500	0.133222	0.809624	0.780621
Median	3.921555	12.70720	3.790000	0.127376	1.728382	1.293169
Maximum	15.32916	72.83550	9.790000	0.367418	18.05893	12.27614
Minimum	-10.92409	5.388008	0.000000	-0.230053	-18.97455	-13.12823
Std. Dev.	4.782807	16.86890	2.748341	0.133301	6.621470	4.620323
Skewness	-0.453868	1.840648	0.461967	-0.541629	-0.395665	-0.483026
Kurtosis	4.298939	5.200966	2.826575	3.334302	4.495707	4.394069
Jarque-Bera	4.185374	30.66032	1.472881	2.142012	4.772239	4.794472
Probability	0.123355	0.000000	0.478815	0.342664	0.091986	0.090969
Sum Sq. Dev.	892.1345	11097.83	294.5817	0.692996	1709.911	832.5479
Observations	43	43	43	43	43	43

Source: Author’s computation using E views (2025)

The descriptive statistics for the period 1981–2023 provide an overview of the key macroeconomic variables relevant to poverty and economic growth in Nigeria, including GDP growth rate, inflation (CPI), unemployment (UNE), capital formation (CFO), industrial progress (IPR) and per capita income (PCI). On average, Nigeria experienced a moderate GDP growth rate of 3.45%, but inflation was high at 18.90%, indicating persistent price instability. Unemployment averaged 3.49%, while both capital formation and industrial progress remained low, with mean values of 0.13% and 0.81%, respectively. The median values are generally close to the means, though discrepancies in CPI and PCI suggest some asymmetry in their distributions. Extremes in the data, such as GDP growth ranging from -10.92% to 15.33% and CPI peaking at 72.84%, highlight periods of economic volatility and inflationary spikes.

The data also reveal considerable variability in all indicators, especially inflation and GDP, as shown by their high standard deviations. Skewness and kurtosis analyses indicate that some variables, particularly CPI, are skewed and exhibit heavy tails, reflecting the presence of extreme values or outliers. For instance, CPI is positively skewed and leptokurtic, pointing to inflation shocks over time. The Jarque-Bera test confirms that CPI deviates significantly from normality, while variables like GDP, UNE and PCI generally follow a more normal distribution. These findings suggest that Nigeria’s macroeconomic environment during the study period was marked by instability and fluctuations, which are critical in understanding the structural determinants of poverty in the country.

Table 2: ADF Unit Root Test Result

Variables	ADF Unit Root Result				Order of integration
	At Level		At First Difference		
	T – statistics	P-value	T – statistics	P-value	
GDP	-4.0657	0.0029			1(0)
CPI	-3.6815	0.0082			1(0)
UNE	0.2691	0.9737	-5.7817	0.0000	1(1)
CFO	-4.1353	0.0023			1(0)
IPR	-5.5508	0.0000			1(0)
PCI	-4.1086	0.0026			1(0)

Source: Author’s computation using E views (2025)

The Augmented Dickey-Fuller (ADF) unit root tests indicate that GDP, CPI, CFO, IPR and PCI are stationary at levels (I(0)). At the same time, UNE is non-stationary at level but becomes stationary after first differencing (I(1)). This behaviour is not unusual, as unemployment rates often exhibit persistence and slow adjustment over time, making them prone to structural breaks and long-run trends that prevent stationarity at the level. Since the variables exhibit

mixed integration orders, some at level and others at first difference, the Autoregressive Distributed Lag (ARDL) model is appropriate. The ARDL approach effectively accommodates variables integrated at different orders, allowing analysis of both short- and long-run relationships in the study.

Tables 3: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-362.9297	NA	18.44809	19.94214	20.20337	20.03424
1	-273.8039	144.5283*	1.073473*	17.07048*	18.89909*	17.71515*
2	-240.5987	43.07695	1.465048	17.22155	20.61754	18.41880
3	-199.9818	39.51911	1.808407	17.97199	21.93536	18.72181

* indicates lag order selected by the criterion

Source: Author’s computation using E views (2025)

The study used the Akaike Information Criterion (AIC), Final Prediction Error (FPE), Hannan-Quinn (HQ) and Schwarz Criterion (SC) to determine the optimal lag length for the model. All criteria consistently indicated that a lag length of 1 is optimal, supported by the lowest AIC (17.07), FPE (1.073473), HQ (17.71515) values and a significant likelihood ratio (LR) test (144.5283). Therefore, lag 1 was chosen to best capture the variable dynamics without over fitting or losing predictive accuracy.

Table 4: ARDL F-Bound Cointegration Test Result

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	4.524921	10%	2.26	3.35
k	5	5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Author’s computation using E views (2025)

The ARDL bound test results indicates a long-term relationship among the variables, with an F-statistic of 4.524921 exceeding the 5% (3.79) and 2.5% (4.18) upper bound critical values. This leads to rejecting the null hypothesis of no co integration, confirming that GDP, CPI, UNE, CFO, IPR and PCI share a stable long-run equilibrium despite short-term fluctuations.

Table 5: Variance Inflation Factor (VIF) Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
GDP(-1)	0.010263	4.356649	3.260991
CPI	7.11E-07	5.109847	2.163979
CPI(-1)	7.65E-07	5.485790	2.326349
UNE	2.24E-05	6.094946	2.352204
CFO	0.009887	3.930735	1.880990

CFO(-1)	0.008678	3.377730	1.688219
IPR	5.71E-06	2.869970	2.856550
PCI	1.41E-05	3.315646	3.218369
PCI(-1)	0.010872	3.287250	3.268298
C	0.080397	924.7767	NA

Source: Author’s computation (2025)

The results of the Variance Inflation Factor (VIF) test, presented in Table 4.1.4, indicate that all the centered VIF values for the independent variables fall well below the commonly accepted critical threshold of 10. This suggests that multicollinearity is not a serious concern in the model, as none of the explanatory variables exhibit high linear correlation with one another.

4.1 Results

Table 6: ARDL Short and Long Run Estimation Results

Dependent Variable: GDP

Short Run Estimation				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-1)	0.526793	0.117296	4.491159	0.0001
CPI	0.000602	0.000696	0.865107	0.3949
CPI(-1)	-0.001189	0.000900	-1.321430	0.1979
UNE	-0.000356	0.003973	-0.089705	0.9292
CFO	0.193415	0.080061	2.415851	0.0230
CFO(-1)	-0.175596	0.074925	-2.343631	0.0270
IPR	0.000701	0.001979	0.354294	0.7260
PCI	1.034530	0.003092	334.5800	0.0000
PCI(-1)	-0.534975	0.121792	-4.392531	0.0002
Long Run Estimation				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	-0.002471	0.002204	-1.121098	0.2725
UNE	-0.193415	0.080061	-2.415851	0.0230
CFO	0.779810	0.281773	2.767511	0.0103
IPR	0.001481	0.004157	0.356414	0.7244
R-squared	0.999907	Adjusted R-squared		0.999867
F-statistic	25291.09	Durbin-Watson stat		1.709837
Prob(F-statistic)	0.000000			

Source: Author’s computation using E views (2025)

The ARDL estimation results reveal significant short- and long-run effects of key variables on Nigeria’s GDP growth (1981–2023). In the short run, past GDP growth positively influences current growth (GDP(-1) coefficient = 0.53, $p < 0.01$), consistent with the Neoclassical Growth Theory emphasising persistence in growth. The error correction term (CointEq(-1) = -0.4732, $p < 0.01$) confirms a long-run equilibrium, with nearly 47% of deviations from equilibrium corrected each period, indicating a relatively fast adjustment in Nigeria’s economy.

The empirical result from this study revealed that inflation (CPI) does not significantly affect Nigeria's economic growth in either the short or long term. This outcome aligns with Niken, Haile and Berecha (2023), who found inflation's impact on growth to be context-dependent and often statistically insignificant over longer periods. However, it contrasts with Saungweme (2021) and Philips and Aworinde (2025), who highlighted inflation's negative effects on economic performance. The findings suggest policymakers should focus more on capital formation and employment generation. More so, unemployment shows no significant short-term effect but a significant negative long-term impact on growth, supporting Okun's Law. This aligns with studies by Saungweme (2021), Priambodo (2021), Adelowokan et al. (2019) and Dahliah and Nur (2021), which emphasise unemployment's detrimental effect on economic productivity and poverty. It also resonates with Niken, Haile and Berecha (2023) regarding the delayed impact of unemployment on growth.

On other hand, capital formation positively and significantly influences economic growth in both the short and long run. This finding is consistent with Ogbonna and Okeke (2024), Ademola and Ojo (2023) and Onyemaechi and Chinedu (2023), all of whom documented positive links between capital formation and economic growth. However, it contrasts with Opadeji et al. (2023), who found capital formation insignificant in their study period.

However, industrial progress has a positive but statistically insignificant impact on growth, consistent with Adesanya and Babalola (2019), who highlighted under investment and structural weaknesses in Nigeria's industrial sector. The findings also align with the poverty-environment nexus theory, suggesting that without addressing broader socio environmental issues, industrial progress alone cannot drive growth.

Per capita income shows a strong, positive and significant relationship with economic growth. This aligns with Ibrahim and Abubakar (2024), Akinlo and Olayiwola (2023) and Basse and Usen (2023), who documented positive correlations between per capita income and development indicators. The results also support Amartya Sen's Capability Approach and the Poverty Trap Theory, emphasising income's role in enabling sustained development.

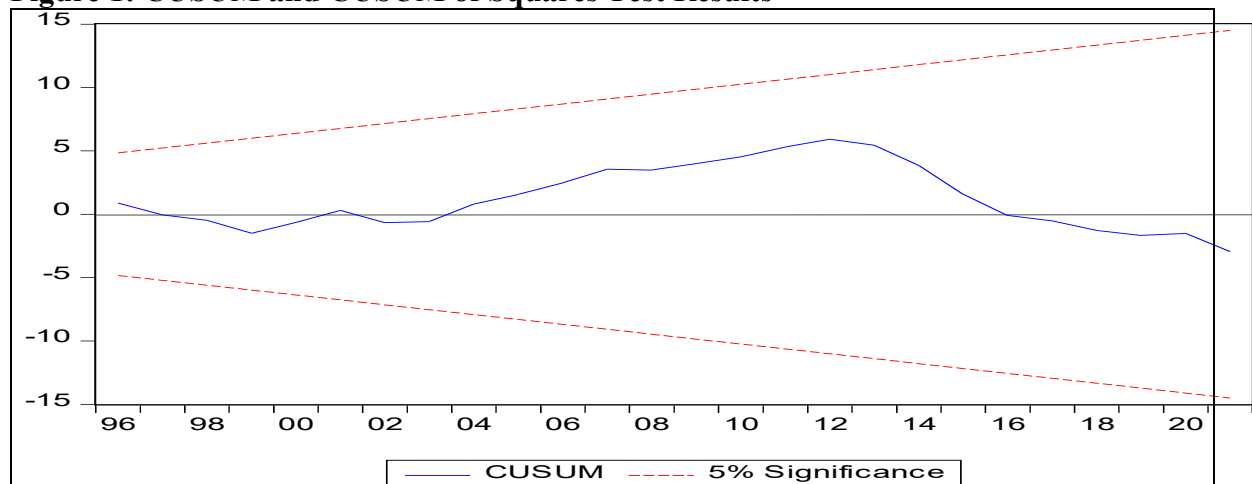
Table 7: Summary of Diagnostic Tests

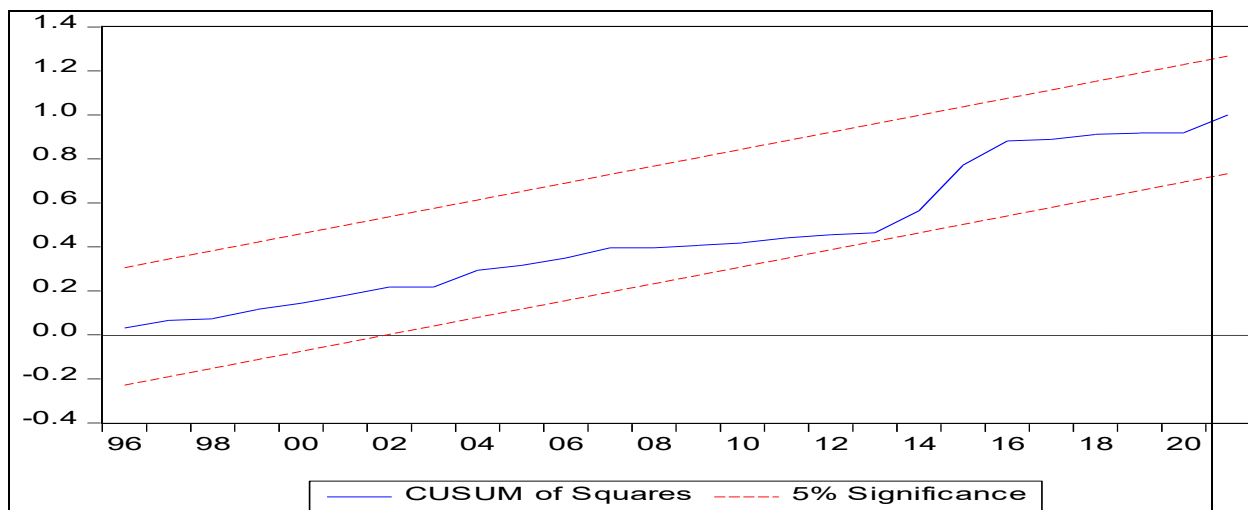
Test	Statistic	Value	Degrees of Freedom (df)	(p-value)
Breusch-Godfrey Serial Correlation Test	F-statistic	0.439256	(2, 24)	0.6496
	Obs*R-squared	1.341860	—	0.5112
Breusch-Pagan-Godfrey Heteroskedasticity Test	F-statistic	1.943194	(11, 26)	0.0800
	Obs*R-squared	17.14518	—	0.1037
	Scaled explained SS	6.746665	—	0.8192
Ramsey RESET Test	t-statistic	1.492213	25	0.1482
	F-statistic	2.226699	(1, 25)	0.1482
Jarque-Bera Normality Test	Statistic	0.244219	—	0.885051

Source: Author’s computation using E views (2025)

The diagnostic test results indicate that the model is well specified and reliable. The Breusch-Godfrey test shows no evidence of serial correlation in the residuals, while the Breusch-Pagan-Godfrey test suggests the absence of heteroskedasticity, indicating constant variance of errors. The Ramsey RESET test confirms that the model’s functional form is correctly specified, with no indication of mis specification. Additionally, the Jarque-Bera test reveals that the residuals are normally distributed, satisfying an important assumption for valid statistical inference. Collectively, these results support the robustness and appropriateness of the model used in the analysis.

Figure 1: CUSUM and CUSUM of Squares Test Results





Source: Author’s computation using E views (2025)

The CUSUM and CUSUM of Squares tests are graphical methods used to check the stability of the model. If the CUSUM and CUSUM of Squares lines remain within the 5% significance boundaries, the model is considered stable. Since no critical boundaries are exceeded in the graphical plots (as inferred), we conclude that the model is stable over the sample period.

The diagnostic tests suggest that the model's residuals are normally distributed, there is no serial correlation and no heteroskedasticity is present. Additionally, the model is correctly specified and the stability tests (CUSUM and CUSUM of Squares) indicate that the model is stable.

5.0 Conclusion and Recommendations

This study examined the determinants of poverty and their effects on economic growth in Nigeria from 1981 to 2023 using the ARDL model. The findings show that per capita income and capital formation significantly promote economic growth, highlighting the need for policies that boost income generation and investment in infrastructure. Unemployment negatively affects growth, emphasising job creation as a policy priority. Interestingly, inflation measured by CPI was found not to significantly impede growth, suggesting that economic strategies should shift focus toward enhancing income and employment opportunities. Overall, the study advocates for a comprehensive economic policy approach that integrates income improvement, employment generation and capital investment to alleviate poverty and sustain growth. These insights provide guidance for future research and policy formulation aimed at addressing Nigeria’s economic challenges.

This study offers several policy recommendations to address macroeconomic drivers of poverty in Nigeria. Although CPI was not statistically significant, managing inflation remains essential for economic stability. Policymakers should pursue balanced monetary policies and promote financial literacy to help households cope with price changes. Given the negative effect of unemployment on growth, job creation must be prioritised, especially in agriculture, manufacturing and technology sectors. Public-private partnerships and support for SMEs can drive entrepreneurship and expand employment opportunities. To boost capital formation, the government should foster an investment-friendly environment through incentives, improved infrastructure, reduced bureaucracy and access to affordable credit. While industrial progress was not statistically significant, strengthening the sector through infrastructure, technology, skills development and energy reforms is critical for long-term growth. Supporting innovation and SMEs will further enhance industrialization. Finally, raising per capita income through skills training, vocational education and entrepreneurship support is vital. Tax incentives for human capital investment can improve living standards and reduce poverty

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