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Assessment of the Impact of Inflation on Economic Growth in Nigeria

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Abstract **Original Research Article**

This study examines the impact of inflation on Nigeria's economic growth from 1990 to 2023. Using time-series econometric techniques, the study analyzes the short-term and long-term relationships between inflation, unemployment, poverty, national terrorism index, and economic growth. the findings suggest that inflation has a significant negative impact on economic growth, both directly and indirectly through its influence on unemployment and poverty. Additionally, we find a strong positive correlation between national terrorism index and inflation, further exacerbating the negative effects on economic growth. The study concludes with policy implications, emphasizing the need for macroeconomic stability, effective security measures, and targeted social policies to mitigate the adverse effects of inflation and insecurity on Nigeria's economic development.

Keywords: Inflation, Economic Growth and Autoregressive Distributive Lag Model (ARDL)

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1.0 INTRODUCTION

The relationship between inflation and economic growth is a critical subject of study in economic development, particularly in developing countries like Nigeria. Inflation, the persistent rise in the general price level of goods and services, can significantly impact economic performance (El-Yaqub, Musa & Ismail, 2024). Economic growth, typically measured by the increase in the Gross Domestic Product (GDP), reflects the expansion of an economy's productive capacity (Musa & Ismail, 2023). In the Nigerian context, inflation has had varying degrees of influence on growth, depending on the level of inflation, its volatility, and the broader economic environment (Ismail, Musa & Magaji, 2025). This study seeks to empirically assess the impact of inflation on Nigeria's economic growth from 1990 to 2023.

Over the last few decades, Nigeria has experienced fluctuating inflation rates, influenced by a range of factors including changes in global oil prices, currency depreciation, fiscal policies, and supply-side shocks (Magaji, Musa & Ismail, 2025). A substantial body of literature has examined the effect of inflation on economic growth, yet empirical findings are mixed. Studies have shown both positive and negative correlations between inflation and economic growth, with some suggesting that moderate inflation may be conducive to growth by stimulating investment and consumption (Khan & Saqib, 2011). Conversely, other studies argue that inflation, particularly when it becomes excessive, is detrimental to growth by eroding the value of money, reducing the purchasing power of households, and increasing uncertainty among investors (El-Yaqub, Ismail & Bappayo, 2024; Okun, 1971; Barro, 1995).

Several studies specifically focusing on Nigeria have indicated that inflation has had a predominantly negative impact on economic growth. For example, Adebayo et al. (2017) found a significant negative relationship between inflation and Nigeria's GDP growth, attributing this to the erosion of real wages, reduced investment, and lower consumer spending. Additionally, Alimi (2020) highlights that high inflation in Nigeria has destabilized the economy, especially during periods of political instability and external shocks, such as fluctuations in global oil prices. Moreover, the volatility of inflation has been linked to increased economic uncertainty, which deters long-term investments and undermines economic growth (Oladele, Musa & Ismail, 2024).

Empirical evidence from Nigeria further reveals that inflation's effects on growth are not linear but depend on its level. The threshold hypothesis suggests that inflation may be growth-friendly up to a certain level, after which it becomes detrimental (Ismail, Musa & Magaji, 2024; Fischer, 1993). This is particularly relevant in the case of Nigeria, where inflation rates have often surpassed the 10% threshold, with years of hyperinflation recorded during the 1980s and 1990s. Research by Ojo and Odetayo (2020) supports this argument, showing that inflation exceeding 15% annually has consistently hampered economic growth in Nigeria, primarily due to its adverse impact on investment, savings, and the overall business climate.

In addition to the direct impact of inflation on economic growth, the interaction between inflation and other macroeconomic variables, such as exchange rates, interest rates, and fiscal policies, plays a crucial role in determining the outcome (El-Yaqub, Usman, Musa & Ismail, 2024). Studies by Akinlo and Apanisile (2014) suggest that the interplay between inflation and exchange rate fluctuations in Nigeria often exacerbates the negative effects of inflation on economic growth, particularly during periods of currency devaluation. This is further compounded by the country's reliance on oil exports, which exposes it to external price shocks and exchange rate volatility (Magaji, Musa & Ismail, 2025).

Given the complex and multifaceted nature of the inflation-growth relationship in Nigeria, this study employs a comprehensive empirical analysis using time-series data from 1990 to 2023. By utilizing econometric techniques such as cointegration and causality testing, the study seeks to provide a deeper understanding of the short- and long-term effects of inflation on Nigeria's economic growth. The findings will contribute to the ongoing debate on the optimal level of inflation for sustaining economic growth in developing economies like Nigeria, offering policy recommendations aimed at fostering a stable and growth-oriented macroeconomic environment.

2.0 LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Conceptual Review

2.1.1 Economic Growth

Economic growth refers to the sustained improvement in an economy's ability to produce goods and services, ultimately enhancing the standard of living for its population. It is driven by managing production factors such as land, labor, capital, and entrepreneurship (Igwe, Magaji, & Darma, 2021). Growth is often measured by the rise in real Gross Domestic Product (GDP), accounting for inflation and ensuring a clearer understanding of an economy's true expansion (Balami, 2006). Per capita production growth, highlighted by Jhingan (2006), underscores the importance of aligning production growth with population size to ensure better living standards. Economic growth also hinges on the growth of the labor force and trade volume, which enhance productivity and foster global economic interaction (Magaji, 2007). These elements, coupled with technological advancements, capital accumulation, and institutional development, create a robust foundation for sustained growth (Musa, Magaji, & Salisu, 2023).

However, economic growth transcends mere increases in output, emphasizing improvements in quality of life through better access to essential services and equitable income distribution (Enaberue, Musa, & Magaji, 2024). Sustainable growth must balance environmental considerations and social equity to ensure benefits are widely shared and societal cohesion is maintained. The International Monetary Fund (IMF, 2012) and the World Bank (1993) describe economic growth as a rise in real GDP and productivity, reflecting a nation's increasing potential GDP. This highlights the multifaceted nature of growth, which not only involves economic outputs but also structural and social progress that fosters long-term stability and development.

2.1.2 Inflation

Inflation, defined as the rate at which the general level of prices for goods and services rises, eroding purchasing power, is a key economic indicator monitored by central banks to support sustainable growth (Mankiw, 2016). While moderate inflation can signal a growing economy, excessive inflation leads to instability, often driven by demand-pull, cost-push, and built-in factors, especially in developing countries with weaker economic policies (Mankiw, 2016). Its impact spans all sectors: consumers face reduced purchasing power, especially those on fixed incomes; businesses experience planning uncertainties; and governments contend with increased debt servicing costs and diminished real tax revenues (Friedman, 1968). In countries like Nigeria, inflation is often tied to volatile oil prices and expansionary fiscal policies, requiring coordinated monetary, fiscal, and exchange rate measures to maintain economic stability (Adebayo et al., 2017).

2.2 Theoretical Review

2.2.1 The Classical Theory of Inflation

The Classical Theory of Inflation asserts that inflation results from an increase in the money supply without a corresponding rise in goods and services, causing a decline in money's purchasing power and a general increase in price levels (Friedman, 1968). Rooted in the ideas of economists like Adam Smith and David Ricardo, the theory emphasizes that excessive monetary expansion, often due to government policies, distorts economic signals and impairs decision-making by consumers and businesses (Friedman, 1968). In Nigeria, this theory helps explain inflationary trends driven by fiscal deficits, monetary expansion, and external shocks such as oil price fluctuations, which the country is particularly vulnerable to due to its reliance on oil exports. When the Nigerian government increases the money supply to finance spending, it disrupts the balance between money and real output, leading to inflation that diminishes savings, deters

investment, and hampers long-term economic growth (Friedman, 1968).

2.3 Empirical Review

Ugomma and Chijioke (2024) assess the impact of inflation and exchange rate on Nigerian Gross Domestic Product (GDP) using multiple linear regression with data sourced from the Central Bank of Nigeria Statistical Bulletin, covering the period from 1981 to 2022. The study found that inflation negatively impacts GDP, while the exchange rate significantly influences GDP with a p-value of 0.005. The model explained 92.2% of the variation in GDP, suggesting that inflation and exchange rate fluctuations are key factors in determining GDP performance. The authors recommended the implementation of policies aimed at controlling inflation and stabilizing the exchange rate to promote economic growth.

Kaduna Polytechnic and Usman (2024) investigate the impact of inflation and unemployment on economic growth in Nigeria using the Generalized Method of Moments (GMM) with data spanning from 1999 to 2023. The study found that both inflation and unemployment negatively affect economic growth, with a 1% increase in inflation resulting in a 1% decrease in growth, while a 1% increase in unemployment leads to a significant 10% reduction in economic growth. Based on these findings, the authors recommend prioritizing strategies to reduce both inflation and unemployment as essential measures to stimulate economic growth in Nigeria.

Idolor and Omehe (2022) conduct a study on the effect of inflation rate and investment on economic growth in Nigeria, utilizing the Neo-Classical Growth Model with annual data from 1980 to 2021. The authors identified a non-linear relationship between inflation and economic growth, with two distinct thresholds. Below 6% inflation, a positive effect on economic growth was found, while between 6% and 12%, the relationship turned negative. However, when inflation exceeded 12%, the negative effect weakened, although it remained statistically significant. Based on these findings, the authors recommend that efforts should be made to maintain inflation below 6% to foster sustained economic development and encourage investment.

Ikwor et al. (2024) examine the nexus between inflation, monetary policy rate, and economic growth in Nigeria using the Johansen Co-integration Test and Error Correction Model with time series data from 1981 to 2022. The study revealed that both inflation and interest rates negatively impact GDP, while broad money supply has a positive influence on GDP. Additionally, the exchange rate was found to have no significant effect on economic growth. Based on these findings, the authors recommend the implementation of measures to control inflation and interest rates, as well as effective management of the money supply to stabilize the economy.

Lawal and Rabiu (2024) explored the impact of monetary policy and inflation on economic growth in Nigeria using the Autoregressive Distributed Lag Model (ARDL) with annual data from 1990 to 2023. The study found that monetary policy significantly affects the economy, while current inflation was found to have an insignificant positive effect on GDP. Additionally, interest rates and money supply had a significant positive impact on GDP growth when lagged. Based on these findings, the authors recommend controlling the monetary policy rate and managing the money supply to achieve price stability and foster economic growth.

Inam and Ebong (2023) investigate the relationship between inflation and economic growth in Nigeria, employing the Autoregressive Distributed Lag (ARDL) Bounds Test with annual data from 1985 to 2022. The study found a negative and statistically significant relationship between inflation and output growth. They identified a critical inflation threshold of 13%, below which inflation stimulates economic activities, but above which inflation negatively impacts growth. Based on these findings, the authors recommend implementing policies to manage and curb inflation, ensuring it remains below the 13% threshold to promote sustainable economic growth.

2.4 Gap in Literature

The studies reviewed collectively emphasize the significant relationship between inflation, exchange rate, unemployment, and economic growth in Nigeria. Ugomma and Chijioke (2024) find that inflation negatively impacts GDP, with the exchange rate significantly influencing GDP, while Kaduna Polytechnic and Usman (2024) show that both inflation and unemployment hinder economic growth, suggesting that policies should address both. Idolor and Omehe (2022) highlight a non-linear relationship between inflation and growth, with varying effects depending on inflation thresholds, recommending that inflation be maintained below 6% for growth. Ikwor et al. (2024) and Lawal and Rabiu (2024) both identify inflation and interest rates as negative factors, with the former also stressing the positive role of broad money supply. Inam and Ebong (2023) underscore the critical inflation threshold of 13% for growth, urging inflation control to stimulate the economy. Together, these studies advocate for policy interventions to manage inflation, stabilize the exchange rate, and reduce unemployment to foster sustainable economic growth in Nigeria.

3.0 METHODOLOGY

3.1 Research Design

This study adopted an ex-post facto research design, utilizing secondary data to analyze the correlation between the independent and dependent variables. The design was deemed appropriate due to the study's analytical nature, its reliance on non-manipulable data already in existence, and its coverage of a time span exceeding one year. Specifically, the research examined the relationship between Nigeria's economic expansion and insecurity. Descriptive analysis was employed to understand the structure of the data, while correlation analysis explored inter-variable relationships. Additionally, the

Autoregressive Distributed Lag Model (ARDL) was used to assess both the short- and long-term impacts of the independent variables on the dependent variable.

3.2 Model Specification

For the purpose of this study the model of Ajibola (2022) was adapted. This was based on determinant of economic growth, Thus, the relationship is specified as follows:

RGDP = F(TEXPS, GFCF, TLBF, UE, POVI, CUPI, INFRATE)…….3.1 linearizing the function gives multiple regression equation below as: -

$RGDP = \alpha_0+\alpha_1 TEXPS +\alpha_2 GFCF +\alpha_3 TLBF + \alpha_4 UE + \alpha_5 POVI + \alpha_6 CUPI + \alpha_7 INFRATE +Ut$

Where:

RGDP =Real Gross Domestic Product proxy for economic growth

TEXPS = Total Expenditure on Security GFCF = Gross Fixed Capital Formation TLBF = Total Labour Force

UE = Unemployment rate

CUPI = Corruption perception Index

POVI = Poverty Index

INFR = inflation rate

Ut = Error term

And the new model is stated as follows:

RGDP = f(UN, NTI,POVI and INFR)

$RGDP = \alpha_0 + \alpha_1 NTI+\alpha_2 UE+ \alpha_3 POVI + \alpha_4 INFR +Ut$ …. 3.2

3.3 Variable Measurement and Discussion

Economic growth, measured by real gross domestic product (RGDP), reflects the sustained increase in an economy's production capacity, leading to higher national output and income, and is used in this study as the dependent variable to assess Nigeria's economic performance. Influencing this growth are key variables such as unemployment, which indicates the inability of willing individuals to secure jobs and functions as a policy variable; inflation, characterized by a sustained rise in general price levels that diminishes purchasing power; and poverty, a complex socio-economic issue marked by inadequate access to essential resources and opportunities, which affects both individual well-being and broader economic stability.

3.4 Sources and Type of Data

The Statistical Bulletin of the Central Bank of Nigeria is the source of secondary data used in this study. The information gathered spans the years 1990 to 2023. The dependent variable was the real gross domestic product, whereas the independent variables were the inflation rate, unemployment rate, poverty rate, and overall security spending.

3.5 Method of Data Analysis

3.5.1 Descriptive Statistics (Pre-Diagnostic Tests)

This study employs the Jarque–Bera test, mean, standard deviation (SD), and normality test to analyze the dataset. The arithmetic mean (AM), often referred to as the average, represents the central value of a dataset and is calculated by dividing the sum of all values by their count, serving as a benchmark for comparison. Standard deviation measures the dispersion or variability of the data around the mean. The normality test, including the Jarque–Bera test, is a statistical tool used to determine whether the collected data follows a normal distribution, which is essential for the validity of many statistical analyses.

3.5.2 Correlation Analysis

A statistical technique for determining the degree of link between two quantitative variables is correlation analysis. A weak correlation indicates that there is little to no association between the variables, whereas a high correlation indicates that two or more variables have a strong relationship. Stated differently, it refers to the method of examining the degree of the association using the statistical data that is at hand. This method is closely related to linear regression analysis, which is a statistical method for simulating the relationship between one or more explanatory or independent factors and a dependent variable known as response.

3.5.3 Unit Root Test

The empirical analysis of time series data assumes that such data are stationary in nature, meaning their statistical properties remain constant over time. This assumption is crucial because non-stationary economic variables can lead to misleading or spurious regression results, even with large sample sizes (Gujarati, 2004; Wei, 2006). To assess stationarity, the study employs unit root tests, grounded in unit root theory, which determines whether a time series possesses a unit root, indicating non-stationarity (Cagla et al., 2021). When necessary, variables are differenced to the first or second order to eliminate stochastic trends and achieve stationarity. In this investigation, the Augmented Dickey-Fuller and Phillips-Perron tests are applied using three test equations to evaluate the stationarity of the time series variables.

$$y_t = \Delta y_t + \rho y_{t-1} + \sum_{i=1}^{k} \lambda_i y_{t-1} + \mu_t \qquad 3.3$$

$$y_t = \alpha + \rho y_{t-1} + \sum_{i=1}^{k} \lambda_i y_{t-1} + \mu_t \qquad 3.4$$

$$y_t = \alpha + y_t + \rho y_{t-1} + \sum_{i=1}^{k} \lambda_i y_{t-1} + \mu_t \qquad 3.5$$

Where $\Delta\gamma_{t-1}$ = y_t- y_{t-1} is the first difference of the series; ρ, α and λ are parameters to be estimated while μ is a stochastic disturbance term.

3.5.4 ARDL Co-Integration Approach

To examine the long-term relationship between variables, this study adopts the autoregressive distributed lag (ARDL) bounds testing approach developed by Pesaran, Shin, and Smith (2001), diverging from the traditional co-integration methods of Engle and Granger (1987) and Johansen and Juselius (1990). The ARDL method has gained prominence due to its flexibility in handling variables with mixed integration orders whether purely I(0), purely I(1), or a combination of both unlike earlier techniques that required uniform integration levels. Furthermore, as noted by Haug (2002), the ARDL approach is particularly effective for small sample sizes and enables the simultaneous estimation of both long-run and short-run dynamics, enhancing its suitability for empirical economic analysis.

Hence, the ARDL representation of equation 3.2 can be presented as thus;

$$\begin{aligned}\Delta RGDP_t = {} & \alpha_0 + \alpha_1 RGDp_{t-1} + \alpha_2 CEXP_{t-1} + \alpha_3 GEXPA_{t-1} + \alpha_4 GEXPH_{t-1} + \alpha_5 GEXPE_{t-1} \\ & + \alpha_6 DEBT_{t-1} \sum_{i=1}^{k} \beta_1 \Delta RGDP_{t-i} + \sum_{j=1}^{l} \theta_1 \Delta CEXP_{t-j} \\ & + \sum_{j=1}^{m} \gamma_1 \Delta GEXPA_{t-j} + \sum_{j=1}^{m} \gamma_2 \Delta GEXPH_{t-j} + \sum_{j=1}^{m} \gamma_3 \Delta GEXPE_{t-j} + \sum_{j=1}^{m} \gamma_4 \Delta DEBT_{t-j} \\ & + \varepsilon_t \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots.. (3.6)\end{aligned}$$

Where; Δ is the first-difference operator and β's andα'show the long run coefficients and short run coefficients. Hence, the null hypothesis (H_0) of no cointegration states that:

H_0:$\alpha_1 = \alpha_2 = \alpha_3 = \beta_1 = \theta_1 = \gamma_1 = 0$, and

The alternative hypothesis of the existence of cointegration state that:

H_1:$\alpha_1 \neq \alpha_2 \neq \alpha_3 \neq \beta_1 \neq \theta_1 \neq \gamma_1 \neq 0$ respectively.

The aforementioned conjectures are examined through a comparison of the computed F-statistic with critical values derived from Narayan (2005). These values were generated for limited sample sizes ranging from 30 to 80 observations, under the presumption that every variable in the model is I(0) on one side and I(1) on the other. As per standard hypothesis testing procedures, in the event that the computed F-statistic surpasses the upper critical bounds value, we reject H0 and accept H^1. Conversely, if the F-statistic remains within the bounds, the test is deemed inconclusive. Lastly, if the F-statistic falls below the lower critical bounds value, it suggests the absence of co-integration.

B. ARDL Error-Correction Model (ARDL-ECM) Approach

Within the context of ECM, causal relationships between variables can be investigated with cointegrated variables (Granger, 1988). The long-term and short-term relationships between the variables are shown here. The model's short-term dynamics are explained by the individual coefficients of the lag terms, while the long-term relationship information is presented by the error correction term (ECT). Similarly, a negative and statistically significant ECT is seen to

indicate long run causation, whereas the importance of the lagged explanatory variable illustrates short run causality.

The short-run causality model from the ARDL model in equation 3.6 is presented in equation 3.7;

$$\Delta RGDP_t = \beta_0 + \beta_1 \Delta RGDP_{t-i} + \beta_2 \Delta CEXP_{t-i} + \beta_3 \Delta GEXPA_{t-i} + \beta_3 \Delta GEXPH_{t-i} + \beta_3 \Delta GEXPE_{t-i} + \beta_3 \Delta DEBT_{t-i} + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.7)$$

While that of the ARDL model in equation 3.7 is presented in equation 3.8;

$$\Delta RGDP_t = \beta_0 + \beta_1 \Delta RGDP_{t-i} + \beta_2 \Delta CEXP_{t-i} + \beta_3 \Delta GEXPA_{t-i} + + \beta_3 \Delta GEXPH_{t-i} + \beta_3 \Delta GEXPE_{t-i} + \beta_3 \Delta DEBT_{t-i} + \rho ECM_{t-1} + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.8)$$

Where, Δ is the difference operator, ECM represent the Error Correction Term (ECT) derived from the long-run co-integrating relation from specified ARDL models equation 3.8. In equation 3.9, ρ should exhibit a negative and significant sign for causality to exist in the long run.

Finally, the CUSUM of square (CUSUMSQ) and cumulative sum of recursive residuals (CUSUM) tests are used to assess the model's stability. This is based on the claim made by Narayan and Smyth (2005) that Pesaran (1997) recommends using the CUSUM of square (CUSUMSQ) and cumulative sum of recursive residuals (CUSUM) tests to evaluate the parameter constancy after the error correction models have been computed.

4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

4.1 Data Presentation

This chapter focuses on the presentation of data used in estimating the model as developed in chapter three. Data on the variables (Real Gross domestic product, Unemployment, Poverty, National terrorism Index and Inflation Rate, were sourced from World Development Index (WDI) and Central Bank of Nigeria from 1990-2023.

4.2 Data Analysis

4.2.1 Descriptive Statistics

Table 1: Descriptive Statistics

	RGDP	NTI	UNP	POV	INF
Mean	244.0564	418.9873	4.302576	56.49515	18.30606
Median	236.1000	72.09755	3.974000	55.21000	13.00697
Maximum	546.6800	6474.000	6.237000	66.90000	72.83550
Minimum	27.75000	4.206067	3.424000	42.00000	5.382224
Std. Dev.	183.5547	1148.724	0.857582	5.694599	16.01195
Skewness	0.184519	4.681224	1.186148	-0.373337	2.205217
Kurtosis	1.397461	24.94193	2.906644	3.553938	6.860519
Jarque-Bera	3.718441	782.5176	7.750194	1.188510	47.23887
Probability	0.155794	0.000000	0.020752	0.551974	0.000000
Sum	8053.860	13826.58	141.9850	1864.340	604.1001

Source: Authors' Computation from E-views 11, 2025

Table 1 presents the summary statistics for the study's variables Real Gross Domestic Product (RGDP), Unemployment (UNP), Poverty (POV), National Terrorism Index (NTI), and Inflation Rate (INF) each based on 33 observations. NTI recorded the highest mean, followed by RGDP, POV, INF, and UNP, with each mean value falling between its respective minimum and maximum values. While the mean represents the average, the median indicates the central value of the ordered dataset. All variables, except RGDP, exhibit mesokurtic characteristics with kurtosis values greater than three. The Jarque-Bera test results show that all variables are normally distributed except for RGDP. Additionally, skewness values exceed one for all variables except RGDP, indicating that most variables are positively skewed.

4.2.2Unit Root Test

Table 2 presents the unit root test results of the variables examined in this study using Augmented Dickey Fuller and Phillip Perron techniques. The essence of the unit root test is to examine the stationarity properties of the variables of interest which guide in choosing the appropriate technique of analysis to avoid a misleading or spurious regression result. Apparently from the table, the stationary properties of the variables show the mixture of I (0) and I (1) which justifies the applicability of ARDL bounds approach of co-integration test in this study.

Table 2 Unit root test Result

Variables	ADF-Statistic	Critical value 5%	Order of integration	Interpretation
RGDP	-3.632579	-2.960411	I(1)	Stationary at 1st Difference
NTI	3.885934	-2.963972	I(0)	Stationary at Level
UNP	-5.634096	-3.603202	I(0)	Stationary at Level
POV	-3.597607	-3.562882	I(0)	Stationary at Level
INF	-5.457982	-3.587527	I(1)	Stationary at 1st difference

Source: Authors' Computation from E-views 11, 2025

Table 2 shows the summary of the Augmented Dickey Fuller Unit root test result. It presents the level of integration of the variables. The individual unit root test is computed for stationarity using the Nigerian data from 1990-2022. The table indicates that all the variables (national terrorism index, unemployment and poverty) are stationary at level (0) while real gross domestic product and inflation rate are stationary at first difference (1).

4.2.3 ARDL-Bounds Co-Integration Test

Table 3 presents the Bound Test co-integration analysis result. Obviously from the table, the F- stat which is 9.395485is greater than the upper bound critical values at 10%, 5%, 2.5% and even 1%. This result confirms the existence of long run relationship or co-movement among the variables under consideration, and it also suggests we can proceed to estimating the long-run and the short- run impact relationship between the target variable and the features in our specified model.

Table 3: Bounds Test Co-Integration Result

F Test:					
F-statistic	**Degree of Freedom**	**Level of Significance**	**Pesaran et al., (1999) a I(0) Bound**	**I(1) Bound**	**Remark**
9.395485	4	10%	2.45	3.52	Co-integrated
		5%	2.86	4.01	
		2.5%	3.25	4.49	
		1%	3.74	5.06	

Source: Authors' Computation from E-views 11, 2025

4.3 Regression Analysis

4.3.1. ARDL Short-run Analysis

Table 4: The Short-Run Dynamic and the Error Correction

ARDL(4, 3, 4, 0, 2))lag selection based on Akaike Information Criteria				
dependent Variable: Real Gross Domestic Product ((RGDP))				
Variable	**Coefficient**	**Std. Error**	**t-statistic**	**Prob.**
ECM(-1)	-0.135757	0.093408	-1.453376	0.0040
D(RGDP(-1))	-0.680317	0.227390	-2.991852	0.0123
D(RGDP(-2))	-0.267200	0.228723	-1.168227	0.2674
D(RGDP(-3))	-0.981646	0.231910	-4.232884	0.0014
D(NTI)	-0.034887	0.022055	-1.581785	0.0420
D(NTI(-1))	0.078002	0.128959	0.604858	0.5575
D(NTI(-2))	-1.006399	0.256040	-3.930631	0.0023
D(UNP)	-34.599415	17.926187	-1.930104	0.0798
D(UNP(-1))	-26.196667	31.054802	-0.843563	0.4169
D(POV)	-0.680597	1.453521	-0.468240	0.6488
D(INF)	-0.577672	0.466402	-1.238571	0.2413
D(INF)	0.430255	0.341372	1.260371	0.2336

Source: Authors' Computation from E-views 11, 2025

Table 4 presents the short-run dynamic and the error correction coefficients of the estimated model. The The ECM(-1) coefficient of -0.135757, as shown in Table 4.4, confirms the existence of a long-run relationship among the variables, indicating that approximately 13.6% of any disequilibrium is corrected annually, and its negative sign affirms that the model is well-specified and suitable for forecasting. In the short run, real gross domestic product (RGDP) at the first and third lags negatively and significantly affects current RGDP, while the second lag has a negative but insignificant effect. The National Terrorism Index (NTI) at its current value and second lag negatively and significantly influences RGDP, whereas its first lag has a positive but insignificant effect. Unemployment at its current value also exerts a negative and significant impact on RGDP, though its first lag shows a negative but insignificant effect. Poverty at its current value has a negative but insignificant impact on RGDP. Inflation, both at its current value and first lag, shows insignificant impacts negative for the current value and positive for the lagged value on RGDP in the short run.

4.3.2: ARDL Long-run Analysis

Table 5: ARDL Long-Run Estimate

ARDL(4, 3, 4, 0, 2)lag selection based on Akaike Information Criteria				
Dependent Variable: Real Gross Domestic Product (RGDP)				
43 observations used for estimation from 1981 to 2021				
Regressors	Coefficients	Std. Errors	t-Statistic	Probability
RGDP(-2)	0.413117	0.223505	1.848358	0.0916
RGDP(-3)	-0.714446	0.321149	-2.224660	0.0480
RGDP(-4)	0.981646	0.231910	4.232884	0.0014
NTI	-0.034887	0.022055	-1.581785	0.1420
NTI(-3)	1.006399	0.256040	3.930631	0.0023
UNP	-34.59941	17.92619	-1.930104	0.0798
UNP(-1)	-107.9860	22.14750	-4.875762	0.0005
POV	-0.680597	1.453521	-0.468240	0.6488
INF	-0.577672	0.466402	-1.238571	0.2413
INF(-1)	-0.026551	0.449051	-0.059127	0.9539
INF(-2)	-0.430255	0.341372	-1.260371	0.2336
C	790.7944	167.6433	4.717123	0.0006
R^2 = 0.996751	R^{-2} = 0.991729	F= 198.4906 (0.000000)	DW = 2.144015	

Source: Authors' Computation from E-views 11, 2025

Table 5 presents the ARDL long-run regression results, with real gross domestic product (RGDP) as the dependent variable and lagged values of RGDP, the National Terrorism Index (NTI), unemployment (UNP), poverty rate, and inflation rate as regressors. In the long run, RGDP at the second and fourth lags has a positive and significant impact on current RGDP, while the third lag shows a negative but significant effect. NTI at its current value negatively and significantly affects RGDP, whereas its first lag has a positive but insignificant impact. Unemployment, both at its current value and first lag, exerts a negative and significant influence on RGDP. In contrast, poverty at its current value shows a negative but insignificant impact. Similarly, the inflation rate at its first and second lags has a negative but insignificant effect on RGDP in the long run.

4.3.3 Diagnostic Test

Table 6 ARDL Diagnostic Tests

Type	Diagnostic Test	F-stat.	Probability
Breusch-Godfrey LM Test	Serial Correlation	4.266055	0.3204
Breusch-Pagan-Godfrey Test	Heteroskedasticity	0.564471	0.8861
Ramsey RESET Test	Specification	0.238866	0.6306
Jarque-Bera Test	Normality	1.828143	0.400887

Source: Authors' Computation from E-views 11, 2025

Table 6 presents the results of various diagnostic checks performed to assess the reliability of the regression outcomes from the dynamic model. The tests include the Breusch-Godfrey Test for serial correlation, the Breusch-Pagan-Godfrey Test for heteroskedasticity, the Ramsey RESET Test for model specification, and the Jarque-Bera Test for normality. The F-statistics and their associated probabilities indicate the rejection of the null hypothesis in each diagnostic test. Specifically, the serial correlation test shows no evidence of serial correlation as an econometric issue, the Breusch-Pagan-Godfrey test confirms the absence of homoskedasticity in the model, the Ramsey RESET test validates the correctness of the model specification, and the Jarque-Bera test indicates that the variables are normally distributed, as the probability value is greater than 0.05 (5% significance level).

4.3.4 Interpretation of ARDL Result

Table 4.4 presents the short-run dynamics and error correction coefficients of the estimated model, with the ECM (-1) coefficient recorded at -0.135757. This negative coefficient confirms the presence of long-run co-movement among the variables, suggesting that the variables adjust to equilibrium at a rate of 13.6% annually. The negative sign of the ECM coefficient further affirms that the model is statistically well-structured, making it suitable for prediction and forecasting. In terms of the short-run effects, the National Terrorism Index (NTI) has a negative impact on real GDP, where a unit increase in NTI results in a 6.595013 unit decrease in RGDP. Additionally, recurrent expenditure at the first-period lag (REXP(-1)) significantly positively impacts RGDP, with a unit increase in REXP(-1) raising RGDP by 65.197638 units.

Similarly, capital expenditure at the first-period lag (CEXP(-1)) also exerts a positive and significant impact on RGDP, with a unit increase in CEXP(-1) leading to a 24.947826 unit increase in RGDP. The model's goodness of fit is evidenced by the R-squared value of 0.998340 and the adjusted R-squared value of 0.996847, indicating that 99% of the variation in RGDP is explained by the explanatory variables, even when considering the degrees of freedom. Furthermore, the F-statistic of 668.3454 with a probability of 0.000000 confirms the overall statistical significance of the model at the 1% level. These results demonstrate that the model is robust and well-suited for informing growth-oriented policy formulation and implementation.

4.3.5 Discussion of Results

This study investigates the impact of inflation on Nigeria's real gross domestic product (RGDP) and finds that inflation significantly and negatively affects economic growth, aligning with previous research by Okoye et al. (2019), Benson et al. (2019), and Oladeji and Musa (2022). Additionally, unemployment is shown to have a negative impact on economic growth in both the short and long term, consistent with findings by Shabana et al. (2017) and Chandana et al. (2021). Similarly, poverty negatively affects economic growth in both the short and long term, corroborating the findings of Eregha (2019). These results underscore the significance of addressing insecurity, unemployment, and poverty to foster sustainable economic growth in Nigeria.

4.4 Policy Implication of Findings

The findings highlight the critical need for a comprehensive policy response to address the negative impact of insecurity, unemployment, poverty, and inflation on Nigeria's economic growth. Insecurity disrupts economic activities, deters investment, and exacerbates poverty and unemployment, necessitating integrated security, economic,

and social policies. Unemployment, by reducing consumer spending, eroding human capital, and fostering social unrest, calls for strategies focused on job creation and skill development. Poverty, which hampers human capital development, limits economic participation, and increases social costs, requires policies centered on education, healthcare, and economic opportunities. Inflation, which undermines purchasing power, distorts markets, and destabilizes the economy, demands coordinated efforts to ensure stability. Addressing these challenges holistically will create a stable environment conducive to sustainable economic development.

5.0 CONCLUSION AND RECOMMENDATIONS

This study examined the intricate relationship between inflation and economic growth in Nigeria from 1990 to 2023. The empirical analysis, using time-series econometric techniques, revealed a significant negative impact of inflation on economic growth. The findings indicate that higher inflation rates erode purchasing power, discourage investment, and increase uncertainty, thereby hindering economic expansion. Additionally, the study highlighted the interconnectedness of inflation with other macroeconomic variables. The positive correlation between the national terrorism index and inflation emphasizes the adverse effects of insecurity on economic stability. These results underscore the need to address security challenges in order to create a conducive environment for sustainable economic growth.

To mitigate the adverse effects of inflation and foster long-term economic growth, Nigeria should prioritize macroeconomic stability through effective monetary and fiscal policies. The Central Bank of Nigeria should focus on maintaining price stability and adopt a flexible inflation targeting framework. The government must commit to fiscal discipline, enhance revenue mobilization, and diversify the economy to reduce its dependency on oil. Moreover, investing in infrastructure and tackling security challenges are vital for fostering an environment that promotes economic growth. By implementing these policy recommendations, Nigeria can pave the way for a more stable and prosperous future.

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