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IMPACT OF DOMESTIC INVESTMENT ON UNEMPLOYMENT RATE IN NIGERIA

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Abstract

This study examines the impact of domestic investment on unemployment rate in Nigeria from 1999 to 2023. The Auto Regressive Distributed Lag (ARDL) was utilized to ensure that the objectives of the study were achieved. Data for the variables were sourced from Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics and World Development Indicators. From the results of the study, domestic investment and gross domestic product growth rate are negatively related to unemployment rate in Nigeria, while institutional quality, inflation rate and government expenditure have positive impact both in the long and short run. Based on the findings of the study it is therefore recommended that investments in strategic sectors like manufacturing and agriculture should be promoted. The investments will improve productive capacity, thus promoting faster growth and lowering the rate of unemployment both in the short and long run.

Keywords: Domestic investment, Unemployment rate, Government expenditure, Nigeria.

JEL Classification Codes: E24, H53, J64.

1.0 Introduction

Domestic investments play an important role in the economic growth of a country. They help stimulate demand, increase productivity, foster innovation and create jobs, thereby reducing unemployment rate. When companies invest in new facilities, equipment and technologies, this creates employment opportunities and stimulates consumption, which encourages other companies to invest in turn (Yedder et al., 2023). In Africa, domestic investment has also played a significant role in economic transformation and job creation. For instance, Ethiopia, one of Africa's fastest-growing economies between 2010 and 2020, has seen substantial domestic investment, particularly in infrastructure projects such as the Grand

Ethiopian Renaissance Dam and extensive road and rail networks. These investments have not only boosted economic growth but have also created millions of employment opportunities, thereby reducing the unemployment rate (World Bank, 2021).

In the same vein, Nigeria, Africa's largest economy, presents a unique case where increased domestic investment could significantly impact unemployment reduction. Despite its abundant natural resources and large market, Nigeria struggles with high unemployment rates, particularly among its youth. Structural issues like poor infrastructure, policy inconsistency, and skills mismatch between the labour market demands and graduates' skills have been some of the causes of the problem. Economic volatility, dependence on oil revenue, and non-diversification have also stifled the generation of sustainable jobs. According to the National Bureau of Statistics (2022), Nigeria's unemployment rate stood at 33.3% in 2021, one of the highest in the world. This high unemployment rate underscores the need for substantial domestic investment to stimulate job creation (International Monetary Fund, 2021).

The lack of adequate infrastructure, particularly in power and transportation, hampers business operations and reduces the country's attractiveness to investors. Also, corruption and governance issues impede the effective utilization of funds earmarked for capital projects. Mismanagement and embezzlement of public funds lead to delays and incomplete projects, which undermine the overall investment in infrastructure and other capital goods.

The Nigerian government has taken several steps over the years to address the issues of domestic investment in creating employment. One significant step was the formulation of the Economic Recovery and Growth Plan (ERGP) in 2017. This strategic plan aimed to revitalize the economy through various measures, including substantial investments in infrastructure (Federal Ministry of Budget and National Planning, 2017). Empirical evidences have affirmed that there exist mixed findings. While; Omar and Kabani (2020); Oaikhenan and Aigheyisi (2015) found a positive relationship, on the other hand, Anowor et al (2020); Musa et al (2021) established a negative relationship. Thus, this study examines the impact of domestic investment on unemployment reduction in Nigeria from 1999 – 2022.

The remaining part of the paper is organised as follows: Section 2 reviews relevant works of literature, section 3 outlines the methodology and model specification, section 4 deals with the estimation, analysis and interpretation of empirical results. Section 5 covers conclusion and recommendation.

2.0 Literature Review

2.1. Conceptual Issues

According to the World Bank (2023), domestic investment encompasses the value of new and replacement investments in fixed assets, reflecting the resources used to expand and maintain an economy's productive capacity. Similarly, the International Monetary Fund (2022) defines it as the total expenditure on fixed assets and improvements, including construction and purchases of machinery, which is important for assessing the growth potential of an economy. Smith and Johnson (2023) emphasize that domestic investment represents a key indicator of investment activity within an economy, affecting future productivity and economic development. The working definition of this study is therefore the acquisition of fixed assets such as buildings, machinery, and equipment by an economy, minus disposals to attract investment in order to reduce unemployment. According to the International Labour Organization (2023), unemployment reduction involves implementing measures that enhance job creation, improve labour market efficiency, and support skill development to facilitate smoother transitions into employment. The OECD (2022) defines it as a multi-faceted approach that includes promoting economic growth, ensuring labour market flexibility, and providing targeted support to disadvantaged groups. This study defines unemployment reduction as the strategies and policies aimed at decreasing the number of individuals who are actively seeking but unable to find employment.

2.2 Theoretical Review

The Neoclassical Investment Theory

The Neoclassical Investment Theory, developed by economist Daniel Jorgenson in 1963, examines how domestic investment relates to various economic factors, including unemployment. This theory is built on several fundamental assumptions, including the presence of perfect competition in markets, the lack of uncertainty in firms' expectations, the assumption of full employment where resources are effectively utilized, and the concept of diminishing returns to capital. It also posits that financial markets are perfect, enabling firms to borrow or lend at a consistent interest rate, and that firms aim to maximize their present value of future profits.

In relation to Nigeria, this theory provides insights into how domestic investment can influence unemployment reduction. By increasing domestic investment, especially in infrastructure and various industries, there is potential for job creation that can help mitigate unemployment challenges.

2.3 Empirical Literature

Stojanovic and Karanovic (2022) investigated the relationship between domestic investment, measured by gross fixed capital formation (GFCF), and unemployment rates in Eastern European economies from 2000 to 2018. The study applied panel data econometric techniques, including fixed and random effects models, the study finds a significant negative correlation between GFCF and unemployment. This suggests that higher investment in fixed capital contributes to lower unemployment rates. The impact is stronger in economies with advanced industrialization and well-developed infrastructure. Investments in infrastructure and industrial sectors are particularly effective in job creation. Conversely, investments in real estate and non-productive sectors have a relatively smaller effect on employment levels.

In addition, Habanabakre and Dickason-Koekemor (2022) examined the global economic issue of unemployment, with a specific focus on South Africa, where unemployment remains a serious concern. Utilizing the autoregressive distributed lag (ARDL) model, the study analysed data from 1995 to 2019 and the findings indicated that increased gross capital formation (GCF) contributes to long-term job creation in the construction and business enterprise sectors. Additionally, GCF influences short-term employment changes across different economic sectors. However, the study finds that GCF does not significantly impact long-term employment in the finance, manufacturing, and mining sectors. Also, Hawariyuni and Andrasari (2022) analysed the impact of foreign direct investment, domestic investment, and macroeconomic variables on unemployment reduction in Indonesia from 2010 to 2020 using an OLS model and panel data from 34 provinces. The study found that GDP and FDI significantly reduced unemployment, showing a negative relationship. In contrast, domestic investment, inflation, minimum wage, and poverty had no significant effect. The results suggest that higher GDP and FDI contribute to lowering unemployment. However, other macroeconomic factors did not play a crucial role in unemployment reduction.

Rawal et al (2021) explore the relationship between unemployment, gross capital formation (GCF), and economic growth (GDP) in India, addressing persistent macroeconomic challenges such as stagnating productivity and high unemployment. Utilizing time series data from 2010 to 2019, the researchers employed a vector auto-regressive (VAR) system to analyse the causality effects of these variables. The findings revealed that gross capital formation has a negative relationship with GDP, though an increase in GDP is associated with an

increase in GCF. Additionally, the model shows that unemployment (UNEMP) does not have a short-term impact on economic development (GDP). Also, Adzim and Prajanti (2021) examined the effects of foreign and domestic investment, economic growth, wages, population, and education on open unemployment in Bali from 2014 to 2018 using panel data regression. The study found that economic growth and wages significantly reduced unemployment, while population and education increased it. Foreign and domestic investment had a negative but insignificant effect on unemployment.

Similarly, Musa et al (2021) investigated the relationship between investments and unemployment in Nigeria from 1991 to 2019 and applied the Vector Error Correction Model (VECM). The analysis revealed that both domestic and foreign investments are negatively and significantly associated with unemployment. Omar and Kabbani (2020) in their study examined the impact of various types of investments on employment in Egypt from 2000 to 2018. Using a panel data approach and employing a combination of fixed effects and random effects models, the study revealed that both public and private investments have a significant positive effect on employment, while private sector investments showed a stronger impact compared to public investments. The study also indicated that while infrastructure investments contribute to short-term job creation, investments in technology and innovation sectors are more likely to foster long-term employment growth.

Furthermore, Nasiru and Mohammed (2020) examined the impact of domestic and foreign investments on the rate of unemployment in Nigeria using data for the period of 1991 to 2018 and employed VECM to realize the objective. The result found that domestic and foreign investments were negative and significantly associated with unemployment in Nigeria.

In a study carried out by Anowor et al. (2020), a dynamic error correction model using data from Nigeria (1980-2017) was employed to demonstrate how investment can effectively create employment opportunities by utilizing idle resources. The findings however revealed that investment negatively impacted unemployment in Nigeria.

Sahoo and Sahoo (2019) examined the impact of macroeconomic variables on unemployment in India from 1991 to 2017 using cointegration tests, VECM, and the Granger causality test. The findings showed that unemployment could be predicted using the variables, with a significant positive intercept indicating a proportional increase over time. In the same vein, Ndugbu et. al (2019) examined the impact of private sector investments on unemployment in Nigeria

from 1986 to 2016. The VECM and Pairwise Granger causality analysis were employed in the data analysis. The study indicated that private sector investments did not granger cause unemployment rate in the long-run. However, a significant but negative relationship was found between past unemployment rate and private domestic investment lagged one period and unemployment rate in Nigeria.

Furthermore, Alrayes and Abu Wadi (2018) investigated the determinants of unemployment in Bahrain, focusing on how GDP, inflation, government expenditure, and the fixed capital formation influenced unemployment rates from 1980 to 2015. The study found that economic growth and inflation did not have a significant impact on unemployment in Bahrain. However, fixed capital formation and government expenditure were found to significantly affect unemployment.

Moreover, Fabiyi et al (2018) evaluated the impact of macroeconomic policies on unemployment in Nigeria from 1995 to 2015. The study employed secondary data on unemployment and various economic variables, including GDP, government final consumption expenditure (GFCE), GFCF, Exports, and Imports. The results show a negative relationship between unemployment and GDP, GFCE, and exports, while a positive relationship was found between unemployment and GFCF and imports. However, Hoon et al. (2018) estimated the relationship between investment and unemployment in 20 OECD countries from 1960 to 2015. The study adopted a non-monetary model of the natural rate of unemployment, which aligns with the empirical patterns found in the data. The findings indicate that an inverse relationship between investment and unemployment remains robust even in the long run. Furthermore, the statistical relationship between a rise in the current account surplus and higher unemployment is likely mediated through investment. Specifically, a capital outflow—represented by a positive current account surplus—leads to lower investment and higher unemployment.

In another development, Oaikhenan and Aigheyisi (2015) examined the impact of domestic and foreign direct investments, government consumption expenditure on unemployment rate in Nigeria. The study utilized the Stock-Watson DOLS methodology and the findings revealed that domestic investment, trade openness, and inflation are positive and significant factors in reducing unemployment. Conversely, foreign direct investment and government spending did not show statistically significant effects, despite negative coefficients.

The existing empirical literature on domestic investment and unemployment shows a

significant lacuna, as previous studies overlooked the role of institutional quality in their work. Institutional quality, such as governance, regulatory institutions, and political stability, is significant as it determines the context within which investments are undertaken, and the extent to which they succeed in generating employment opportunities and mitigating unemployment. By eliminating this dimension, previous studies have provided a partial explanation of the relationship, which limits the scope to develop policies to maximize the employment benefits from domestic investment.

3.0 Methodology

3.1. Model Specification

The model used in this study is specified in accordance with the model of Alrayes and Abu Wadi (2018). A slight modification was done to investigate the impact of domestic investment on unemployment reduction in Nigeria. Alrayes and Abu Wadi (2018) included in their model, unemployment rate, gross domestic product, government expenditure, inflation rate and gross fixed capital formation. The model is thus functionally specified as;

$$UN = f\ (FCF, GDP, INF, GX) \qquad 3.1$$

Where, UN = Unemployment rate, FCF = Fixed Capital Formation, GDP = Gross Domestic Product, INF = Inflation, GX = Government Expenditure

This study therefore modified the model of Alrayes and Abu Wadi (2018) to include unemployment rate, domestic investment, government expenditure, institutional quality, inflation and gross domestic product growth rate. While other variables are adopted from the model of Alrayes and Abu Wadi (2018), institutional quality is included because it ensures smooth operations of businesses in an economy. The functional form of this study's model is thus specified as;

$$UEPR = f(DOI, GEXP, INSQ, INFR, GDPG) \qquad 3.2$$

The econometric form of the model is written as;

$$UEPR_t = \beta_0 + \beta_1 \mathrm{DOI}_{t-1} + \beta_2 \mathrm{GEXP}_{t-1} + \beta_3 \mathrm{INSQ}_{t-1} + \beta_4 \mathrm{INFR}_{t-1} + \beta_5 \mathrm{GDPG}_{t-1} + \mu_t \qquad 3.3$$

Where, UEPR stands for unemployment rate and it is used as a proxy for unemployment reduction; DOI depicts domestic investment which is proxied by gross fixed capital formation, GEXP is government expenditure; INSQ is institutional quality; INFR is inflation rate, GDPG is gross domestic product growth rate μ is the stochastic error term; β_0, β_1, β_2, β_3, β_4, β_5, are the coefficients' slopes.

In this study, both the long and short run ARDL model is presented as:

ARDL Equation

$$\begin{aligned}\mathrm{InUEPR_t} = {} & \mathrm{In}\beta_0 + \beta_1 In\mathrm{UEPR}_{t-1} + \beta_2 In\mathrm{DOI}_{t-1} + \beta_3 In\mathrm{GEXP}_{t-1} + \beta_4 In\mathrm{INSQ}_{t-1} \\ & + \beta_5 In\mathrm{INFR}_{t-1} + \beta_6 In\mathrm{GDPG}_{t-1} + \sum_{i=1}^{p} \alpha_1 \, \Delta InUEPR_{t-1} \\ & + \sum_{i=1}^{p} \alpha_2 \, \Delta InDOI_{t-1} + \sum_{i=1}^{p} \alpha_3 \, \Delta InGEXP_{t-1} + \sum_{i=1}^{p} \alpha_4 \, \Delta InINSQ_{t-1} \\ & + \sum_{i=1}^{p} \alpha_5 \, \Delta InINFR_{t-1} + \sum_{i=1}^{p} \alpha_6 \, \Delta InGDPG_{t-1} - \text{Ø}\mathrm{ECM}_{t-1} + \mu_t \end{aligned} \quad 3.4$$

Where, ln is the natural logarithm, Δ is first difference operator.

3.2. Techniques of Estimation

The study adopts Autoregressive Distributed Lag (ARDL) approach to cointegration developed by Pesaran (1997) and subsequently redeveloped bounds testing approach by Pesaran, Shin, & Smith (1999, 2001) to achieve objectives one to two. The study chooses ARDL approach due to its comparative advantages over other cointegration approaches. ARDL approach has been proven to be robust in small sample, estimating and testing hypothesis of long run coefficients of underlying variables irrespective of whether they are all integrated at level, I(0), at first difference, I(1) or mixed (Pesaran, 1997).

In accordance with Pesaran et al. (2001), the ARDL model can be specified as:

$$y_t - y_{t-1} = c + (\lambda\text{-}1).\, y_{t-1} + (\beta_0 + \beta_1).\, X_{t-1} + \beta_0 .\, \Delta X_t + \upsilon_t \quad 3.5$$

$$\Delta y_t = c + \varphi .\, (y_{t-1} - \text{Ø}.\, X_{t-1}) + \beta_0 .\, \Delta X_t + \upsilon_t \quad 3.6$$

Where, φ = (λ-1) is the coefficient of the error correction term, β = (β_0 + β_1) and Ø = - $\frac{\beta}{\varphi}$ are the long run coefficients of X_t. The speed of adjustment is – φ.

Table 3.1: Measurement and Definition of Variables

Variables	Definition and Measurements	Sources of Data	A priori Expectation
Unemployment rate (UEPR)	It is the percentage of people who have all what it takes to be gainfully employed but could not get the jobs. This is measured in percentages.	National Bureau of Statistics (2023)	
Domestic investment (DOI)	This refers to the investments made by the government in Nigeria. It is proxied with gross fixed capital formation, and measured in billions of naira	CBN Statistical Bulletin (2023)	Positive

Government expenditure (GEXP)	GEXP is the total expenditure incurred by a government on commodities and services, along with public projects, including infrastructure, education, healthcare, defense, and social welfare. It is measured in billions of naira	CBN Statistical Bulletin (2023)	Positive
Institutional quality (INSQ)	INSQ means the solidity, transparency, and quality of a nation's political, economic, and legal institutions in the guarantee of good governance. This is measured based on index	World Development Indicators (2023)	Positive
Inflation rate (INFR)	It is the persistent rise in prices of goods and services, measured in percentages	CBN Statistical Bulletin (2023)	Negative
GDP growth rate (GDPG)	GDPG is the growth rate of gross domestic product, measured in percentages	CBN Statistical Bulletin (2023)	Positive

Source: Researcher's Compilation, 2025

4.0 Data Analysis and Discussion of Findings

4.1. Presentation and Interpretation of Results

4.1.1. Descriptive Statistics

Table 4.1: ***Summary of Descriptive Statistics***

	UEPR	DOIE	GEXP	INFR	INSQ	GDPG
Mean	18.39200	4.035434	3.652849	13.18402	16.70800	4.900000
Median	14.90000	3.995512	3.661567	12.55496	15.64000	5.300000
Maximum	39.30000	4.834654	5.312017	28.92000	32.89000	15.30000
Minimum	3.000000	3.321917	2.845780	5.388008	10.99000	-1.800000
Std. Dev.	8.862859	0.444461	0.558172	5.203658	5.062643	3.646117
Skewness	0.719030	0.251688	0.965300	1.013178	2.423456	0.456201
Kurtosis	2.905581	2.260565	4.238653	4.542481	8.395623	4.157659
Jarque-Bera	2.163470	0.833492	5.480709	6.755587	54.79719	2.263180
Probability	0.339007	0.659188	0.064547	0.034123	0.000000	0.322520
Sum	459.8000	100.8858	91.32124	329.6006	417.7000	122.5000
Sum Sq. Dev.	1885.207	4.741094	7.477347	649.8732	615.1284	319.0600
Observations	25	25	25	25	25	25

Source: E-views 12 output, 2025 (UEPR is Unemployment rate, DOIE is domestic investment, GEXP is Government expenditure, INFR is inflation rate, GDPG is Gross Domestic Product growth rate, INSQ is Institutional Quality)

The mean value for unemployment rate (UEPR) is 18.3920, 4.0354 for domestic investment (DOIE), 3.6528 for government expenditure (GEXP), 16.7080 for inflation rate (INFR), 4.9000 for Gross Domestic Product growth rate (GDPG) and 16.7080 for institutional quality (INSQ). This implies that the expected values are close to their true

values. The standard deviation shows that DOIE, GDPG and GEXP have low variability and it implies that the variations are as low as possible, that is, the estimates are close to their true values. Similarly, UEPR has high variability, indicating significant fluctuations over time. The large dispersion suggests that the values deviate widely from the mean. However, INSQ and INFR has moderate variability, meaning the values experience noticeable but not extreme fluctuations over time. The skewness around their mean values gives positive values of 0.7190 for UEPR, 0.25168 for DOIE, 0.96530 for GEXP, 1.01317 for INFR, 2.42345 for INSQ and 0.4562 for GDPG. This implies that all the variables are skewed to the right since the values fall within the boundary. For Kurtosis, the values for UEPR are 2.90558 and 2.26056 for DOIE, which are less than 3. This means that the distribution is flat. Also, the kurtosis values for GEXP, INFR, INSQ and GDPG which are 4.23865, 4.54248, 8.3956 and 4.15765 respectively. These are greater than 3 and it means that the distribution is more peaked than normal. Furthermore, the probability value of Jarque-Bera reveals that INFR and INSQ which have probability values of 0.03412 and 0.0000 respectively are not normally distributed since their probability values are lower than 0.05. However, UEPR, DOIE, GEXP and GDPG are normally distributed owing to the fact that their probability values are greater than 5%. The p value for UEPR is 0.33900, 0.659188 for DOIE, 0.06454 for GEXP and 0.32252 for GDPG.

4.1.2 Test of Stationarity

Table 4.2: ***Summary of the Augmented Dickey-Fuller Unit Root Test***

Variables	ADF Stats	Critical Value @5%	Order of Integration	Remarks
UEPR	-6.1643	-3.6220	I(1)	Stationary
DOIE	-3.9023	-3.6220	I(1)	Stationary
GEXP	-6.4121	-3.6122	I(1)	Stationary
INFR	-5.0606	-3.6908	I(1)	Stationary
GDPG	-4.3355	-3.6122	I(0)	Stationary
INSQ	-5.3495	-3.6122	I(1)	Stationary

Source: E-views 12 output, 2025

Table 4.2 presents the summary of the results of unit root test carried out for this study. The result shows that UEPR, DOI, GEXP, INFR and INSQ are stationary at first difference,

that is, integrated of order one (I(1) while GDPG is stationary at level, that is, integrated of order zero I(0). The variables are stationary since their statistical properties, such as mean and variance, remain constant with time, which means that they do not exhibit a unit root. It is then concluded that all the variables are stationary and the null hypothesis of no stationarity is rejected. Due to this mixed order of integration, the ARDL Bounds test is required.

4.1.3: Lag Length Selection

Table 4.3: ***Summary of VAR Lag Selection Criteria***

Lag	LogL	LR	FPE	AIC	SC	HQ
0	81.90877	NA	1.37e-11	-7.990397	-7.692153	-7.939922
1	156.6430	94.40115*	2.88e-13*	-12.06769*	-9.979978*	-11.71436*

Source: E-views 12 Output, 2025

From the result presented in Table 4.3, the appropriate lag length for this model is one, since all criteria for selecting optimum lag length choose one as the lag length. Thus, Akaike information criterion was used in this study. The AIC reaches its minimum value at -12.0677, and the SC at -9.9799, which may indicate that incorporating one lag reflects an appropriate balance between model complexity and goodness of fit. While the AIC always favours more complex models, the SC imposes a stricter penalty for additional parameters. That their minimum values fall at lag 1 supports the fact that this lag captures the dynamics of the system very well without overfitting, and therefore, it is most adequate to model the relationships among the endogenous variables.

4.1.4 ARDL Bounds Test for Cointegration

Cointegration analysis is necessary in time series data in order to determine whether there is long run relationship or not.

Table 4.4: ***ARDL Bounds Test Result***

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	4.123132	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: E-views 12 Output, 2025

In this study, ARDL Bounds test was employed to check this relationship and the result is presented in Table 4.4. The result reveals that the value of F-statistics (4.1231) of the test is greater than the lower bound (2.39) and upper bound (3.38) at 5 per cent level of significance. Thus, there is long run relationship among the variables. This leads to the rejection of the null hypothesis which states that there is no long run relationship among the variables of the model. Based on this decision, the long and short run ARDL model was conducted since there is cointegration in the model.

4.1.5. Autoregressive Distributed Lag (ARDL) Model

The results of the long and short run ARDL estimates are presented in Table 4.5.

Table 4.5: ARDL Results

Long-run Estimate

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
DOIE	-3.044626	19.00628	-3.160191	0.0046
GEXP	5.260733	14.97067	3.351403	0.0096
INFR	0.487673	0.559315	0.871912	0.3954
INSQ	0.471521	0.777987	0.606079	0.5525
GDPG	-0.957598	1.170209	-2.818314	0.0245
C	3.690908	44.29711	0.083322	0.9346

Short-run Estimate

Conditional Error Correction Regression				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.025348	23.73215	0.085342	0.9330
UEPR(-1)	-0.548740	0.258776	-2.120522	0.0490
DOIE	-1.670707	10.17521	-0.164194	0.8715
GEXP	2.886773	8.318027	3.347050	0.0028
INFR	0.267606	0.324756	0.824020	0.4213
INSQ	0.258742	0.392919	2.658514	0.0190
GDPG	-0.525472	0.479062	-1.096877	0.2880
CointEq(-1)	-0.548740	0.127767	-4.294843	0.0005
R-squared	0.529338	Mean dependent var		1.512500
Adjusted R-squared	0.409338	S.D. dependent var		6.089984
S.E. of regression	4.680427	Akaike info criterion		5.965430
Sum squared resid	503.8472	Schwarz criterion		6.014515
Log likelihood	-70.58516	Hannan-Quinn criter.		5.978452
Durbin-Watson stat	1.676104			

Source: E-views 12 Output, 2024

From Table 4.5 the long run result reveals that DOIE and GDPG are negatively related to unemployment rate in Nigeria. The coefficient values are -3.0446 for DOIE and -0.9575 for GDPG, which implies that on average, 1 percent increase in DOIE and GDPG will decrease unemployment rate by 3.04% and 0.96% respectively. Also, the result showed that institutional quality, inflation rate and government expenditure will increase unemployment rate in Nigeria. This suggests that 1 percent increase in INSQ, INFR and GEXP will increase unemployment rate in Nigeria by 0.47%, 0.49% and 5.26% respectively.

The short run estimate affirms that the lagged value of unemployment rate has negative relationship with its current value with about -0.5487, and this suggests that 1 percent increase in unemployment rate in previous years will lead to decrease in unemployment rate in the current year by 0.55%. The negative coefficient of -0.55 reveals that unemployment does not remain at the same high levels indefinitely. Instead, the labour market will adjust in the long run, with earlier increases in unemployment followed by later decreases. DOIE and GDPG have negative coefficient values of -1.6707 and -0.5255 respectively, meaning that 1 percent increase in DOIE and GDPG in the short run, will decrease unemployment rate in Nigeria by 1.67% and 0.53% respectively. On the other hand, INSQ, INFR and GEXP have positive relationship with unemployment rate in the short run. The coefficient values are 2.8867 for GEXP, 0.2676 for INFR and 0.2587 for GDPG, meaning that when other things are held constant, 1 percent increase in INSQ, INFR and GDPG will increase

unemployment rate by 2.89%, 0.27% and 0.26% respectively. The error correcting term as indicated in this study shows cointegrating value of -0.5487, with the p value of 0.0005. This indicates that the speed of adjustment from disequilibrium to equilibrium position is about 0.55 and it is highly statistically significant at 5 percent. The variables both in the long and short run also show that GEXP is statistically significant since their p values are below 5 percent. DOIE and GDPG are significant in the long run but in the short run, it is insignificant. While INFR is insignificant both in the long and short run, INSQ is significant in the short run but insignificant in the long run.

The R^2 of 0.529 shows that about 53 percent variations in unemployment rate are explained by DOIE, GEXP, INFR, GDPG and INSQ, while the remaining 47 percent is captured in the stochastic error term. This variation is also supported by the adjusted R^2 of 0.41%. The Durbin-Watson *d* test which is approximately 2 suggests that there is no autocorrelation in the model.

4.1.6. Post Estimation Diagnostic Tests

After estimating the parameters of this study's model, the necessary diagnostic tests were conducted. For this study, the serial correlation and stability tests were conducted.

Table 4.6: ***Summary of Serial Correlation Test***

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.582804	Prob. F(1,10)	0.4628
Obs*R-squared	1.156488	Prob. Chi-Square(1)	0.2822

The result of the serial correlation test shows that the model is free from serial correlation since the probability value of F-statistics of 0.4628 is greater than the critical value at 5 percent. This makes the study to accept the null hypothesis which states that there is no serial correlation in the model.

Stability Tests

The stability test is necessary in a time series data to check whether the model is stable or not. This study used the Recursive OLS tests to establish the stability status and the results are presented in Figure 4.1.

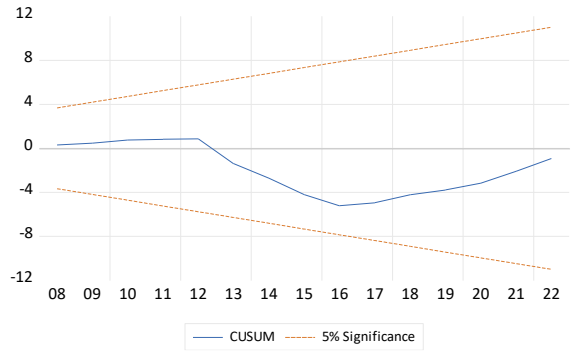


Figure 4.1: Cumulative Sum Test

Source: Eviews 10 Output

The results in Figure 4.1 shows that our model is stable since the base lines fall within the 5 percent boundary level. Based on the decision rule, the study accepts the null hypothesis which states that the model is stable.

4.2. Discussion of Findings

From the results of the long and short run ARDL estimates, DOIE and GDPG have negative relationship with unemployment rate, which indicates that DOIE and GDPG helped to reduce unemployment rate in Nigeria. This is because capital accumulation has been used to put infrastructures that will stimulate economic growth in place, which in turn reduces unemployment. The rate at which GDP grows also has negative relationship with unemployment rate. As production of goods and services increases, there would be many economic activities that will help create jobs. This will eventually reduce unemployment rate, and thus, it conforms to the a priori expectation. The findings of Alrayes and Abu Wadi (2018) is in conformity with the findings of this study on GDP growth rate.

The positive relationships among GEXP, INFR and INSQ and unemployment rate, based on empirical evidence, suggest that expenditure by the government over the years remains inadequate, mismanaged and even embezzled by the people in charge of the funds. This has adversely affected infrastructural development which is crucial in enhancing economic growth and reducing unemployment as investors are encouraged to invest. Wagner's Law assumes that with expanding economies, government spending grows, but if the spending is not directed into the labour-intensive sectors in an efficient manner, it might not prove to be enough in terms of employment generation. Additionally, excessive public expenditure can be accompanied by increased taxation or debt, which can chase away private investment, thus further reducing job creation. These findings are not in conformity with the a priori expectation because it is expected that capital formation as well as expenditure by the government should be used to provide developmental projects that attract investments. The findings of Oaikhenan and Aigheyisi (2015) does not support the findings on domestic investment as it has positive impact on unemployment rate in Nigeria. Their findings however corroborate the findings on government expenditure and unemployment rate in Nigeria.

Furthermore, the result of INSQ reveals that institutional quality does not conform to the a priori expectation. This is because high quality institution determines the smooth operations of every activity in a country. Thus, low institutional quality can retard the growth of the economy, thereby causing unemployment to increase. Although better institutions are generally thought to foster economic growth and employment, institutionally, short-term institutional change can result in rigidities and transition problems. Institutional Transition Theory presumes that good governance, better regulations, and anti-corruption policies could destabilize the current economic systems in the short run and render it more difficult for companies to operate business effectively. For example, if stronger formal institutions create tighter tax enforcement and control over businesses, it might become difficult for informal sector entrepreneurs to switch to the formal sector, causing temporary job loss.

The rate of inflation also shows positive relationship. This implies that persistent increase in prices in goods and services, which erodes the purchasing power of consumers will cause unemployment to increase on one hand, one can say this conforms to the a priori expectation because investors gain from high inflation while consumers lose. Thus, gains from the producers' sales can be invested back in order to create more employment. However, in the case where consumers cannot purchase enough goods and services due to high inflation rate, producers will have to cut down production and this will affect employment generation. As per the Phillips Curve, inflation and unemployment indeed have a trade-off in the short run but in the long-run, high inflation may cause economic instability, reducing investment and the level of job creation. The findings of this study on inflation is in tandem with the findings of Oaikhenan and Aigheyisi (2015). The results also reveal that the model can be used for economic predictions since the goodness of fit is moderately high.

5.0 Conclusion and Policy Recommendations

The study examines the impact of domestic investment on unemployment rate in Nigeria, while the period covered 1999 to 2023. The ARDL approach of estimation was used and from the findings, domestic investment and GDP growth rate have negative impact on unemployment rate both in the long and short run. The result further shows that institutional quality, government expenditure and inflation rate have positive impact on unemployment rate in Nigeria. The ECM reveals about 55% speed of adjustment, while the coefficient of determination established that the model is a good fit with R^2 of 53%. The post estimation

tests conducted to show the reliability and validity of the model reveal that the model is reliable for economic predictions. The fact that domestic investment has negative relationship with unemployment rate in Nigeria implies that, when there are significant investments in the country, it often leads to increased production capacity which stimulate economic activities. As businesses expand, they tend to create more job opportunities which help reduce unemployment. This indicates that domestic investment is crucial in unemployment reduction in Nigeria. In light of the findings of this study, it is recommended that domestic investment should be targeted at high employment-generating industries like manufacturing, agriculture, and technologically advanced industries since they possess high labour-absorbing capacity in the sense that they generate a high job-capital ratio, encourage economic diversification, reduce dependence on the volatile oil sectors, and foster value-added production, ultimately leading to sustainable expansion of employment and economic stability for Nigeria. Furthermore, there should be a greater coordination between labour market demand and investment-led economic growth. It can be done by establishing vocational training programs, industry-university partnerships, and government-sponsored skill acquisition programs to provide employment seekers with the requisite skills. If the right skills are given to the workforce, domestic investment will result in more employment absorption and lower the rate of unemployment. Similarly, policies aimed at encouraging efficiency in spending on infrastructure, education, and health would bring productivity and ease unemployment rate.

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