JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

UNEMPLOYMENT AND ECONOMIC GROWTH IN NIGERIA: A CRITICAL EVALUATION

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Abstract

Unemployment remains a critical macroeconomic challenge in Nigeria, hindering economic growth and exacerbating social instability. This study evaluates the relationship between unemployment and economic growth in Nigeria from 1990 to 2024 using the Autoregressive Distributed Lag (ARDL) model. Secondary annual time-series data were obtained from the Central Bank of Nigeria (CBN) and World Development Indicators (WDI), with real GDP as the dependent variable and unemployment rate, labor force participation, foreign direct investment, and inflation rate as independent variables. The results indicate that while unemployment has no significant long-run impact on economic growth, it negatively affects GDP in the short run. Foreign direct investment positively influences economic growth in the long run, while inflation and labor force participation exhibit mixed effects. The study concludes that addressing unemployment through policy reforms and industrial diversification is crucial for sustainable economic growth in Nigeria.

Keywords: Unemployment, Economic Growth, ARDL Model, Nigeria, Foreign Direct Investment

1. Introduction

Unemployment is a major macroeconomic issue affecting both developed and developing nations, with severe consequences for economic stability and social development. In Nigeria, persistent unemployment has hindered economic growth, exacerbated poverty, and contributed to social instability. Despite being Africa's largest economy (CBN, 2024), Nigeria struggles with job creation, leading to rising youth unemployment and a widening gap between economic potential and actual development. The country's reliance on oil revenues, weak industrialization, and slow diversification have further complicated labor market challenges.

The link between unemployment and economic growth is a central debate in economic literature. Classical and Keynesian economists provide differing perspectives—while classical economists argue that market forces naturally correct unemployment, Keynesians emphasize government intervention to stimulate job creation. In Nigeria, the relationship between unemployment and growth is particularly complex, with structural challenges such as poor infrastructure, corruption, and policy inconsistencies contributing to job losses and economic stagnation (Anyanwu, 2014).

Between 1980 and 2024, Nigeria experienced fluctuations in unemployment rates, influenced by external economic shocks, political instability, and ineffective labor policies. Government interventions, including the National Economic Empowerment Development Strategy (NEEDS), N-Power, and the Economic Recovery and Growth Plan (ERGP), have aimed at reducing unemployment. However, these programs have had limited success due to poor implementation, funding constraints, and weak private sector involvement. As a result,

unemployment remains a pressing issue, with its impact felt across various sectors, from agriculture to manufacturing and services (Aronu, 2024).

This study critically evaluates the impact of unemployment on Nigeria's economic growth, focusing on trends from 1990 to 2024. It examines how unemployment affects GDP growth, labor force participation, and long-term economic sustainability. By analyzing these relationships, the study aims to provide insights into policy strategies that can foster job creation and inclusive economic growth. Addressing unemployment effectively requires a multidimensional approach, including labor market reforms, skill development, and enhanced industrialization. This evaluation seeks to inform policymakers, scholars, and stakeholders on the necessary measures to reduce unemployment and promote sustainable economic growth in Nigeria.

2. Literature Review

Unemployment remains a critical macroeconomic challenge that affects economic growth, social stability, and national development (Aronu, 2024). Scholars and policymakers have extensively examined the relationship between unemployment and economic growth, with various theoretical perspectives and empirical findings shaping the discourse.

Theoretical Perspectives on Unemployment and Economic Growth

The classical economic theory, rooted in Adam Smith and David Ricardo's work, posits that labor markets are self-regulating, with unemployment being a temporary phenomenon as wages adjust to market conditions. Conversely, Keynesian economics (Keynes, 1936) argues that unemployment results from insufficient demand and requires government intervention to stimulate job creation. The Phillips Curve (Phillips, 1958) suggests an inverse relationship between inflation and unemployment, implying that lower unemployment may lead to higher inflation. However, stagflation experiences in the 1970s challenged this model, leading to the development of the Natural Rate of Unemployment hypothesis (Friedman, 1968), which posits that unemployment cannot be reduced below a certain level without causing inflationary pressures.

The Okun's Law (Okun, 1962) further establishes a negative relationship between unemployment and economic growth, indicating that a 1% increase in unemployment leads to a significant decline in GDP. This theory has been tested in various economies, with mixed empirical support, especially in developing countries where structural unemployment remains a major concern.

Empirical Studies on Unemployment and Economic Growth

Studies on Nigeria's labor market reveal a persistent unemployment crisis with significant economic implications. Ehinomen and Afolabi (2015) find that unemployment negatively affects Nigeria's GDP growth, primarily due to a mismatch between labor market needs and educational output. Similarly, Kanayo et al. (2013) highlight the role of structural rigidities in the labor market, exacerbated by weak industrialization and poor infrastructure.

Between 2010 and 2020, Nigeria experienced rising unemployment alongside declining GDP growth. Aronu et al. (2023) found a strong correlation between high unemployment rates and economic downturns, particularly during periods of recession. Furthermore, Rabiu et al. (2024) emphasize that Nigeria's "brain drain" phenomenon, where skilled professionals migrate in search of better opportunities, further weakens the economy by reducing the availability of human capital for national development.

Government Policies and Unemployment in Nigeria

The Nigerian government has implemented several policies to address unemployment, including the National Directorate of Employment (NDE), the Youth Enterprise with Innovation in Nigeria (YouWIN) program, and the Economic Recovery and Growth Plan (ERGP). Despite these efforts, Jibrin and Habib (2024) argue that weak policy implementation, corruption, and poor funding have limited the effectiveness of these initiatives. Ugoani and Ibeenwo (2015) also note that while entrepreneurship programs have had some positive impact, they are not sufficient to address the scale of unemployment in Nigeria.

Gaps in Literature

Existing studies provide valuable insights into the impact of unemployment on economic growth but often fail to account for the long-term structural factors influencing labor market trends. There is limited research on the role of technological advancements, automation, and informal sector employment in shaping Nigeria's unemployment dynamics. Additionally, regional disparities in unemployment have not been adequately explored, despite evidence suggesting that some states experience higher joblessness due to differences in industrialization and resource allocation.

The literature highlights the complex relationship between unemployment and economic growth in Nigeria. While economic theories provide frameworks for understanding unemployment dynamics, empirical studies emphasize the need for targeted policy interventions. Addressing Nigeria's unemployment crisis requires a multi-faceted approach, incorporating industrialization, labor market reforms, and investment in human capital development. This study contributes to the existing body of knowledge by examining unemployment trends in Nigeria from 1990 to 2024, offering policy recommendations for sustainable economic growth.

3. Methodology

This study utilizes annual secondary time series data spanning from 1990 to 2024, sourced primarily from the Central Bank of Nigeria (CBN) Statistical Bulletin and the World Development Indicators (WDI). The analysis relies on economic growth, represented by real gross domestic product (RGDP), as the dependent variable. The independent variables include the unemployment rate, labor force participation, foreign direct investment, and inflation rate, all obtained from the CBN Statistical Bulletin. Additionally, data from international organizations such as the World Bank and the International Monetary Fund (IMF) are referenced for supplementary insights.

This study employed the ARDL model (Pesaran, Shin & Smith, 2001) for its flexibility in handling I(0) and I(1) variables. It ensured efficient estimation, addressed endogeneity, and captured short- and long-run relationships using bounds testing and an Error Correction Model (ECM).

The generalized Autoregressive Distributed Lag (ARDL) model is expressed as:

$$Y = b_0 + \sum_{i=1}^{p} \pi 1iYt - i + \sum_{i=0}^{q} \pi 2iXt - i + \omega t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

where p and q represent the optimal lag lengths, which may not necessarily be symmetrical. Specifically:

p denotes the optimal lag length for the dependent variable.

q represents the optimal lag length for the independent variables.

ARDL Bounds test:

$$\Delta RGDPt = \alpha_0 + \sum_{i=1}^{p} \phi i\Delta RGDPt - i + \sum_{i=0}^{p} \Theta i\Delta UNPRt - i + \sum_{i=0}^{p} \text{ɥ} i\Delta LFPt - i + \sum_{i=0}^{p} \Psi i\Delta FDIt - i + \sum_{i=0}^{p} \Omega i\Delta INFRt - i + \delta_1 UNPR_{t-1} + \delta_2 LFP_{t-1} + \delta_3 FDI_{t-1} + \delta_4 INFR_{t-1} + \varpi_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(2)}$$

Definitions:

Δ represents the first difference operator.

α1−α4 denote the short-run relationship coefficients.

β1−β4 correspond to the long-run relationship coefficients.

(t−i) indicates the lagged term for the respective variables.

Σ signifies the summation operator, while ωi\omega_i represents the error term in the equation.

Error Correction Model (ECM) is specified as:

$\Delta RGDP_t = \alpha_0 + \sum_{i=1}^{p} \alpha 1i \Delta RGDPt - i + \sum_{i=1}^{q} \alpha 2i \Delta UNPRt - i + \sum_{i=1}^{q} \alpha 3i \Delta LFPt - i + \sum_{i=1}^{q} \alpha 4i \Delta FDIt - i + \sum_{i=q}^{q} \alpha 5i \Delta INFRt - i + \pi ECT_{t-1} + e_t$ ..... (3)

Where:

$\sum^{q}_{i=0} \alpha i$ = Long run parameter, πECTt-1: This term represents the lagged value of the error correction term , et: This is the error term or residual. And α0, α1i, α2i, α3i, α4i, α5i = are the short run dynamic coefficient of the model's adjustment long-run equilibrium.

3.3 Model Specification

Functional Form of the Model:

RGDP = f (UNPR, LFP, FDI, INFR) ..... (4)

Where:

RGDP = Real Gross Domestic Product (proxy for economic growth), UNPR = Unemployment rate, LFP = Labor Force participation, FDI = Foreign Direct Investment and INFR = Inflation rate

Specifying the Autoregressive Distributed Lag Model (ARDL), all variables will be difference, therefore reducing their lag length by 1;

Mathematical Form of the Model:

$$\Delta RGDP_t = \alpha_0 + \sum_{i=1}^{n} \alpha i \, \Delta RGDP_{t-1} + \sum_{i=1}^{n} \alpha i \Delta \, UNPR_{t-j} + \sum_{i=1}^{n} \alpha i \, \Delta LFP_{t-j} + \sum_{i=1}^{n} \alpha i \, \Delta FDI_{t-j} + \sum_{i=1}^{n} \alpha i \, \Delta INFR_{t-j} \quad \text{.....(5)}$$

Econometric Form of the Model:

$$\Delta RGDP_t = \alpha_0 + \sum_{i=1}^{n} \alpha i \, \Delta RGDP_{t-1} + \sum_{i=1}^{n} \alpha i \Delta \, UNPR_{t-j} + \sum_{i=1}^{n} \alpha i \, \Delta LFP_{t-j} + \sum_{i=1}^{n} \alpha i \, \Delta FDI_{t-j} + \sum_{i=1}^{n} \alpha i \, \Delta INFR_{t-j} + \cup_{it} \quad \text{..... (6)}$$

Where:
α_0 = Constant, t = time, and $\cup_t$ = Stochastic error term

Justification of the Model

This research utilizes the Autoregressive Distributed Lag (ARDL) model to examine both short-term and long-term relationships among variables with varying integration orders. The model is appropriate as long as none of the variables are integrated at the second order (I(2)), making it applicable to series that are stationary at level (I(0)) or at first difference (I(1)). To verify the integration order of the variables, the study applies the Augmented Dickey-Fuller (ADF) and Phillips-Perron tests.

This chapter presents the findings derived from the analysis based on the specified model. The chapter includes descriptive statistics, pre-estimation tests (unit root test, lag length criteria, and bound test), regression results, and post-estimation test (normality test, autocorrelation test, heteroskedasticity, multicollinearity and CUSUM test) results output.

4. Data Analysis and Interpretation

Descriptive statistics:

Descriptive statistics outline the characteristics and distribution of the variables, detect potential outliers, evaluate the goodness of fit, and interpret the observed values of the variables.

Table 4.1 Descriptive Statistics

	RGDP	UNPR	LFP	FDI	INFR
Mean	46590.41	4.290967	28.50004	2.85E+09	18.85639
Median	43837.39	3.901000	30.12600	1.96E+09	13.00697
Maximum	77936.10	6.352278	32.11300	8.84E+09	72.83550
Minimum	21680.20	3.700000	23.53900	-1.87E+08	5.388008
Std. Dev.	21054.99	0.810919	3.049467	2.61E+09	15.96047
Skewness	0.113428	1.538756	-0.517569	0.954534	2.018731
Kurtosis	1.365710	3.842404	1.498585	2.735706	6.281509
Jarque-Bera	3.970119	14.84689	4.850062	5.416823	39.47621
Probability	0.137372	0.000597	0.088475	0.066643	0.000000
Sum	1630664.	150.1839	997.5016	9.99E+10	659.9737
Sum Sq. Dev.	1.51E+10	22.35805	316.1744	2.31E+20	8661.049
Observations	35	35	35	35	35

Source: Author's computation (2025)

Table 4.1 presents the descriptive statistics of the variables, including their mean, median, standard deviation, skewness, and kurtosis. The dataset comprises 35 observations for each variable and the normality distribution is assessed using the Jarque-Bera (JB) test and its probability values. From Table 4.1, all variables except inflation rate (INFR) and unemployment rate (UNPR) have JB probability values greater than the 0.05 significance level, suggesting that they follow a normal distribution. However, INFR and UNPR deviate from normality, as their JB probability values are statistically significant. Examining skewness, real GDP (RGDP), foreign direct investment (FDI), and INFR are positively skewed, indicating long right tails, while labor force participation (LFP) is negatively skewed, indicating a long-left tail. UNPR exhibits the highest positive skewness. Regarding kurtosis, INFR exceeds the threshold of 3, indicating a leptokurtic distribution (fat tails), while the other variables, including RGDP, LFP, and FDI, exhibit platykurtic distributions (thin tails).

Pre-estimation Test

Table 4.2: ADF and PP Unit Root Test

Variables	**Augmented Dickey-Fuller (ADF)**			**Philip-Perron (PP)**		
	Level form	**First Difference**	**Order**	**Level form**	**First Difference**	**Order**
LRGDP	-2.523653	-5.565565*	I(1)	-0.556929	-2.954021*	I(1)
UNPR	-1.854955	-5.474600*	I(1)	1.248358	-5.226129*	I(1)
LFP	-1.073904	-4.206954*	I(1)	-0.965263	-3.282397*	I(1)
FDI	-2.429312	-6.802460*	I(1)	-1.705313	-6.784949	I(1)
INFR	-3.859441	-	I(0)	-4.593334	-	I(0)

Source: Author's computation (2025)

Table 4.2 depicts the ADF and PP unit root test. The results of the unit root test indicate that the variables real gross domestic product (LRGDP), unemployment rate (UNPR), labor force participation rate (LFP) and foreign direct investment (LFDI) are stationary at first difference i.e I(1); while inflation rate (INFR) is stationary at level form order I(0). Since the variables indicate stationarity at different level (level form and first difference), the study employed the Autoregressive Distributed Lag (ARDL) bound test co-integration estimation technique to examine the long run relationship. But before this, the optimum lag-length selection of the variables will be conducted.

4.2.2 Optimum Lag-Length Selection: The lag length selection criteria include the Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn Criterion (HQ) are statistical measures used to evaluate model selection and determine optimal lag length.

Table 4.3: Lag Length Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-238.7697	NA	7.862098	16.25132	16.48485	16.32602
1	-74.38378	263.0175	0.000744	6.958919	8.360116	7.407174
2	-28.62088	57.96634*	0.000217*	5.574725*	8.143587*	6.396526*

Source: Author's computation (2025)

Based on the findings in Table 4.3, the Akaike Information Criterion (AIC) has the lowest value and is therefore selected as the optimal lag determination criterion.

Bounds Test for Cointegration: Since the variables exhibit stationarity at different orders, specifically I(0) and I(1), the ARDL bounds test approach will be employed to assess co-integration.
$\square_0$ = No co-integration
$\square_1$ = Co-integration

Table 4.4: Bounds Test F-Statistic

Test Statistic	Value	Significance	I(0)	I(1)	Result
F-statistic	6.186080	10%	2.2	3.09	
		5%	2.56	3.49	Co-integrated
		1%	3.29	4.37	

Source: Author's computation (2025)

The data analysis in Table 4.4 shows that the Wald test's F-statistic (6.186080) is greater than both the lower and upper critical bounds at the 5% significance level. This leads to the rejection of the null hypothesis, confirming that the variables are co-integrated. The presence of co-integration suggests a stable long-term relationship among the variables. Therefore, the study will proceed with the Autoregressive Distributed Lag (ARDL) model to analyze both short-run and long-run dynamics.

Presentation of ARDL Long-run and Short-run Regression

Table 4.5: Long-run ARDL Regression (Dependent Variable: LRGDP)

Variables	Coefficient	Std. Error	T-statistics	p-value
UNPR	0.105587	0.192979	0.547141	0.5900
LFDI	0.355646	0.119310	2.980846	0.0071
INFR	0.337535	0.129367	2.609127	0.0135
LFP	-0.055172	0.046642	-1.182896	0.2501
C	4.925296	3.141550	1.567792	0.1319

Source: Author's computation (2025)

Table 4.6: Short-run and Error Correction Model (ECM) Regression

Variables	Coefficient	Std. Error	T-Statistic	Prob.
D(LRGDP(-1))	0.237027	0.186178	1.273115	0.2169
D(UNPR)	-0.077305	0.036251	-2.132508	0.0449
D(LFDI)	0.003927	0.010505	0.373864	0.7123
D(INFR)	-0.001159	0.000410	-2.825167	0.0101
D(LFP)	0.003750	0.006206	0.604253	0.5521
CointEq(-1)	-0.001315	0.000454	-2.897205	0.0066

Source: Author's computation (2025)

The regression results provide insights into the short-run and long-run dynamics of the relationship between economic growth and its key determinants. The coefficient of the lagged real GDP growth rate, D(LRGDP(-1)), is 0.237027, indicating that past economic growth has a positive influence on current growth. However, with a p-value of 0.2169, this effect is statistically insignificant at the 5% level, suggesting that past GDP growth does not significantly impact present growth in the short run.

Unemployment rate (D(UNPR)) has a negative coefficient of -0.077305, meaning that an increase in unemployment reduces economic growth. The associated p-value of 0.0449, which is below 0.05, confirms that this relationship is statistically significant. This finding aligns with economic theory, as higher unemployment implies lower productivity and reduced aggregate demand, ultimately constraining economic expansion.

Foreign direct investment (D(LFDI)) exhibits a positive coefficient of 0.003927, indicating a slight positive effect on economic growth. However, with a high p-value of 0.7123, this effect is not statistically significant. This suggests that, in the short run, FDI inflows do not have an immediate or substantial impact on Nigeria's economic growth, potentially due to structural inefficiencies or delays in capital utilization.

Inflation rate (D(INFR)) has a negative coefficient of -0.001159, implying that rising inflation adversely affects economic growth. This relationship is statistically significant, as evidenced by the p-value of 0.0101. The negative impact of inflation on growth may stem from its erosion of purchasing power, increased business costs, and uncertainty, which discourage investment and economic activities.

Labor force participation (D(LFP)) shows a small positive coefficient of 0.003750, suggesting that an increase in labor force participation contributes to economic growth. However, the effect is not statistically significant, with a p-value of 0.5521. This insignificance could indicate inefficiencies in labor market absorption, where increased labor supply does not necessarily translate to higher productivity or employment.

The coefficient of the error correction term (CointEq(-1)) is -0.001315, which is statistically significant with a p-value of 0.0066. This negative and significant coefficient confirms the presence of a long-run equilibrium relationship among the variables. The magnitude of the coefficient suggests that deviations from long-run equilibrium are corrected at a slow pace, implying that adjustments in economic growth in response to changes in unemployment, inflation, FDI, and labor force participation occur gradually over time.

Overall, the findings highlight that unemployment and inflation exert significant short-run effects on Nigeria's economic growth, while FDI and labor force participation do not have immediate measurable impacts. Additionally, the existence of a stable long-run relationship suggests that policies aimed at reducing unemployment and managing inflation are crucial for sustaining economic growth.

4.4 Evaluation Based on Post-Estimation Test

The normality test is performed on the error term to determine whether it follows a normal distribution. In this study, the Jarque-Bera (JB) test is applied for this purpose. The decision criterion states that the null hypothesis should be rejected if the JB probability value is less than 0.05; otherwise, it should not be rejected.

Table 4.7. Normality Test Result

Jarque-Bera Statistic	4.791487
Probability Value	0.091105

Source: Author's computation (2025)

The normality test assesses whether the residual follows a normal distribution. The null hypothesis (H_0) states that the residual is not normally distributed. According to the decision rule, H_0 is rejected if the Jarque-Bera p-value is less than or equal to 0.05. Based on Table 4.7, the p-value of the Jarque-Bera statistic is 0.091105, which exceeds 0.05. As a result, the null hypothesis is not rejected, indicating that the residual is normally distributed.

The Breusch-Godfrey Serial Correlation LM test was employed to examine the presence of autocorrelation, as it effectively detects autocorrelation across multiple lag lengths. The decision criterion is as follows: reject the

null hypothesis if the probability value associated with autocorrelation, following a chi-square distribution, is less than 0.05 at a 5% significance level. Conversely, if the p-value is greater than 0.05, the null hypothesis is not rejected.

Table 4.8: Autocorrelation Output

Obs*R-Squared	0.827243
Prob. Chi-Square (2)	0.6613

Source: Author's computation (2025)

As presented in Table 4.8, the probability value of the chi-square distribution is 0.6613, which exceeds the 0.05 significance level. Consequently, the null hypothesis is not rejected, indicating that autocorrelation is not present in the residuals. This confirms that the error term is not serially correlated.

Heteroskedasticity Test: This test assesses whether the residuals have a constant variance. A non-constant variance would violate the Best Linear Unbiased Estimator (BLUE) properties of the classical linear regression model. The White test, which follows a chi-square distribution, was employed for this purpose. The decision criterion is to reject the null hypothesis if the chi-square p-value is less than 0.05; otherwise, the null hypothesis is not rejected.

Table 4.9: Heteroskedasticity Output

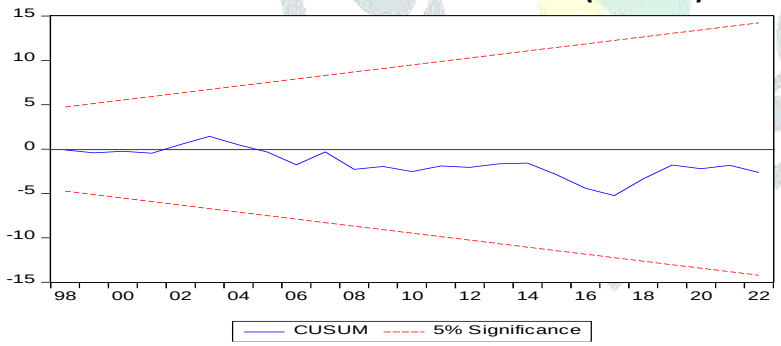
Obs*R-squared	5.069909
Prob. Chi-Square (1)	0.8282

Source: Author's computation (2025)

Table 4.9 indicates that the chi-square probability value is 0.8282, which exceeds the 0.05 significance level. As a result, the null hypothesis is not rejected, confirming that the residuals exhibit homoscedasticity. This implies that there is no issue of heteroskedasticity in the model, ensuring that the error term maintains a constant variance.

Model Stability Test

Figure 4.1: Cumulative Sum of Recursive Residuals (CUSUM)



The CUSUM test graph evaluates the stability of regression coefficients over time. In the graph, the blue line represents the cumulative sum of recursive residuals, while the red dashed lines mark the 5% significance thresholds. Since the blue line remains within these boundaries throughout the analysis period, there is no indication of structural instability in the model. This confirms that the estimated parameters remain consistent over time, ensuring the reliability of the regression results for economic interpretation and policy recommendations.

Table 4.10: Correlation Matrix

Correlation	LRGDP	UNPR	LFDI	INFR	LFP
LRGDP	1.000000				
UNPR	0.575003	1.000000			
LFDI	0.541970	-0.197346	1.000000		
INFR	-0.345760	0.095364	-0.376648	1.000000	
LFP	-0.842714	-0.630780	-0.211230	0.238015	1.000000

Source: Author's compilation (2025)

The Table 4.10 is the correlation matrix in Table. The correlation matrix shows the relationships between economic growth (LRGDP), unemployment rate (UNPR), foreign direct investment (LFDI), inflation rate (INFR), and labor force participation (LFP). LRGDP has a positive correlation with UNPR (0.575003) and LFDI (0.541970), indicating that economic growth tends to rise with higher FDI and unemployment. Inflation (INFR) negatively correlates with LRGDP (-0.345760) and LFDI (-0.376648), suggesting that higher inflation may hinder growth and investment. LFP has a strong negative correlation with LRGDP (-0.842714) and UNPR (-0.630780), implying that a higher labor force participation rate is associated with lower unemployment and lower GDP. The weak correlation between LFP and LFDI (-0.211230) suggests that FDI inflows do not significantly influence labor force participation.

4.4: Evaluation of Research Hypothesis

The hypotheses outlined in Chapter One will be tested using the estimated regression model. The evaluation is as follows:

Hypothesis One: There is no impact of unemployment rate on economic growth in Nigeria:

From the regression output, the coefficient of the unemployment rate (D(UNPR)) is **-0.077305**, with a **t-statistic of -2.132508** and a **p-value of 0.0449**. Since the p-value is less than 0.05, we reject the null hypothesis and conclude that the unemployment rate has a statistically significant impact on economic growth in Nigeria. The negative coefficient suggests that a rise in unemployment leads to a decline in economic growth. This implies that policies aimed at reducing unemployment could contribute positively to Nigeria's economic growth.

Hypothesis Two: Labor force participation does not impact on economic growth in Nigeria:

From the regression output, the coefficient of labor force participation **D(LFP)** is **0.003750**, with a **t-statistic of 0.604253** and a **p-value of 0.5521**. Since the p-value is greater than 0.05, we fail to reject the null hypothesis. This indicates that labor force participation does not have a statistically significant impact on economic growth in Nigeria within the study period. The result suggests that merely increasing labor force participation may not directly translate into economic growth unless accompanied by improvements in job opportunities, skills development, and productivity-enhancing policies.

Hypothesis Three: There is no long run relationship between unemployment rate and economic growth in Nigeria:

From the regression output, the coefficient of the **error correction term (CointEq(-1))** is **-0.001315**, with a **t-statistic of -2.897205** and a **p-value of 0.0066**. Since the coefficient is negative and the p-value is less than 0.05, we reject the null hypothesis and conclude that a long-run relationship exists between the unemployment rate and economic growth in Nigeria. This result implies that any short-term deviation in economic growth caused by changes in unemployment will gradually adjust back to the long-run equilibrium. However, the relatively low coefficient value suggests a slow speed of adjustment, indicating that economic policies aimed at reducing unemployment may take time to reflect in overall economic growth.

5. Conclusion and Recommendations

The study examined the relationship between economic growth and key macroeconomic variables, including unemployment, foreign direct investment (FDI), inflation, and labor force participation in Nigeria. The results from the Autoregressive Distributed Lag (ARDL) model revealed that unemployment and inflation have significant short-run effects on economic growth, with unemployment negatively impacting growth and inflation exerting a contractionary effect. Foreign direct investment and labor force participation were found to have a positive but statistically insignificant effect in the short run. Additionally, the significant and negative error correction term confirms the existence of a long-run equilibrium relationship among the variables, indicating that deviations from equilibrium are corrected over time, albeit at a slow rate.

Based on the findings, the following recommendations were made:

i. The results show that unemployment has a positive but statistically insignificant impact on economic growth. Therefore, government should strengthen job creation policies, vocational training, and industrialization to reduce unemployment's adverse effects.
ii. FDI positively and significantly impacts economic growth, indicating that increased investment drives GDP expansion. Therefore, there should be an improvement in business regulations, provides incentives, and enhance infrastructure to attract and sustain FDI.
iii. Inflation has a positive and significant effect on economic growth, implying that moderate inflation may stimulate economic activity. There should be a balanced implementation of monetary policies to control inflation while maintaining economic stability.
iv. Labor force participation has a negative but insignificant impact on GDP, suggesting inefficiencies in workforce utilization. Therefore, there should be an investment in skills development, remove labor market barriers, and promote inclusive employment policies.

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