



Nexus between Unemployment and Economic Growth in Nigeria: New Empirical Insight from an ARDL Approach

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Abstract: Objectives: This study re-examines the unemployment-growth relationship in Nigeria from 1986 to 2024, with emphasis on persistent jobless growth and the structural composition of economic expansion. **Prior Work:** It addresses mixed evidence in earlier Nigerian studies and limitations arising from shorter samples and narrow model specifications. **Approach:** Annual data are analysed with an Autoregressive Distributed Lag (ARDL) bounds-testing framework incorporating domestic credit, labour force participation, foreign direct investment, and inflation to capture short- and long-run dynamics. **Results:** The bounds-test F-statistic of 4.345063 exceeds the 5% upper bound, confirming cointegration. Unemployment is statistically insignificant in both the short and long run; inflation has a negative long-run effect; lagged foreign direct investment has a significant short-run negative effect; and the error-correction coefficient of -0.900010 indicates rapid adjustment to equilibrium. **Implications:** Structural rigidities and macroeconomic instability appear to constrain employment-rich growth. **Value:** The study extends evidence on Nigeria using a longer sample and a broader dynamic specification, supporting policies that promote labour-intensive diversification and macroeconomic stability.

Keywords: Labour market; Price instability; Cointegration; Private credit

JEL Classification: C22; E24; O47; O55

1. Introduction

Growth is one of the key metrics of macroeconomic performance, as it reflects the growth in productive capacity and the rising standard of living. Theoretically, economic growth is supposed to create jobs, raise incomes and living standards (Todaro & Smith, 2020). Yet, this theoretical link has been found to be weak in many developing countries, due to structural factors that hinder the effective transmission of growth to the labour market. In Nigeria, the problem of jobless growth has been extensively observed, with economic growth not leading to commensurate job creation (Ajakaiye et al., 2016). This raises

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questions about the inclusivity and durability of growth, as growth without jobs hampers the capacity to drive positive labour market outcomes.

Nigerian economic growth is a case in point. Nigeria has enjoyed substantial growth in the past, driven by the petroleum sector and public spending. For example, despite substantial growth in gross domestic product over the decades, the unemployment rate has grown, signalling a structural problem in the economy (National Bureau of Statistics, 2021; Anidi et al., 2022). The predominance of the capital-intensive oil sector limits employment opportunities and diminishes the labour-intensive nature of growth (Dauda, 2016). Consequently, growth in Nigeria has been non-inclusively geared with little effect on the labour market.

The introduction of the Structural Adjustment Programme (SAP) in 1986 was a pivotal moment in the history of the Nigerian economy, as it brought about reforms geared towards liberalisation, deregulation and private sector growth (Iyoha & Oriakhi, 2002). Though these measures helped to restructure the Nigerian economy, there is little evidence that it has had a positive effect on unemployment, as high unemployment rates have persisted since the reforms (Raifu, 2017; Nwaka et al., 2015).

The empirical evidence on the link between economic growth and unemployment in Nigeria is mixed. For example, Raifu (2017) finds no significant impact of economic growth on reducing unemployment in Nigeria, while Nwaka et al. (2015) report a weak and insignificant relationship between the variables. The variability in these results indicate that the relationship between unemployment and economic growth in Nigeria is influenced by structural factors, such as the structure of production, labour market rigidities and the pattern of economic change (Ajakaiye et al., 2016).

Also, most studies examining the unemployment and economic growth nexus in Nigeria are limited in scope by the choice of data and estimation methods which do not sufficiently represent both the short- and long-run dynamics of the relationship (Raifu, 2017; Nwaka et al., 2015). This limits the ability to gain a fuller picture of the dynamic interaction between unemployment and economic growth.

In this context, this paper examines the dynamics of the unemployment-growth nexus in Nigeria using yearly data 1986-2024, within the framework of the Autoregressive Distributed Lag (ARDL) approach. The use of a longer time period and a sound econometric technique will help to shed more light on the dynamic relationship between unemployment and economic growth.

2. Literature Review

Unemployment and growth have always been a central topic in macroeconomic literature, with various branches of the discipline providing different accounts of the effect of output growth on the labour market. A well-known theory is Okun's Law proposed by Okun (1962), which describes a negative relationship between the unemployment rate and output growth. According to the theory, when economic growth exceeds potential output, the demand for labour increases, thereby reducing unemployment. On the other hand, if the economy grows at a lower rate, then the unemployment rate increases. While such a link has been extensively debated in the macroeconomic literature, it tends to be more volatile in developing countries due to structural inflexibility and labour market frictions, which hinder the transmission of growth to employment.

Another classical model is the Neoclassical Growth Model of Solow (1956). It describes economic growth as a function of capital, labour and technology with productivity being a key driver of long-term growth. Although the model is very relevant for the analysis of growth, it does not directly explain unemployment, particularly in economies with capital-intensive growth. So, it explains why economic growth may not be associated with a similar rate of employment growth.

Another explanation comes from the Structuralist approach which holds that the growth-employment relationship is determined by the structure of the economy. When the output is produced in capital-intensive industries, the growth effect on employment may not be strong because these industries create less jobs. In such a case, unemployment may remain high even when output is growing, signalling underlying structural problems in the economy.

These views imply that economic growth does not necessarily lead to a decline in unemployment. Whether growth is realised in the form of employment depends on the production structure, sectoral composition of output and the adjustment processes in the labour market. This suggests a need to investigate this empirically in the Nigerian context.

The evidence on the relationship between unemployment and growth in Nigeria remains mixed, due to methodological variations and economic specificities. While some studies find evidence of jobless growth, others report weak and unstable relationships, implying that the link between growth and unemployment is highly specific to its circumstances.

Ajakaiye et al. (2016) offer compelling evidence of jobless growth, suggesting that Nigeria's growth has been driven mainly by low employment elastic sectors. But their study does not adequately consider the impact of financial and external factors, which may affect the linkages between growth and employment. Similarly, Anidi et al. (2022) note the predominance of the oil sector, but do not empirically disentangle its impact in a dynamic modelling framework, which constrains the rigour of their findings.

Raifu (2017) and Nwaka et al. (2015) also report an insignificant association between growth and unemployment. These conclusions question the presence of Okun's Law in Nigeria but are limited by short sample sizes and estimation methods that do not jointly account for short- and long-term dynamic effects. As such, their results may be plagued by dynamic omissions. Crucially, previous studies tend to ignore the possibility that the relationship between unemployment and growth is indirect, with the influence of intermediate macroeconomic factors (such as inflation, financial development and labour force) being overlooked. This could be one of the reasons for the mixed results.

So, the fundamental issue in literature is not only the lack of data but also the lack of appropriate modelling. A more encompassing approach that considers both short-run and long-run dynamics and structural factors is required. To overcome this limitation, this research uses the ARDL model over a long period (1986-2024) and incorporates other macroeconomic variables to give a better understanding of the unemployment-growth relationship in Nigeria.

Apart from Nigeria, the evidence from developing countries is not conclusive. For example, research in Sub-Saharan Africa and emerging markets reveal that the link between unemployment and growth is weak due to structural rigidities and sectoral distortions. Recent research (2018-2024) also employing the ARDL and cointegration techniques show inflation and financial development have a greater impact

on growth than unemployment. This implies that the growth-employment relationship is conditioned by macroeconomic and institutional variables.

3. Research Methods

This research uses a time series econometric analysis to investigate the link between economic growth and unemployment in Nigeria. The analysis utilises annual data between 1986 and 2024. This time frame is chosen to allow for observations of the situation before and after the economic reforms which began with the introduction of the Structural Adjustment Programme (SAP) in 1986.

3.1. Theoretical Framework

The study is based on Okun's Law (Okun, 1962), which offers a framework for examining the link between unemployment and growth. Okun's Law suggests that there is an inverse relationship between GDP and unemployment, and that economic growth should lead to lower unemployment due to increased labour demand.

But in developing countries like Nigeria, this relationship might not be that robust due to structural bottlenecks such as sectoral misalignment, labour market inflexibilities and capital-intensity in the economy. Thus, economic growth may not lead to job creation and hence the concept of jobless growth. The usefulness of Okun's Law to this study is in its provision of a roadmap for empirical analysis of the effectiveness of economic growth to reduce unemployment in Nigeria. To complement this investigation, we also introduce other macroeconomic indicators to explain structural and financial aspects of the Nigerian economy.

3.2. Model Specification

Following the theoretical framework, the model is specified to examine the relationship between economic growth and unemployment alongside selected macroeconomic variables.

The functional form of the model is expressed as:

Equation 1. Functional Form of the Model

$$GDP = f(UNEMP, NDC, FDI, INF, LFPR)$$

To improve estimation efficiency and ensure linearity, the variables are transformed into their natural logarithmic forms. The estimable model is specified as:

Equation 2. Estimable Growth Model

$$GDP_t = \alpha_0 + \beta_1 UNEMP_t + \beta_2 NDC_t + \beta_3 FDI_t + \beta_4 INF_t + \beta_5 LFPR_t + \varepsilon_t$$

Variables expressed in percentage form, including GDP growth, inflation, and unemployment, are retained in levels. Logarithmic transformation is not applied to variables containing negative values to avoid estimation bias

Where:

GDP	=	Gross Domestic Product
UNEMP	=	Unemployment Rate
FDI	=	Foreign Direct Investment
INF	=	Inflation Rate
LFPR	=	Labour Force Participation Rate
NDC	=	Credit to Private Sector
α_0	=	Constant term
β_1 – β_4	=	Parameters to be estimated
ε_t	=	Error term

3.3. Description of Variables

This research uses gross domestic product growth as the dependent variable and unemployment, domestic credit, foreign direct investment, inflation and labour force participation as explanatory variables. The purpose is to determine whether changes in labour-market and macroeconomic conditions significantly explain movements in economic growth in Nigeria.

Gross Domestic Product (GDP): Annual growth rate (%) is used.

Unemployment Rate (UNEMP): This is the percentage of the labour force that is without a job but actively seeking a job.

Credit to Private Sector (NDC): This is lending to the private sector and measures the degree of financial development and access to finance in the economy.

Foreign Direct Investment (FDI): This represents foreign investment in the economy and reflects capital inflows.

Inflation Rate (INF): This is an indicator of the pace at which the overall level of price rises and reflects macroeconomic stability.

Labour Force Participation Rate (LFPR): This is the share of the working-age population that is in the labour force.

The variables are transformed where appropriate to improve linearity and reduce heteroskedasticity; variables expressed as rates or containing negative values are retained in level form to avoid invalid logarithmic transformation.

3.4. Sources of Data

The data for this study is secondary and sourced from credible sources. Gross Domestic Product, Foreign Direct Investment, Domestic Credit and Labour Force Participation Rate were obtained from World Development Indicators (World Bank) and unemployment and inflation were sourced from Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS). The data spans the years 1986–2024.

3.5. A Priori Expectations

Theoretically, we expect the following signs for the variables:

β_1 (UNEMP): Negative - Unemployment is expected to have a negative impact on economic growth (Okun's Law).

β_2 (NDC): Positive - Domestic credit is expected to boost investment and growth.

β_3 (FDI): Positive - Foreign direct investment (FDI) is expected to boost economic growth through capital inflows and technology spillovers.

β_4 (INF): Negative - Inflation is expected to have a negative impact on growth because of macroeconomic instability.

β_5 (LFPR): Positive - An increase in the labour force participation rate is expected to boost economic growth.

3.6. Estimation Technique

The present research uses the Autoregressive Distributed Lag (ARDL) modelling technique to determine the short-run and long-run relationship between unemployment and growth.

The ARDL model is specified as:

Equation 3. ARDL Specification

$$\begin{aligned} \Delta \ln GDP_t = & \alpha_0 + \sum (\alpha_{1i} \Delta \ln GDP_{t-i}) + \sum (\beta_{1j} \Delta \ln UNEMP_{t-j}) + \sum (\beta_{2k} \Delta \ln NDC_{t-k}) \\ & \sum (\beta_{3k} \Delta \ln FDI_{t-k}) + \sum (\beta_{4k} \Delta \ln INF_{t-k}) + \sum (\beta_{5k} \Delta \ln LFPR_{t-k}) \\ & \phi_1 \ln GDP_{t-1} + \phi_2 \ln UNEMP_{t-1} + \phi_3 \ln NDC_{t-1} + \phi_4 \ln FDI_{t-1} \\ & \phi_5 \ln INF_{t-1} + \phi_6 \ln LFPR_{t-1} + \varepsilon_t \end{aligned}$$

3.7. Justification for the Use of ARDL

This study adopts the ARDL technique because it can handle variables integrated into different orders, such as I (0) and I (1), but not of order two. It also enables the joint estimation of short-run dynamics and long-run equilibrium relationships. Moreover, the ARDL approach can be applied to relatively small samples, and it produces efficient and consistent estimates, and is therefore applicable in this study. It also allows for bounds testing to ascertain whether there is a long-run relationship between the series.

4. Results and Discussion

4.1. Descriptive Statistics

Table 1. Descriptive Statistics

Statistic	GDP	UNEMP	INF	FDI	LFPR
Mean	3.983425	14.13077	19.33333	1.292204	83.21367
Median	4.195924	7.200000	13.70000	1.159070	83.33200
Maximum	15.32916	40.60000	72.80000	4.282088	85.26000
Minimum	-6.368898	5.000000	5.400000	-0.028873	80.09600
Std. Dev.	4.032350	11.42988	16.40336	0.963461	1.252374
Skewness	0.160721	1.030763	2.009692	0.818953	-0.285310
Kurtosis	3.884589	2.517696	6.227924	3.543629	2.457195
Jarque-Bera	1.439462	7.284071	43.18429	4.839683	1.007897
Probability	0.486883	0.026199	0.000000	0.088936	0.604141
Observations	39	39	39	39	39

Source: Author's Computation using EViews 12, 2026

The findings reveal that the average real GDP growth over the years is 3.98 percent with a minimum of -6.37 percent and a maximum of 15.33 percent, suggesting volatility in economic growth. The mean value of unemployment was 14.13 percent and the difference between the mean and median indicates a recent increase in unemployment.

The average rate of inflation was 19.33 percent and very volatile, indicating macroeconomic instability. FDI was low, suggesting foreign capital is not driving economic growth. The labour force participation rate was fairly stable, indicating that the increase in unemployment is not caused by a decline in labour supply, but rather a lack of employment opportunities. The findings reflect structural weaknesses in the Nigerian economy, primarily the combination of an unstable economic growth with inflation and a rising unemployment.

4.2. Correlation Analysis

The correlation matrix offers some evidence on the direction and magnitude of the linear relationships. The results are shown in Table 2.

Table 2. Correlation Matrix

Variable	GDP	UNEMP	NDC	INF	FDI	LFPR
GDP	1.000000					
UNEMP	0.424761	1.000000				
NDC	-0.077110	0.488812	1.000000			
INF	-0.350490	-0.345290	-0.323150	1.000000		
FDI	0.266711	0.245882	-0.189200	0.198728	1.000000	
LFPR	0.068798	-0.377990	-0.808790	0.500330	0.160885	1.000000

Source: Author's Computation using EViews 12, 2026

GDP is positively correlated with unemployment ($r = 0.4248$), which is contrary to the conventional expectation of Okun's Law and suggests the likelihood of jobless growth in Nigeria. This empirical finding is consistent with the notion that growth has not been job-rich in Nigeria, as also confirmed by Ajakaiye et al. (2016). GDP has a negative correlation with inflation ($r = -0.3505$), which may suggest that economic instability will undermine growth. GDP also has a weak positive correlation with FDI ($r = 0.2667$), suggesting that foreign capital inflows might have a positive impact on growth, but not strongly. The correlation between GDP and LFPR ($r = 0.0688$) is weak, implying that labour force participation may not be correlated with economic growth.

The positive correlation between unemployment and net domestic credit suggests that credit expansion may have occurred without sufficient employment creation. The strong negative correlation between net domestic credit and labour force participation also points to structural imbalance in the financial and labour markets. However, correlation does not imply causality; therefore, the ARDL model is required to examine the short-run and long-run dynamics.

4.3. Unit Root Test

To prevent spurious regression, the stationarity of the variables was tested using both the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. The results are reported in Tables 3 and 4.

Table 3. Augmented Dickey-Fuller (ADF) Unit Root Test

Variable	ADF at Level	5% Critical Value	Status at Level	ADF at First Difference	Order of Integration
GDP	-4.097318	-2.941145	Stationary	-	I(0)
UNEMP	-1.638224	-2.941145	Not Stationary	-6.143386	I(1)
FDI	-3.733686	-2.941145	Stationary	-	I(0)
LFPR	-1.597401	-2.943427	Not Stationary	-3.665488	I(1)
INF	-2.729092	-2.943427	Not Stationary	-3.491111	I(1)
NDC	-0.623987	-2.948404	Not stationary	-5.090263	I(1)

Source: Author's Computation using EViews 12, 2026

Table 4. Phillips-Perron (PP) Unit Root Test

Variable	PP at Level	5% Critical Value	Status at Level	PP at First Difference	Order of Integration
GDP	-4.018010	-2.941145	Stationary	-	I(0)
UNEMP	-1.659143	-2.941145	Not Stationary	-6.143417	I(1)
FDI	-3.815937	-2.941145	Stationary	-	I(0)
LFPR	-1.495830	-2.941145	Not Stationary	-4.630886	I(1)
INF	-2.690819	-2.941145	Not Stationary	-5.742810	I(1)
NDC	-0.608961	-2.948404	Not stationary	-6.985290	I(1)

Source: Author's Computation using EViews 12, 2026

Both the ADF and PP results are similar. GDP and FDI are $I(0)$ whereas unemployment, inflation and labour force participation rate (LFPR) are $I(1)$. This combination of $I(0)$ and $I(1)$ variables makes the ARDL model suitable, given that ARDL is suitable in the case of variables not being all integrated at the same order, as long as none is $I(2)$. The non-stationarity of unemployment, inflation and LFPR also suggests that they have long memory, hence the need to test for the existence of a long-run relationship.

4.4. Lag Selection Criterion

The optimal lag length of the ARDL model was chosen based on information criteria. This is shown in Table 5.

Table 5. Lag Order Selection Result

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-505.602	NA	473094	30.09421	30.36357	30.18607
1	-370.817	214.069*	1468.412*	24.28338*	26.16888*	24.92639*
2	-345.770	30.94113	3449.171	24.92764	28.42929	26.12180

Note: * indicates optimal lag length.

Source: Author's Computation using EViews 12, 2026

The outcome reveals that lag 1 is the preferred lag as the values of FPE, AIC and HQ reach their minimum at this lag. It suggests that lagging the variables by 1 period is enough to reflect the dynamic relationships among variables without over-parameterisation. As such, the ARDL estimation is based on lag 1.

4.5. ARDL Bounds Test for Cointegration

The ARDL bounds test is used to test for the presence of a long-run relationship between the variables in the model. It is shown in Table 6.

Table 6. ARDL Bounds Test Result

Null Hypothesis: No long-run relationship exists

Test Statistic	Value	K
F-statistic	4.345063	5
Significance	I(0) Bound	I(1) Bound
10%	2.26	3.35
5%	2.62	3.79
2.5%	2.96	4.18
1%	3.41	4.68

Source: Author's Computation using EViews 12, 2026

The test statistic value 4.345063 is higher than the 5 percent level upper bound critical value of 3.79. The long-run relationship is thus confirmed. It confirms that there is cointegration among the variables, implying that unemployment, domestic credit, FDI, inflation, labour force participation rate and

economic growth are co-moving in the long run. This finding favours the error correction model of the ARDL approach.

4.6. ARDL Error Correction Model (Short-Run Dynamics)

Table 7 shows the results for the ARDL error correction model in the short run.

Table 7. ARDL Error Correction Regression Result

Dependent Variable: D(GDP)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C***	-572.0510	98.38562	-5.81437	0.0000
D(LUNEMP)	1.514502	1.230540	1.230762	0.2352
D(LUNEMP(-1))	1.178188	1.240665	0.949643	0.3556
D(LNDC)	0.207600	1.421639	0.146029	0.8856
D(LNDC(-1))	-0.865080	1.403200	-0.616500	0.5457
D(LFDI)	-0.699580	0.629641	-1.111070	0.2820
D(LFDI(-1))**	-1.925500	0.777109	-2.477780	0.0240
D(LINF)***	-4.372770	0.989201	-4.420510	0.0004
D(LINF(-1))***	4.835252	0.904881	5.343520	0.0001
D(LLFPR)	112.3001	104.2730	1.076981	0.2965
D(LLFPR(-1))	-211.4170	105.1595	-2.010440	0.0605
ECT(-1)***	-0.900010	0.154949	-5.808450	0.0000

R-squared = 0.802858

Adjusted R-squared = 0.704288

Durbin-Watson = 2.648981

F-statistic = 2.144997

Prob(F-statistic) = 0.000018

Note: *** and ** represent 1% and 5% levels of significance.

Source: Author's Computation using EViews 12, 2026

In the short run, the unemployment coefficient is insignificant in both its current and lagged form, implying that unemployment has no significant impact on economic growth. This implies that short-run unemployment does not affect output in the same period in Nigeria. This result is in line with Raifu (2017) and Nwaka et al. (2015), who also find that the unemployment-growth relationship in Nigeria is insignificant.

Local credit is not significant in the short run, suggesting that financial intermediation has not been sufficient in mobilising productive activity over the period considered. FDI has a lagged, negative and significant coefficient, implying that it has not had an immediate, positive effect on growth. This could be attributed to the nature of FDI investments in “enclave” capital intensive sectors with little benefits for the rest of the economy, as suggested by the structural concerns expressed in Anidi et al. (2022).

Inflation has a significant negative contemporaneous effect on growth but is positive and significant with a lag. This may reflect an initial distortion of economic activity but may also capture the adjustment of policies and/or temporary price shocks in the future. Labour force participation rate is not significant contemporaneously; however, the coefficient of the lagged value is marginally significant and negative, suggesting that an increase in labour supply without an increase in labour demand may have a negative effect on short-run output.

The error correction term is negative and significant (-0.900010; $p = 0.0000$), suggesting that there is a stable long-run relationship. This suggests that 90% of the short-run disequilibrium is corrected in one period, implying a very fast adjustment of economic activities towards long-run equilibrium.

4.7. ARDL Long-Run Estimates

Table 8 shows the long-run results of ARDL model.

Table 8. ARDL Long-Run Result

Dependent Variable: GDP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-572.0510	376.7752	-1.518280	0.1473
GDP(-1)***	-0.900010	0.212438	-4.236610	0.0006
LUNEMP(-1)	0.134913	1.661280	0.081210	0.9362
LNDC(-1)	-0.039990	0.639658	-0.062520	0.9509
LFDI(-1)	1.954234	1.386013	1.409968	0.1766
LINF(-1)***	-5.238440	1.751852	-2.990230	0.0082
LLFPR(-1)	133.5099	82.59156	1.616508	0.1244

Note: *** and ** represent 1% and 5% levels of significance.

Source: Author's Computation using EViews 12, 2026

The empirical findings give strong evidence that growth in Nigeria has not translated to the labour market. This finding is in line with Raifu (2017) and Nwaka et al. (2015), who also find that the labour market in Nigeria is not responsive to output growth. The fact that unemployment is not significant in the short run and long run, suggests that growth has not led to employment creation. This supports the structuralist view that the growth-employment nexus is more dependent on the type of growth rather than the level of growth.

It is possible that this finding can be explained by the rising importance of capital-intensive sectors, especially the oil sector, which play a significant role in GDP but only account for a small fraction of the workforce. As a result, output growth in such sectors does not create commensurate jobs, leaving unemployment levels unchanged.

The negative and significant short-run effect of lagged foreign direct investment also suggests the structural deficiencies of the Nigerian economy. Rather than generating economic activity across the board, foreign direct investment (FDI) may be invested in enclaved sectors that have limited links to the

rest of the economy. This limits the potential for backward and forward linkages in terms of technology spillovers, skills transfer and employment generation.

Inflation stands out as a key factor influencing economic growth, with a strong negative long-term impact. Sustained inflation destabilises the economy by reducing the value of money, deterring investment and creating uncertainty. The short-run positive lagged effect of inflation may be due to short-term adjustments or policy reactions; nevertheless, its long-run effect remains negative for growth.

The lack of significant impact of domestic credit implies that financial intermediation in Nigeria has not been able to mobilise productive investment. This could reflect structural weaknesses in the financial sector, such as low access to credit for small and medium-scale enterprises, which are likely to be more labour-intensive.

In summary, the results suggest that the relationship between unemployment and growth in Nigeria is more influenced by structural and institutional factors than by cyclical factors. This is why the theoretical predictions (such as Okun's Law) do not hold strongly in Nigeria.

4.8. Diagnostic Tests

To test the validity of the estimated model, we conducted diagnostic tests and the results are shown in Table 9.

Table 9. Diagnostic Tests Result

Test	Technique	Statistic	P-value
Residual Normality	Jarque-Bera	0.361936	0.834462
Serial Correlation	Breusch-Godfrey	2.357466	0.1158
Heteroskedasticity	Breusch-Pagan-Godfrey	1.135457	0.3978
Model Specification	Ramsey RESET	0.469593	0.5030
Stability Test	CUSUM and CUSUMSQ	Stable	Stable

Source: Author's Computation using EViews 12, 2026

The results of the diagnostic tests indicate that the model is robust. The Jarque-Bera probability suggests that the residuals are normally distributed. The Breusch-Godfrey and Breusch-Pagan-Godfrey tests indicate no serial correlation and heteroskedasticity, respectively. The Ramsey RESET test indicates that there is no evidence of model misspecification and the CUSUM and CUSUMSQ tests show that the parameters of the model are stable over time. Overall, these findings suggest that the ARDL model is appropriately specified and is valid for inference.

5. Conclusion

The empirical analysis of Nigeria's economic growth and unemployment from 1986 to 2024, based on the ARDL model, is insightful. Economic growth has been accompanied by rising unemployment, suggesting the absence of inclusive growth. The descriptive statistics indicate that economic growth has been volatile, but unemployment has been on the rise. Similarly, inflation has been very volatile and

foreign direct investment is low. Significantly, the participation rate has been relatively constant, which means that the unemployment problem is due to a lack of jobs rather than a lack of workers.

The unit root tests indicated a combination of orders of integration, thus supporting the adoption of the ARDL approach. The bounds test also confirmed the existence of a long-run relationship between economic growth, unemployment, foreign direct investment, inflation and labour force participation rate. In the short term, economic growth was not influenced by unemployment. But foreign direct investment had an effect with lag and inflation had a significant impact. The significant and negative feedback coefficient suggests a strong adjustment process towards long run equilibrium. In the long run, unemployment was insignificant with respect to growth, implying that the growth in Nigeria has not been labour-intensive. Foreign direct investment remained insignificant, but inflation remained significant and negative. The labour force participation rate was positive but insignificant.

In conclusion, this evidence supports the idea that Nigeria's growth has not resulted in significant job growth. The lack of a significant relationship between growth and unemployment in the short and long run points to the presence of jobless growth. Second, the structure of the economy is important; capital-intensive industries such as oil do not create sufficient employment opportunities. Economic instability, especially inflation, remains a hindrance to economic growth. If Nigeria is to attain sustainable and inclusive growth, it must ensure that its growth is complemented with policies that promote job creation and reforms. Economic growth must go beyond output growth; it must promote inclusive growth and decent employment.

References

- Ajakaiye, O., Jerome, A., Olowu, D., & Oyinlola, M. (2016). Understanding the relationship between growth and employment in Nigeria. *African Development Review*, 28(1), 1–12.
- Anidi, I., Eze, O., & Okafor, C. (2022). Economic growth and unemployment nexus in Nigeria: Evidence from recent data. *Journal of Economics and Sustainable Development*, 13(4), 45–56.
- Blanchard, O., & Johnson, D. R. (2017). *Macroeconomics* (7th ed.). Pearson Education.
- Dauda, R. O. S. (2016). Economic growth and unemployment in Nigeria: A sectoral analysis. *CBN Journal of Applied Statistics*, 7(1), 1–22.
- Iyoha, M. A., & Oriakhi, D. E. (2002). Explaining African economic growth performance: The case of Nigeria. *African Economic Research Consortium Research Paper*, 123, 1–45.
- Mankiw, N. G. (2019). *Principles of economics* (8th ed.). Cengage Learning.
- National Bureau of Statistics (NBS). (2021). *Labour force statistics report*. Abuja, Nigeria.
- Nwaka, I. D., Kalu, E. U., & Etim, E. (2015). Economic growth and unemployment in Nigeria: Evidence from cointegration and causality tests. *International Journal of Economics and Finance*, 7(10), 1–12.
- Okun, A. M. (1962). Potential GNP: Its measurement and significance. *Proceedings of the Business and Economic Statistics Section of the American Statistical Association*, 98–104.
- Raifu, I. A. (2017). On the relationship between economic growth and unemployment in Nigeria: An empirical investigation. *CBN Journal of Applied Statistics*, 8(1), 1–20.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics*, 70(1), 65–94.
- Todaro, M. P., & Smith, S. C. (2020). *Economic development* (13th ed.). Pearson Education.