

## **Fiscal Policy Response to Unemployment in Nigeria: Empirical Insights and Policy Implication**

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### **Abstract**

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This study examines fiscal policy response to unemployment in Nigeria from 1991 to 2022. Data were obtained from the Central Bank of Nigeria Statistical Bulletin and the World Bank's World Development Indicators, 2022. Domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue, and tax revenue are adopted to proxy fiscal policy while unemployment is used as the dependent variable. The individual series were subjected to unit root tests using the Augmented Dickey Fuller approach and the diagnoses established mixed orders of I(0) and I(1) integrations, thereby necessitating application of the Auto-Regressive Distributive lag bounds test as well as the short-run versions. The analyzed model's result using the bound test established that there is no long-run relationship between fiscal policy and unemployment. Therefore, further findings from the short-run regression revealed that domestic debt, capital expenditure and tax revenue had a negative but significant influence on unemployment. However, the external debt and recurrent expenditure reported an insignificant impact on unemployment whereas oil revenue had a positive and statistically significant relationship with unemployment. Hence, it was concluded that fiscal policy significantly responds to unemployment in Nigeria. It was therefore recommended amongst other that federal ministry of finance should review the country's fiscal policies. They should consider adjustments to ensure that domestic debt levels, do not inadvertently ate unemployment.

**Keywords:** *Unemployment, Domestic Debt, External Debt, Capital Expenditure, Recurrent Expenditure, Oil Revenue, Tax Revenue*

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### **Background to the Study**

Unemployment in Nigeria remains a persistent challenge, affecting millions of lives and posing significant hurdles to economic prosperity. Unemployment refers to individuals who are willing and able to work but are unable to find employment. According to Musa et al (2021) unemployment refers to the percentage of the labour force that is without a job but is able and willing to work at the prevailing wage rate. In line with this view, Oloruntuyi (2020) described unemployment as the number of people who do not have a job, have actively search for work within the past four weeks and are currently available for employment. In Nigeria, unemployment rates have been a significant economic challenge. As of 2023, the unemployment rate stood at 33% with youth unemployment at 45%, according to data from the Nigerian National Bureau of Statistics. This is an indication of high and rising unemployment rate. High unemployment rates in Nigeria has several implications. Economically, it leads to reduced productivity and output, as a large segment of the labor force remains underutilized. This situation contributes to income inequality and social unrest, as unemployed individuals face financial strain and reduced access to basic necessities. Socially, it can lead to increased crime rates and psychological stress among affected individuals and families.

In response to this pressing issue, fiscal policy has emerged as a crucial tool in the government's arsenal to combat joblessness and stimulate economic growth. Fiscal policy can be defined as changes in taxation and government spending. such activity play a crucial role in shaping the macroeconomic environment and determining the trajectory of prices in Nigeria. According to Maheswaranathan and Jeewanthi, (2021) fiscal policy connotes the utilization of policy instruments such as budget, government expenditure, taxation and transfer payments to control and regulate the economy by altering revenue and spending levels. With Nigeria experiencing varying unemployment rates over the years, currently standing at .33% as of 2022, the role of fiscal policy in mitigating joblessness cannot be overstated. Take for instance, during periods of economic downturns, such as the global financial crisis of 2008-2009, the Nigerian government implemented expansionary fiscal measures. These included increased spending on infrastructure projects, such as road construction and power regeneration, aimed at stimulating aggregate demand and supporting economic recovery. For instance, government expenditure on infrastructure rose significantly from 6.8% of GDP in 2007 to 12.6% in 2010 NBS, 2020, contributing to improved economic activity and job creation.

Fiscal policy plays a crucial role addressing unemployment in Nigeria by directly influencing economic activity and job creation. For example, increased government spending on infrastructure projects such as road and construction not only improves transportation networks but also generates jobs for engineers, construction workers, and support staff. Similarly, tax incentives and reductions can stimulate private sector investment and expansion, leading to more job opportunities in industries ranging from manufacturing to services. Social program like unemployment benefits provide essential support to individuals during job transitions, helping to maintain consumer spending levels and overall economic stability. Moreover, targeted labor market policies such as vocational training programs and

job placement services help match unemployed individuals with available job openings, reducing the frictional unemployment rate. Public sector employment initiatives further contribute by directly employing individuals in areas of public service and development.

In Nigeria, the adoption and effective implementation of these fiscal policy measures are crucial for addressing the persistent issue of unemployment. By strategically deploying these tools, policymakers can foster sustainable economic growth, enhance labor market outcomes, and improve overall welfare for the population. However, despite several fiscal policy tools adopted by the Nigerian government, unemployment rate continues to upsurge. For example, Nigerian unemployment rate increased to 33.3% in Q4 2020, which likely contributed to the contraction of the gross domestic product (GDP) by 1.92% in 2020 due to decreased consumer demand (WDI, 2022). This rise in unemployment rate has resulted to increased poverty and inequality. The World Bank reported in 2020 that over 40% of the Nigerian live below the national poverty line, and with the high unemployment rate, more people struggle to meet their basic need without a steady income. This situation exacerbates poverty and widens the gap between the rich and the poor. Also, with over 53% in Q4 2020 of youth unemployment rate according to the World Bank, the country has is not fully benefiting from the potential contributions of its young population to the economic growth and development.

Against this backdrop, the role of fiscal policy as a key instrument for influencing unemployment has garnered increased attention. Therefore, this paper seek to answer the following question as a mean to addressing issues and concerns raised in the study. How has domestic debt impacted unemployment? Has external debt reduced unemployment? To what extent has capital expenditure impacted unemployment? How has recurrent expenditure eased unemployment? To what extent has oil revenue lessened unemployment? And how has tax revenue lightened unemployment?

## **Literature Review**

### **Theoretical Framework**

#### **Keynesian Theory of Public Spending**

Keynesian theory, developed primarily by John Maynard Keynes in 1936 posits that fluctuations in aggregate demand are central to understanding economic fluctuations, including unemployment. Keynes argued that involuntary unemployment persists when aggregate demand is insufficient to full employ available labor resources. This type of unemployment occurs because prices and wages are sticky in the short term, meaning they do not adjust quickly to changes in demand. Keynes advocated for government intervention to manage aggregate demand and stabilize the economy. He proposed that during periods of economic downturns, the government should increase its spending or reduce takes to stimulate consumer and business spending, thereby boosting aggregate demand and reducing unemployment. This intervention is aimed at filling the gap left by insufficient private sector spending.

Proponents of Keynesian economics argue that government intervention through fiscal policy is necessary to achieve full employment and economic stability. They believe that by actively

managing aggregate demand, government can mitigate the negative impact of recessions and depressions. Opponents, such as classical economists, criticize Keynesian theory for potentially leading to inefficiencies and market are self-regulating and that government intervention, particularly through deficit spending, can lead to long-term economic problems such as inflation or debt accumulation. Neoclassical economists, while incorporating some Keynesian insights, generally emphasize the role of market mechanisms and monetary policy in stabilizing the economy.

### **The Automatic Stabilizer Theory**

Alvin Hansen was credited with the Automatic stabilizer theory in 1975. The automatic stabilizer theory posits that certain features of fiscal policy can automatically stabilize the economy without requiring active government intervention. It assumes that progressive income taxes, unemployment benefits, and welfare programs adjust automatically in response to economic conditions. Proponents of automatic stabilizers argue that these mechanisms effectively stabilize the economy by moderating changes in consumer spending and government revenues. They believe that progressive tax systems, which collect more revenue during economic booms and less during downturns, help maintain stability without the need for discretionary fiscal policy changes. Opponents of the theory may argue that automatic stabilizers could potentially create disincentives, such as extended unemployment benefits discouraging individuals from seeking work. Critics might also express concerns about the strain on government budgets during economic downturns when welfare spending increases and tax revenues decline. While the automatic stabilizer theory doesn't have a singular propounded in the same way Keynes, it supported by economists who emphasize the importance of these built-in stabilizing mechanisms in managing economic cycles more smoothly.

### **Empirical Literature**

Ejinkonye et al (2024) assessed the fiscal policy and unemployment nexus in Nigeria using time series data covering 1990 to 2021. The test results showed that: GCE had a coefficient of 3.84 and a probability of 0.9893; GRE had -0.000481 coefficient and a probability of 0.6365; GED had 0.000584 coefficient and a probability of 0.1292 while GTR had 0.002070 coefficient and a probability of 0.0000.

Alhaj (2023) investigate the impact of fiscal policy tools on unemployment rates in Jordan during the period 1986-2019. The results for the first model clarified that the increase in aggregate government expenditure causes unemployment rates to decline in the short and long run. On the other hand, the results for the second model showed that the increase in tax revenues increases unemployment rates in the short and long run. Moreover, current government spending has significant negative short and long-run effects on unemployment rates, while capital spending has only a significant negative short-run impact.

Ibrahim (2023) investigates the impact of fiscal policy tools on unemployment rate in Nigeria between 1991 and 2021 using the autoregressive distributed lag model. The study has found the presence of cointegration among the variables. Additionally, taxation was found in the

long-run to have no impact on unemployment rate while government spending in the long-run worsens unemployment largely due to unproductive and wasteful spending. In the short run, both taxation and government spending worsen the unemployment situation in Nigeria. It, therefore, indicates that the tax system in Nigeria may not be very effective over time.

Jitendra (2023) impact of government expenditure, unemployment, inflation, and household consumption on the economic growth of India over the period 1990-2021 has been examined in this paper. The study found that increasing government expenditure has a strong positive influence on the growth of national income and consumption and a negative influence on unemployment in India. The study recommends increasing government expenditure that could accelerate economic growth and create employment opportunities that also have a positive impact on improving consumption. Results indicate that inflation significantly depresses economic performance in India because of uncertainty and reduces investment, employment, and consequently output and consumption level. Unemployment has not significantly impacted the real GDP in India. Investment in physical capital and human capital has significantly promoted economic performance in India because investment in human capital improves the productivity of the labor forces and hence increases output and investment in physical capital increases the amount of capital per unit of labor and these have the potency of increasing productivity per worker.

Chukwuemeka (2022) investigated the impact of fiscal policy on unemployment rate in Nigeria. Time series data spanning from 1991 to 2020 which were sourced from the Central Bank of Nigeria (CBN) statistical bulletin and the World Development Indicators (WDI). The long run result of the study showed that there is a positive and significant impact between total expenditure (TEXP) and unemployment rate in Nigeria but a negative and significant impact between non-oil revenue (NOR) and unemployment rate in Nigeria. The long run result showed that there is no relationship between total public debt (TDBT) and unemployment rate in Nigeria while the short run result showed that total public expenditure has a positive and significant impact on unemployment rate while non-oil revenue has a negative and significant impact on unemployment rate in Nigeria. Shadi (2020) estimate the effects of Government spending on unemployment in Jordan for the period 1990 to 2019. By using the ARDL co-integration test we found a negative and statistically significant long-run relationship between government spending and the unemployment rate in Jordan. The study also noticed that, in the short-run, government spending has a positive and significant impact on unemployment.

Udeze et al (2020) examine the impact of fiscal policy on urban unemployment in Nigeria. Specifically, the study investigated the impact of government spending, government revenue, fiscal deficit and public debt on urban unemployment in Nigeria. Using time series spanning from 1981 to 2018, the study estimated generalized linear model (GLM). The results obtained show that capital expenditure and government revenue have significant negative impact on urban unemployment in Nigeria. Also, recurrent expenditure and fiscal deficit were found not to exert significant impact on urban unemployment within the period. However, public debt reinforces unemployment in urban centres in Nigeria. Onodugo et al (2017) making use of a

regression model with annual data from 1980 to 2013, empirically determined the impact of public sector expenditures (CEXP and REXP) together with private sector investment (PINV) on unemployment (UNEMP) in Nigeria. Capital expenditure and private sector investment both in the medium to long-run were found to serve as catalyst towards reduction of unemployment, while recurrent expenditure was not statistically strong enough to do same.

Dear and Khalil (2017) ascertain if government development expenditures can cause to reducing unemployment rates in different provinces? The present study in term of purpose is applied and in term of nature is causal-correlational with the type of the mixed data Research. The study period is 1998-2013. The results revealed that Government development expenditures have a significant negative effect on the unemployment rate in the province. Also, all logarithmic models on large and small provinces for the government development expenditures on large provinces a negative coefficient 0.049 is obtained which is significant at 5% probability level and in small provinces negative coefficient of 0.07 is obtained which is significant at 5% probability level.

Unal (2015) focuses on the effects of fiscal policy in Netherlands analyzed in a VAR context. Fiscal shocks are found to involve significant impacts on GDP, unemployment rate, consumption and investment. In this regard, Keynesian effects are observed. In addition, the results suggest that unemployment rises in response to a fiscal contraction whereas it falls following a fiscal expansion. When government spending increases output increases; when total net taxes increase output falls. A social security tax innovation also leads to a rise in unemployment rate. Moreover, the results indicate that the social security taxes is a more effective tool compared to total net taxes for policy-makers in Netherlands in terms of GDP and its private components. Enueshike et al (2021) examined the effect of tax revenue on unemployment in Nigeria from the period between 1994 to 2020. The finding show corporate taxes and Value Added Tax has a positive and significant effect on unemployment in Nigeria, while Customs and Excise Duties have a negative effect and significantly affect unemployment in Nigeria.

### **Gaps and Value Addition**

Consequently, this research paper reviewed a large body of relevant prior work on fiscal policy, in relation to unemployment. Despite the mixed and occasionally contradictory results, research by Jitendra (2023); and Dear and Khalid (2017), all came to the same conclusion that fiscal policy measures such as oil revenue, non-oil revenue, government expenditure and debt reduces or slow down unemployment significantly. On the other hand, according to Ejinkonye et al (2024); submitted that fiscal policy measures via oil revenue, non-oil revenue, government expenditure and debt reduces is insignificant to have any influence on unemployment during the period. In contrasts, this paper discovered that some of earlier studies conducted by Alhaji (2023); Ibrahim (2023); Chukwuemeka (2022); Enueshike et al (2021); Shadi (2020); Udeze et al (2020); Onodugo et al (2017); and Unal (2015) reported that fiscal policy tools such as tax revenue, government expenditure are positive in some cases and negative in other times but statistically significant to impact unemployment. It was also found that previous studies either proxy fiscal policy with government expenditure, tax revenue or non-tax revenue. None of the

prior studies holistically substitute fiscal policy with domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue, and tax revenue. Therefore, this study will be an addition to existing literature by including domestic debt, external debt, capital expenditure, recurrent expenditure, oil revenue, and tax revenue to capture fiscal policy in a single study. This points to a hole in the existing literature.

### Methodology

Secondary data for this article came from the World Bank's development indicators and the Central Bank of Nigeria's (CBN) statistics bulletin; the research methodology used was ex-post facto. In the context of this study, this data source is deemed trustworthy and reliable. There will be thirty-two (31) years of data, spanning the years 1991 to 2022. To represent fiscal policy, we used the following proxies: domestic debt (DDT), external debt (EDT), capital expenditure (CXE), recurrent expenditure (RXE), oil revenue (ORV), and tax revenue (TR). Unemployment (UNE) is used as the dependent variable.

### Model Specification

This study's model is an adaptation of Gbadebo *et al.* (2018) when investigating the effect of government policy on price stability. Their model was;

$$UNE = f(TAX, GEX, DIN, FDI, CON) \quad (1)$$

Where; UNE is unemployment rate, *Tax* is government tax revenue; *GEX* is government spending;

*DIN* is domestic investment; *FDI* is foreign direct investment; and *CON* is private consumption expenditure during the years of study.

Thus, the researcher adjusted the model to include more factors in order to accomplish the goal of this study. Domestic debt (DDT). External debt (EDT), oil revenue, (ORV), and tax revenue (TR) are all part of this set. The following is a statement of the new enlarged model:

$$UNE = f(DDT, EDT, CXE, RXE, ORV, TR, POR) \quad (2)$$

$$UNE = \beta_0 + \beta_1 DDT + \beta_2 EDT + \beta_3 CXE + \beta_4 RXE + \beta_5 ORV + \beta_6 TR \quad (3)$$

$$UNE_t = \beta_0 + \beta_1 DDT_t + \beta_2 EDT_t + \beta_3 CXE_t + \beta_4 RXE_t + \beta_5 ORV_t + \beta_6 TR_t + \mu_t \quad (4)$$

Where:

UNE = Unemployment, DDT = Domestic Debt, CXE = Capita Expenditure, RXE= Recurrent Expenditure, ORV = Oil Revenue, TR = Tax Revenue,  $\mu$  = Error term,  $\beta_0$  = Constant and  $\beta_1$  to  $\beta_6$  = Parameter Estimates. The expectations are:  $\beta_3, \beta_4, \beta_5$  and  $\beta_6 < 0$ ,  $\beta_1$ , and  $\beta_2 > 0$  suggesting that, the sign of  $\beta_3, \beta_4, \beta_5$  and  $\beta_6$  are by theory expected to have a negative relationship with unemployment, since increase in CXE, RXE, ORV and TR will create demand for labor in construction, engineering, and related sectors. This direct employment generation helps reduce unemployment rates by providing job opportunities to workers in Nigeria, while  $\beta_1$  and  $\beta_2$  is expected to have a positive relationship with poverty rate.

### **Description of Variables in the Model**

i. **Unemployment (UNE):** This signifies the inability of individuals who are willing and able to work to secure suitable employment opportunities within an economy. For developing countries, the consequences of unemployment are profound and multifaceted. High unemployment rates hinder economic growth by reducing aggregate demand and consumption levels. This leads to underutilization of resources and limits the overall production capacity of the economy. As a result, countries may struggle to achieve sustainable economic expansion and improve living standards for their populations. Unemployment is the dependent variable and is measured in US\$.

ii. **Domestic Debt (DDT):** This refers to the total amount of money that a country's government owes to creditors within its own borders. It includes government bonds, Treasury bill, and other debt instruments issued by the government to finance budget deficits or other expenditures when tax revenues are insufficient. Domestic debt impact unemployment primarily through economic channels such as the crowding out effect, fiscal policy constraints, investor confidence, and macroeconomic stability. For instance, when governments borrow domestically, they compete with the private sector for available funds. This competition will drive up interest rates, making it more expensive for businesses to borrow money for investments and expansions. As a result, businesses may reduce their hiring or postpone expansion plans, leading to higher unemployment rates. This paper therefore hypothesized that domestic debt will be positively related to unemployment. Domestic debt is measured in billions of Naira annually.

iii. **External Debt (EDT):** This refers to the total amount of money that a country's government owes to foreign creditors and international financial institutions. It typically includes loans, bonds, and other financial instruments borrowed from abroad to finance various projects and budget deficits. The impact of external debt on unemployment can be significant. High levels of external debt can lead to substantial debt servicing burdens, where a large portion of government revenue is allocated to repay loans and interest rather than being invested in productive sectors that create jobs. This situation can constrain government spending on social programs and infrastructure development, which is crucial for employment generation. Additionally, high external debt can undermine investor confidence and economic stability. It will lead to currency depreciation, higher borrowing costs, and reduced foreign investment inflows. These factors can dampen economic growth, limit job creation, and exacerbate unemployment rates. By implication, increase in external debt is expected to have a positive effect on unemployment. External debt will be measured in billions of Naira annually.

iv. **Capital Expenditure (CXE):** This represents government spending on long-term investments in physical infrastructure, such as roads, bridges, schools, hospitals, and other public facilities. Capital expenditure have pivotal impact on unemployment. When governments allocate funds to capital projects, they create demand for labor in construction, engineering, and related sectors. This direct employment generation helps reduce unemployment rates by providing job opportunities to workers. Additionally, infrastructure



development can attract private sector investments, further stimulating economic activity and job creation. Therefore, an inverse relationship is expected between capital expenditure and unemployment. Capital expenditure is measured in billions of naira annually.

v. **Recurrent Expenditure (RXE):** This refers to regular and repetitive government spending on day-to-day operational costs and current expenses, such as salaries, wages, pensions, utilities, and maintenance of existing infrastructure and services. The impact of recurrent expenditure on unemployment is indirect and multifaceted. On one hand, recurrent expenditure supports public sector employment by finding salaries and wages for government employees, including teachers, healthcare workers, police officers, and civil servants. Consequently, this study believed that recurrent expenditure on social programs, such as education, healthcare, and social welfare, plays a crucial role in human capital development and poverty alleviation. Investments in these areas enhance the skills and productivity of the workforce, thereby reducing unemployment over the long term. Therefore, a negative relationship is expected between recurrent expenditure and unemployment. Recurrent expenditure in this study is measured in billions of Naira annually.

v. **Oil Revenue (ORV):** This refers to the income generated by a country from the extraction, production, and export of crude oil and petroleum products. It constitutes a significant portion of government revenue in many oil-producing countries, include Nigeria. The impact of oil revenue on unemployment can be understood through several channels: Oil revenue provides governments with substantial financial resources, which can be allocated towards various sectors and projects aimed at promoting economic growth and employment. For instance, governments can invest in infrastructure development, such as roads, ports, and energy facilities, which creates job directly in construction and indirectly in related sectors. It also enables governments to finance social programs and public services, including education, healthcare, and social welfare. It is believed that oil revenue will be negatively to unemployment. Oil revenue is measured in billions of Naira annually.

vi. **Tax Revenue (TR):** This refers to the funds collected by governments from various sources, including individuals, businesses, and other entities through taxation. Tax revenue serves as a crucial component of government finances, enabling the funding of public expenditures and the implementation of fiscal policies aimed at promoting economic stability and growth. In the context of unemployment, tax revenue impacts the economy in several ways, Firstly, it provides governments with the financial resources needed to invest in infrastructure projects, education, healthcare, and social welfare programs. These investments directly create employment opportunities in sectors such as construction, education, and healthcare services, thereby contributing to a reduction in unemployment. This means that there will a negative relationship between tax revenue and unemployment Tax revenue is measured in billions of Naira annually.

## **Empirical Data Analysis**

### **Unit Root Test**

In order to minimize false regression, the research used the Augmented Dickey Fuller (ADF) unit root test to determine the order of integration of the variables under consideration. This helped in selecting the proper technique.

**Table 1: Unit Root Test Using Augmented Dickey Fuller (ADF)**

Variables	Levels		First Difference		Order of Integration	P-value
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value		
LUNE	-3.234529	-2.963972			1(0)	0.0277
LDDT	-2.132672	-2.960411	-4.023012	-2.963972	1(1)	0.0042
LEDT	-1.05370	-2.963972	-3.876639	-2.963972	1(1)	0.0060
LCXE	-1.285439	-2.960411	-5.627755	-2.963972	1(1)	0.0001
LRXE	-1.499271	-2.960411	-7.541504	-2.963972	1(1)	0.0000
LORV	-.491628	-2.960411	-5.333008	-2.963972	1(1)	0.0001
LTR	-2.476081	-2.960411	-5.47507	-2.963972	1(1)	0.0001

**Source:** Author Computation 2024\* Level of significance at 5%

This study employs the Augmented Dickey-Fuller (ADF) unit root tests to check the order of integration of the variables and the results are presented in Table 1. The results of Augmented Dickey-Fuller (ADF) showed that the variables are integrated in different order or a combination of I(0) and I(1) series. The ADF result revealed that LUNE was stationary at levels 1(0) while, LDDT, LEDT, LCXE, LRXE, LORV and LTR, are stationary after first differencing 1(1). This condition makes the Autoregressive Distributive Lag (ARDL) Bounds test approach to co-integration appropriate for investigating the long-run relationship among these variables.

**Table 2: ARDL Bound Test**

Test Statistics	Value	K
F-statistics	2.542044	6
<b>Significance</b>	<b>I (0)</b>	<b>I(1)</b>
10%	2.12	3.23
5%	2.45	3.61
2.5%	2.75	3.99
1%	3.15	4.43

**Source:** Authors Computation 2024

Table 2 shows that the variables are related to one another over the long term, as the F-statistic of 2.542044 is greater than the critical values of the lower but less than upper bounds. We conclude that there is no long-term association and accept the alternative hypothesis. This indicates that the unemployment in Nigeria is not related to fiscal policy over the long term. Therefore, the study estimate the short-run relationship between fiscal policy and unemployment below.

**Table 3:** ARDL Short-run Result (LUNE)

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	-1.689683	0.269624	-6.266804	0.0082
D(LDDT)	0.855273	0.195204	4.381442	0.0020
D(LDDT(-1))	-0.590877	0.15153	-3.906534	0.0298
D(LDDT(-2))	-0.366714	0.158406	-2.315032	0.1039
D(LEDY)	0.063079	0.032074	1.966663	0.1439
D(LEDY(-1))	0.013508	0.028351	0.476457	0.6663
D(LEDY(-2))	-0.042888	0.023150	-1.852633	0.1610
D(LCXE)	-0.154274	0.036861	-4.185292	0.0249
D(LCXE(-1))	-0.001327	0.031054	-0.042730	0.9686
D(LCXE(-2))	0.052039	0.028191	1.845962	0.1621
D(LRXE)	0.092162	0.080621	1.143154	0.3359
D(LRXE(-1))	0.091596	0.073218	-1.251011	0.2996
D(LRXE(-2))	-0.025284	0.071090	-0.355660	0.7456
D(LORV)	0.685545	0.169528	4.043843	0.0272
D(LORV(-1))	-0.477360	0.203604	-2.343857	0.1009
D(LORV(-2))	0.117408	0.155373	0.755651	0.5048
D(LTR)	-0.705170	0.198035	-3.560461	0.0378
D(LTR(-1))	-0.680335	0.269693	2.522632	0.0860
D(LTR(-2))	-0.241708	0.192952	-1.252686	0.2911
Ecm (-1)	-1.322592	0.201968	-6.548506	0.0072
Adj R <sup>2</sup> = 0.688346, F-stat = 4.254903 (0.015504), DW = 2.123751				

**Source:** Authors computation 2024

The coefficient estimates for the error correction term, ECM (-1) has a negative value and is significant at the 0.05 level. It suggests that the model will reach long-run equilibrium at a rate of 24% every year. This means that a yearly adjustment speed of 24% may fix the mistake from the previous year. The independent variables (LDDT, LEDT, LCXE, LRXE, LORV, & LTR) explain 69% of the total variance in the dependent variable (LUNE), according to the corrected R-Square (R<sup>2</sup>) value. As a whole, the model is noteworthy since the F-statistic is significant at the 5% level of significance. Without serial correlation, the model would not work, according to the Durbin-Watson statistics of 2.123751, which is close to 2.

Table 3 displays the model's short-run outcome. A positive logarithm of domestic debt (LDDT) of (+0.855273) was seen in the current, year periods when the log value of the unemployment (LUNE) was used as a surrogate for fiscal policy in Nigeria. This means that the log value of the unemployment (LUNE), would fall by approximately 0.86% for every unit increase in the logarithm of domestic debt (LDDT) in Nigeria. Domestic debt and unemployment log value correlate statistically ( $p=0.0020$ ). Economic theory predicts this outcome. The log value of the unemployment is likely to rise in response to an increase in logarithm of domestic debt. Using the log value of the unemployment (LUNE) in Nigeria over the current and previous year, the log value of external debt (LEDT) have a positive value of +0.063079 and +0.013508. If the log value of external debt (LEDT) in Nigeria increases by one unit, the log value of the unemployment (LUNE), would rise by about 0.06% and

0.01%%. Based on the p-value of 0.1439 and 0.6663, it can be concluded that the log value of external debt is insignificantly related to the log value of unemployment. Economic theory supports this outcome. The predicted outcome is that the log value of the unemployment rises in response to an increase in the external debt.

As a surrogate for macroeconomic variable in Nigeria in the current year, the log value of the unemployment (LUNE) is negative (-0.154274) when applied to the logarithm value of capital expenditure (LCXE). This means that the log value of the unemployment (LUNE), which is a component of macroeconomic variable, would decline by about 0.015% for every unit rise in the log value of the capital expenditure (LCXE) in Nigeria. The correlation between the logarithm of the recurrent expenditure and the logarithm of the unemployment is statistically significant ( $p=0.0249$ ). Economic theory predicts this outcome. As the capital expenditure increases, the log value of the unemployment is anticipated to fall due to increase in job creation and income generation.

Furthermore, as a surrogate for macroeconomic variable in Nigeria in the second year, the log value of the unemployment (LUNE) is negative (-0.025284) when applied to the logarithm value of recurrent expenditure (LRXE). This means that the log value of the unemployment (LUNE), which is a component of macroeconomic variable, would decline by about 0.03% for every unit rise in the log value of the recurrent expenditure (LRXE) in Nigeria. The correlation between the logarithm of the recurrent expenditure and the logarithm of the unemployment is statistically insignificant ( $p=0.7456$ ). Economic theory predicts this outcome. As the capital expenditure increases, the log value of the unemployment is anticipated to increase due to increase in recurrent expenditure. As a surrogate for macroeconomic variable in Nigeria in the current year, the log value of the unemployment (LUNE) is positive (+0.685545) when applied to the logarithm value of oil revenue (LORV). This means that the log value of the unemployment (LUNE), which is a component of macroeconomic variable, would increase by about 0.69% for every unit rise in the log value of the oil revenue (LORV) in Nigeria. The correlation between the logarithm of the oil revenue and the logarithm of the unemployment is statistically significant ( $p=0.0272$ ). Economic theory do not predicts this outcome. As the oil revenue increases, the log value of the unemployment is anticipated to fall.

Finally, using the log value of unemployment (LUNE) as a stand-in for macroeconomic variable in Nigeria in the current year, the log value of tax revenue (LTR) is negative (-0.680335). If the log value of tax revenue (LTR) in Nigeria were to rise by one unit, the log value of the unemployment (LUNE), would fall by about 0.68%. The correlation between the log of tax revenue and the logarithm of unemployment is statistically significant ( $p = 0.0378$ ). Economic theory predicts this outcome. The predicted outcome of a rise in tax revenue on poverty rate is that the log value of the unemployment will fall.

## Diagnostic Test

**Table 4:** Ramsey Reset Test, Serial Correlation LM Test and Homoscedasticity Test Results

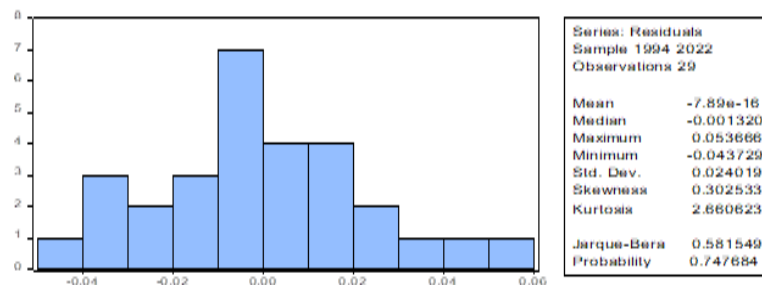
	F-Statistic	Prob-Value
Ramsey Reset Test	4.095336	0.1803
Breusch-Godfrey Serial Correlation LM Test	23.79944	0.1434
Breusch-Pagan-Godfrey Heteroskedasticity Test	0.843590	0.6646

**Source:** Authors computation 2024

From the diagnostic test results in Table 4, we can see that the Ramsey Reset test for linearity found an f-statistic of 4.095336 and a computed p-value of 0.1803, both of which are greater than the 5% (0.05) critical value. Consequently, we can reject the null hypothesis and conclude that the model is correctly specified. The f-statistic is 23.79944 and the Chi-Square probability value is 0.1434, according to the Serial or Autocorrelation Test utilizing the Breusch-Godfrey Serial Correlation LM Test. This proves that there is no serial correlation in the model, as the probability value of around 14% (0.1434) is higher than the crucial value of 5% (0.05).

An f-statistic of 0.843590 and a Chi-Square probability value of 0.6646 were produced by the heteroscedasticity test that used the Breusch-Pagan-Godfrey test. With a probability Chi-square value more than 5% ( $P > 0.05$ ), the results point to the absence of heteroskedasticity in the model. Thus, residuals are homoscedastic, meaning they have a constant variance, an ideal property for regression.

**Fig. 1:** Normality Test



The residuals are normally distributed, as shown in Figure 1, which summarizes the normalcy test. The Jarque-Bara value is 0.581549, and the associated probability value is 0.747684, both of which are more than the 0.05 threshold of significance.

**Fig. 1: Stability**

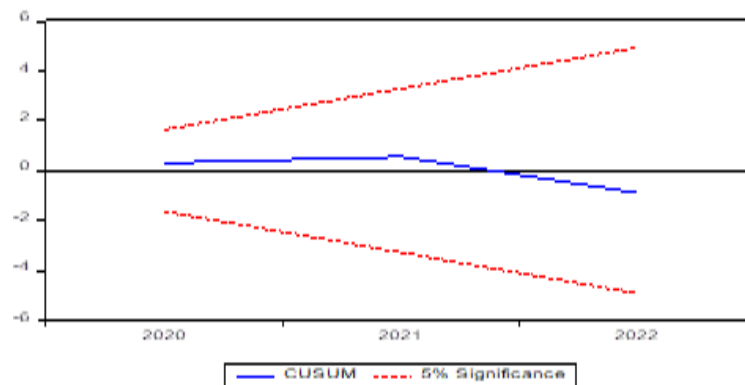


Figure 2, shows summary of the stability test, the result showed that the model is stable. This is evident to the fact that the blue line is in-between the two red (-5 & +5) or less than 0.05 level of significance.

### **Discussion of Findings**

#### **(i) Domestic Debt and Unemployment in Nigeria**

In the current years' time period of the short-run, the results of the regression analysis using the Auto-Regressive Distributive Lag (ARDL) method showed that domestic debt (DDT) has a positive association with unemployment (UNE). It supports economic theory that domestic debt (DDT) and unemployment (UNE) have a positive relationship. The general public foretells that when governments borrow domestically, they compete with the private sector for available funds. This competition will drive up interest rates, making it more expensive for businesses to borrow money for investments and expansions. Also, the result from the p-value shows that domestic debt (DDT) has a statistically significant effect on the UNE. Therefore, the analysis concludes that the null hypothesis that the DDT and UNE are not significantly related is incorrect. The results of this study are not in line with those of earlier research by Ejinkonye et al (2024).

#### **(ii) External Debt and Unemployment in Nigeria**

A positive association between external debt (EDT) and unemployment (UNE) was inferred using regression analysis. It is consistent with economic theory that external debt (EDT) has a positive connection with the unemployment (UNE). Since high levels of external debt can lead to substantial debt servicing burdens, where a large portion of government revenue is allocated to repay loans and interest rather than being invested in productive sectors that create jobs. This situation can constrain government spending on social programs and infrastructure development, which is crucial for employment generation. External debt (EDT) has a statistically insignificant effect on unemployment (UNE), according to the p-value of the finding. Therefore, the analysis concludes that the null hypothesis that the external debt (UNE) and unemployment (UNE) do not have a significant link is true.

**(iii) Capital Expenditure and Unemployment in Nigeria**

Also, in the most recent, years' worth of data, we see that the short-term link between the capital expenditure (CXE) and the unemployment (UNE) is negative. Economists' predictions about a negative correlation between the CXE and the UNE are spot on. The anticipated fall in unemployment is due to increase allocation of funds to capital projects, they create demand for labor in construction, engineering, and related sectors. This direct employment generation helps reduce unemployment rates by providing job opportunities to workers. The result's p-value, however, suggests that the capital expenditure (CXE) has a statistically significant effect on the UNE. Accordingly, the study's results approve the null hypothesis that the correlation between the CX and UNE is not statistically significant. The results of this study are in line with those of earlier research by Alhaji (2023).

**(iv) Recurrent Expenditure and Unemployment in Nigeria**

From what we can see, in the short term, there is an inverse link between the recurrent expenditure (RXE) and the unemployment (UNE) during the last year. Economic theory predicts a positive correlation between the RXE and the UNE. A rise in the recurrent expenditure (RXE) it is believed that recurrent expenditure on social programs, such as education, healthcare, and social welfare, plays a crucial role in human capital development and poverty alleviation. Investments in these areas enhance the skills and productivity of the workforce, thereby reducing unemployment over the long term. Recurrent expenditure (RXE) does not have a statistically significant effect on unemployment (UNE), according to the p-value of the outcome. Since the research found an insignificant link between recurrent expenditure (RXE) and unemployment (UNE), the null hypothesis that there is no relationship between the two is accepted.

**(v) Oil Revenue and Unemployment in Nigeria**

Finally, the estimated model's results showed that a negative oil revenue (ORV) has a short-term effect on the unemployment (UNE) after the current year. Economic theory predicts a negative correlation between the oil revenue (ORV) and the unemployment (UNE). Oil revenue provides governments with substantial financial resources, which can be allocated towards various sectors and projects aimed at promoting economic growth and employment. As a result, governments can invest in infrastructure development, such as roads, ports, and energy facilities, which creates job directly in construction and indirectly in related sectors. Oil revenue (ORV) does have a statistically significant effect on unemployment (UNE), according to the p-value of the finding. It follows that the investigation does not support the null hypothesis that the correlation between the ORV and the UNE is not statistically significant is false.

**(vi) Tax Revenue and Unemployment in Nigeria**

Finally, the estimated model's results showed that a negative tax revenue (TR) has a short-term effect on the unemployment (UNE) after the current year. Economic theory predicts a negative correlation between the tax revenue (TR) and the unemployment (UNE). As a result of the increase in tax revenue government are able to invest in infrastructure projects, education, healthcare, and social welfare programs. These investments directly create

employment opportunities in sectors such as construction, education, and healthcare services, thereby contributing to a reduction in unemployment. Tax revenue (TR) have a statistically significant effect on unemployment (UNE), according to the p-value of the finding. It follows that the investigation supports the null hypothesis that the correlation between the TR and the UNE is not statistically significant is false. The results of this study are not in line with those of earlier research by Ibrahim (2023).

### **Conclusion**

This paper investigated fiscal policy response to unemployment in Nigeria. According to the study's conclusions, unemployment is significantly affected by changes in fiscal policy variables including domestic debt, capital expenditure, oil revenue, tax revenue, etc. Regression analysis on the link between capital expenditure, oil revenue, tax revenue and unemployment found that, in the most recent years' worth of data, capital expenditure, oil revenue, tax revenue and are negatively and significantly correlated with unemployment, whereas external debt and recurrent expenditure are insignificant but positively correlated with unemployment. Lastly, according to the regression results domestic debt is positive and significantly related to unemployment in the current year period.

### **Recommendations**

- i. Federal ministry of finance should review the country's fiscal policies. They should consider adjustments to ensure that domestic debt levels, do not inadvertently exacerbate unemployment.
- ii. Central bank of Nigeria (CBN) should adjust monetary policies to support economic growth and job creation. It can influence interest rate, manage foreign exchange reserves, and implement credit policies that can encourage lending to productive sectors.
- iii. Federal ministry of finance should ensure that fiscal policies prioritize capital expenditure in sectors with employment multipliers such as infrastructure, healthcare, education and agriculture.
- iv. Federal government through the federal ministry of finance should review and streamline recurrent expenditure allocations to prior sector with high employment generation potential
- v. Federal ministry of petroleum should promote policies that attract investment in the oil sector while diversifying into renewable energy and sustainable development projects.
- vi. Finally, the federal ministry of finance budget and national planning should conduct economic analysis, prepare the national budget, and oversee revenue mobilization efforts through taxation.



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