

## Cross-Border Capital Flows and Unemployment in Nigeria: An Auto-Regressive Distributive Lag Approach

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### Keywords

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Remittance,  
Unemployment.

### Abstract

From 1991–2022, this research looks at the data on cross-border capital flows in Nigeria and how it relates to unemployment. The study's data came from World Bank's World Development Indicators and the Statistical Bulletin of the Central Bank of Nigeria. The dependent variable is unemployment, while the proxies for cross-border capital flows are foreign direct investment, foreign portfolio investment, foreign remittance, external reserve, and external debt payment. Unit root tests was ensured by the Augmented Dickey Fuller method, we found that the diagnoses revealed a mixture of  $I(0)$  and  $I(1)$  integration orders; hence, we had to use the Auto-Regressive Distributive lag Model. The bound test result of the model analysis proved that cross-border capital flows do not correlate with unemployment in the long term. Consequently, additional results from the short-run regression showed that unemployment was significantly and negatively correlated with foreign direct investment and external reserves. However, the relationship between foreign portfolio investment and unemployment indicated positive but insignificant relationship in the previous year period while foreign remittance exact a positive and significant impact on unemployment in second year period. Finally, the relationship between external debt service and unemployment is reported to be positive but insignificant both in the current, previous and second year period. Hence, it was concluded that cross-border capital flows had a significant impact on unemployment in Nigeria. It is recommended amongst others that the federal ministry of trade and investment alongside the Nigerian investment promotion commission should work to streamline



*bureaucratic processes, ensure political stability, and strengthen legal and regulatory framework.*

## **I. Introduction**

Cross-border capital flows play a significant role in shaping the economic landscape of countries, worldwide, including Nigeria. These flows involve the movement of funds across international borders, encompassing various financial transactions, investments, and foreign entities. According to Ozigbu (2020), the term "cross-border capital flows" refers to the movement of money, stocks, or bonds from one country to another. Increases in production and employment are possible because nations may use cross-border money to fund greater investment than they can with local resources. Foreign and local investors alike may benefit from expanded access to international markets, which open up new avenues for portfolio growth while mitigating risk.

In recent decades, Nigeria has experienced both inflows and outflows of capital, influenced by global economic trends, commodity prices, exchange rate movements, and domestic policy measures. Nigeria, as an emerging market economy with abundant natural resources and a growing population, has been a recipient of foreign capital inflows in the form of foreign direct investment (FDI), portfolio investment, remittances, and official development assistance. These inflows have contributed to economic growth, infrastructure development, and job creation in sectors such as telecommunications, energy and finance. For example, FDI inflows into Nigeria surged in the early 2000s reaching a peak of \$8.92 billion in 2011, drive by investments in oil and gas, telecommunications, and manufacturing sectors.

However, alongside the benefits, cross-border capital flows also pose challenges for macroeconomic stability in terms of rising unemployment in Nigeria. Fluctuations in capital flows will lead to volatility in exchange rates, interest rates, and asset prices, affecting unemployment, inflation dynamics, and the effectiveness of monetary policy measures. For instance, during periods of large capital inflows, the Nigerian Naira may appreciate, making exports less competitive and contributing to trade imbalances. Conversely, sudden reversals in capital flows can put pressure on the exchange reserves, prompting the Central Bank to intervene in currency markets to maintain stability. For instance, in the mid-2000s, Nigeria saw a surge in FDI inflows, reaching \$6.1 in 2007 driven by investments in oil and gas exploration, telecommunications and banking sectors (NBS, 2022). This influx of capital led to rapid appreciation of the Nigerian Naira, making exports less competitive and contributing to trade imbalances.

However, during the global financial crisis of 2008-2009, Nigeria experienced capital flight and currency depreciation, with FDI inflows declining to \$2.82 billion in 2009 exacerbating exchange rate volatility and inflationary pressures (NBS, 2022). The CBN intervened in currency markets to stabilize the exchange rate but faced constraints due to dwindling reserves, necessitating external borrowing to bolster liquidity. These fluctuations in capital flows highlight the challenges faced by policymakers in managing unemployment situation amidst changing global economic conditions. Additionally, inflationary pressures



mounted, prompting the Central Bank of Nigeria (CBN) to adjust monetary policy to stabilize prices. Moreover, fluctuations in capital flows will influence domestic interest rates, affecting borrowing costs and investment decisions. During periods of capital inflows, domestic interest rates may decline as investors seek higher yields elsewhere, leading to excessive credit expansion and asset price bubbles. Equally, during capital outflows, domestic interest rates may rise as investors demand higher returns, constraining credit growth and economic activity.

Also, Exchange rate movements also reflect the impact of capital flows on unemployment. For example, during the oil boom, the Nigerian Naira appreciated against major currencies, with the USD/NGN exchange rate decreasing from around 150 in 2005 to 120 in 2008. Conversely, during the oil price downturn, the Naira depreciated significantly, reaching over 350 against the US dollar in 2016, it is even worse in 2022 up surging to 425.98 USD/NGN (WDI, 2022). Furthermore, changes in foreign exchange reserves highlight the impact of capital flows on external liquidity and monetary policy flexibility. During periods of capital outflows, foreign exchange reserves may decline sharply, constraining the Central Bank's ability to defend the currency and exacerbating exchange rate volatility. For instance, during the global financial crisis, Nigeria's reserves dropped from over \$50 billion in 2008 to around \$30 billion in 2009, limiting the Central bank's intervention capacity. Inflation trends also reflect the impact of capital flows to price stability. During the mid-2000s oil boom, Nigeria experienced high inflation rates, reaching double digits, driven by increased consumer demand and imported inflation. Conversely, during the oil price downturn, inflation moderated as economic activity slowed and exchange rate pressures eased.

It is against the background that this paper seek to answer the following questions; has increase in foreign direct investment inflows impacted unemployment? Has foreign remittance influenced unemployment? How has external reserve impacted unemployment? To what extent has external debt service discouraged unemployment? How has increase in foreign direct investment outflows eased unemployment? To this end, this paper contributed to the body of knowledge by empirically investigated the impact of cross-border capital flow on unemployment in Nigeria from 1990 to 2022, thereby expanding the scope of the study from what has been done in time past.

## **II. Literature Review**

### **III. Theoretical Framework**

#### **Portfolio Balance Theory**

The portfolio balance theory was originated by James Tobin in 1958 elucidates how investors' portfolio decisions influence exchange rates. At its core, the theory assumes rational investors seeking to maximize returns while minimizing risks. These investors hold diversified portfolios comprising domestic and foreign assets, factoring in expected returns and associated risks in their investment decisions. Proponents of the theory like Markowitz, John Maynard Keynes, Harry Markowitz and Milton Friedman argue that investors allocate their portfolios based on relative expected returns and risks of different assets. When domestic assets for higher returns, leading to domestic currency appreciation to balance the

market. Conversely, when domestic rates are lower, investors seek higher returns abroad, depreciating the domestic currency. Critics such as Eugene Fama, Robert Lucas, and John Cochrane suggest other factors like speculation, government intervention, and market sentiment may sway exchange rates beyond the theory's predictions. They question investors' rationality and information symmetry, highlighting potential deviations from theoretical expectations. In Nigeria, the portfolio balance theory offers insights into exchange rate dynamics. For instance, if the central bank raises interest rates to curb inflation, foreign investors may flock to Nigerian assets, appreciating the Naira. Conversely, political instability or perceived risks may trigger capital outflows, depreciating the Naira.

Thus, policymakers must account for portfolio balance effects when managing exchange rates and formulating monetary policies. While the theory provides a valuable framework, its application to real-world contexts like Nigeria necessitates considering additional factors and empirical evidence for a comprehensive understanding of exchange rate dynamics.

### **Mundell-Fleming Theory**

The Mundell-Fleming theory, developed by economists Robert Mundell and Marcus Fleming in 1962, offers a comprehensive framework for analyzing the interaction between domestic and international macroeconomic factors in an open economy context. At its core, the model integrates the IS-LM framework with the balance of payments equilibrium condition to assess the impact of monetary and fiscal policies, exchange rate regimes, and capital mobility on key macroeconomic variables. Central to the Mundell-Fleming model are several assumptions, including perfect capital mobility, fixed prices in the short-run, a small open economy, exogenous foreign income and prices, and sticky prices and wages. These assumptions provide a simplified framework for analyzing policy trade-offs and macroeconomic dynamics in an open economy setting.

Proponents of the Mundell-Fleming theory such as Paul Krugman, Rudiger Dornbusch, Maurice Obstfeld, Oliver Blanchard etc argue that it offers valuable insights into the macroeconomic implications of different policy choices. Policymakers may evaluate the costs and benefits of pursuing domestic goals like stable production and employment vs. foreign goals like stable currency rates and a balanced balance of payments by looking at both local and global issues. It is impossible, according to the Mundell-Fleming theory, for policymakers to accomplish all three goals independent monetary policy, unrestricted movement of capital, and stable exchange rates at the same time. Instead, policymakers must choose between maintaining exchange rate stability, allowing capital mobility, or pursuing an independent monetary policy, recognizing the trade-offs involved.

Opponents of the Mundell-Fleming theory criticize its assumptions as overly simplistic and not reflective of real-world complexities. For example, perfect capital mobility may not hold true in practice due to capital controls or market imperfections, while the assumption of fixed prices in the short run may not accurately capture dynamic price adjustments. In the context of the Nigerian economy, the Mundell-Fleming theory offers insights into the macroeconomic effects of different policy choices. For example,

policymakers may need to choose between maintaining exchange rate stability by fixing the exchange rate, sacrificing monetary policy independence, or allowing the exchange rate to float freely, exposing the economy to exchange rate fluctuations by preserving monetary policy flexibility.

### **Keynesian Unemployment Theory**

In 1936, John Maynard Keynes proposed the unemployment theory otherwise called Keynesian unemployment theory. The theory posits that unemployment is primarily driven by insufficient aggregate demand in the economy. This theory assumes that when there is not enough demand for goods and services, businesses reduce production, leading to layoffs and higher unemployment. Keynes also believes that prices and wages are strictly downward, meaning they do not adjust quickly to changes in economic conditions which prevents the labour market from clearing and can result in prolonged periods of high unemployment. They argue that changes in aggregate demand have a multiplied impact on the economy, so an increase in government spending can lead to increased income for households, which then spend more, further boosting demand and employment. Consequently, Keynesians advocate for active government intervention to manage economic cycles, believing that fiscal policies (such as increased government spending and tax cuts) and monetary policies (such as lowering interest rates) are necessary to stimulate the economy and reduce unemployment. Proponents of the Keynesian theory like John Maynard Keynes himself, point to the Great Depression as a key example. During the 1930s, many economies experienced severe unemployment despite wages and prices falling. Keynes argued that only government intervention such as the New Deal programs in the United States could boost demand and reduce unemployment. Modern examples include the 2008 financial crisis, during which Keynesian policies were implemented to combat rising unemployment. For instance, the U.S. government enacted the American Recovery and Reinvestment Act of 2009, which included \$831 billion in stimulus spending.

Opponents of the Keynesian theory include monetarists, led by Milton Friedman who argued that Keynesian policies can lead to inflation without reducing unemployment in the long-run. They believed that the natural rate of unemployment determined by market forces cannot be permanently lowered by government intervention. They point to the 1970s stagflation as evidence that Keynesian policies can be ineffective. New classical economists such as Robert Lucas, argue that individuals and firms anticipate the effects of government policies and adjust their behaviour accordingly. Critics also argued that increased government spending can crowd out private investment. If government borrows to finance its spending, it can drive up interest rates, making it more expensive for business to borrow and invest, which can offset the positive effects of fiscal stimulus on unemployment.

## **IV. Conceptual Literature**

### **Cross-Border Capital Flows**

Cross-border capital flows represent the movement of funds across international borders for investment purposes, encompassing various financial transactions such as foreign direct investment, portfolio investment, remittances, loans, and official

development assistance. Examples include foreign companies investing in Nigerian industries, foreign investors purchasing Nigerian government bonds (port-folio investment), Nigerian migrants sending money back home (remittances), and Nigerian banks borrowing funds from international markets (loans). These capital flows impact interest rate stability and the Nigerian economy in significant ways. They influence monetary policy transmission channels, including interest rates, asset prices, and credit availability. For instance, inflows of foreign capital will lower domestic interest rates, stimulate credit growth, and inflate asset prices, while outflows will prompt central banks to adjust policy rates to stabilize exchange rates and manage liquidity conditions.

Exchange rate dynamics affected by cross-border capital flows. Large inflows for foreign capital will appreciate the domestic currency, making exports less competitive and contributing to trade imbalances. Conversely, outflows of capital will lead to currency depreciation, affecting import prices, inflation, and external balances. However, fluctuations in cross-border capital flows will pose challenges, including currency depreciation, inflationary pressures, and balance of payments vulnerabilities. Sudden reversals in these flows can trigger financial market disruptions, affecting investor confidence and economic growth prospects.

### **Unemployment**

People are considered to be unemployed if they are unable to get gainful employment despite their best efforts to do so. The unemployment rate, expressed as a percentage of the total labor force, is a common metric for this. Economic development, poverty levels, social stability, and public financing are just a few of the areas that are adversely affected by unemployment in Nigeria. The unemployment rate in Nigeria, for example, has been climbing over the last several years. The National Bureau of Statistics (NBS) reports that in the fourth quarter of 2020, the unemployment rate in Nigeria jumped from 27.15 percent in the second quarter to 33.33 percent. The economic ramifications of this increase in the unemployment rate are substantial. Reduced economic growth is one of the main effects of excessive unemployment. Lower family earnings caused by unemployment mean less money to spend on products and services. Economic development may be slowed down when demand drops and output levels fall as a consequence. As an example, the COVID-19 epidemic and increasing unemployment dampened economic activity in Nigeria, causing the country's Gross Domestic Product (GDP) growth rate to fall from 2.27% in 2019 to -1.92% in 2020.

Poverty is worsened by unemployment in Nigeria, which puts a lot of people out of work and makes it harder for many households to satisfy their basic necessities. Forty percent of Nigerians, or over 83 million people, are poor, according to the World Bank. High unemployment contributes to this alarming statistics, as it limits people ability to earn a living and support their family. Furthermore, high unemployment can lead to social instability. When large numbers of people particularly young adult are unemployed, there is an increased risk of social unrest and criminal activities. The NBS reported that Nigeria's youth unemployment rate was 42.6% in Q4 2020. This high rate of youth unemployment

possess a significant threat to social cohesion and stability as, disenfranchised youth may resort to crime or become involved in social unrest. Conclusively, high unemployment strains public finances. The government may need to increase spending on social welfare programs to support the unemployment, which can lead to higher budget deficits and increased public debt. In Nigeria, the government has implemented various social intervention programs, such as the N-power program to provide temporary employment and skills training for young people, while these programs are beneficial, they also increase government expenditure.

### **Cross-Border Capitals Flows and Unemployment**

Cross-border capital flows, which encompass investments, loans and remittance moving across national borders, have significant implications for unemployment in Nigeria. For instances, between 2010 and 2020, Nigeria experienced significant fluctuations in foreign direct investment (FDI) inflows reaching a peak of \$8.9 billion in 2011 before declining to \$2.4 billion in 2015 and gradually recovering to \$3.3 billion in 2020 (WDI, 2022). These fluctuations in FDI inflows can impact exchange rates and monetary dynamics, thereby influencing unemployment. Furthermore, portfolio investment flows have been volatile, with notable surges in certain years. For example, portfolio investment inflow surged to \$11.5 billion in 2013, driven by favorable global liquidity conditions and high yields on Nigerian assets. However, these inflows declined sharply to \$3.8 billion in 2015 amid concerns over falling oil prices and economic vulnerabilities. Such fluctuations in portfolio investment can contribute to exchange rate volatility and financial instability, affecting, macroeconomic stability.

Additionally, remittance inflows, which represent a significant source of external financing for Nigeria, have exhibited relative stability over the years but can be susceptible to external shocks. Remittance inflows totaled \$21.7 billion in 2019 and remained relatively resilient amid the COVID-19 pandemic, reaching \$23.8 billion in 2020 (WDI, 2022). However, disruptions in global economic conditions or adverse developments in host countries can affect remittance inflows, which may impact domestic consumption, inflation dynamics, and unemployment. These examples illustrate how cross-border capital flows influence key macroeconomic variables like unemployment in Nigeria. Exchange rate fluctuation driven by capital flows can affect import prices, inflation expectations, and external competitiveness, thereby impacting unemployment. Moreover, the volatility of portfolio investment and remittance flows can pose challenges for monetary policy management, financial stability, and fiscal sustainability.

### **V. Empirical Literature**

The effect of FDI on Nigeria's unemployment rate is examined by Okoli and Callistus (2024). Using dynamic ordinary least squares (DOLS), which removes endogeneity and serial correlation issues, the research used data from 1990 to 2020. The findings demonstrated that foreign direct investment significantly affects both aggregate and urban unemployment rates in Nigeria. The problem of rural unemployment in Nigeria, however, was unaffected by FDI.

Foreign portfolio investment and its effect on Africa's GDP development is the subject of Mlambo's (2022) research from 1995 to 2014. The research used quarterly panel data. The results demonstrated that INT has a good correlation with GDP, whereas portfolio investment has a limited correlation with economic growth. Additionally, the results indicate that EXCH and GDP have a favorable association in the long term. Many believe that slower economic development is the result of the rand's devaluation. The effect of Nigeria's foreign reserves on GDP growth is investigated by Adama et al. (2022). Consequently, the analysis concludes that all of the explanatory factors had a significant role in driving Nigeria's economic development over the long period. In particular, although changes in the exchange rate have a negative effect on growth in the near term, changes in inflation rate (-0.22%), a one period lag of GDP (-0.21%), and foreign reserves (-0.22%) have a considerably beneficial effect on growth.

Youth unemployment, unemployment among individuals without a bachelor's degree, and unemployment among individuals with a master's degree are the three categories of unemployment that Kokotovic and Kurecic (2022) study. The study finds that the main factor lowering the unemployment rate in Croatia is money sent back by workers. It goes on to say that the Czech Republic's unemployment rate is mostly determined by causes at home and the expansion of the overall economy, not by variables involving foreign capital. The study argues that educational investment should reevaluate its relationship to the actual requirements of the labor market and emphasizes how little impact educational spending has on reducing the unemployment rate.

With the reduction of unemployment being a macroeconomic priority for any country, Izuchukwu (2021) examines how remittances from overseas workers affect Nigeria's unemployment rate. It turns out that remittances from overseas have a negative effect on unemployment, and that the relationship between remittances and unemployment is unidirectional and feedback-free. The effect of debt payment on GDP growth was investigated by Efuntade et al. (2021). The facts of the incident were presented by exploring secondary data sources. The secondary data, which spans the years 1990–2020, was retrieved from the debt management office. One of the key findings is that all of the explanatory variables showed signs of co-integration, which means that they all have an effect on the dependent variable over the long run. This suggests that, when handled correctly, working debt servicing can significantly boost a country's economic growth. Muhammad and Kabir (2020) use time-series data from 1985 to 2018 to study how paying off foreign debt affected economic development in Nigeria. Study findings suggest that repaying foreign debt will have a detrimental impact on economic growth over the long term. That is, economic growth slowed as a result of higher external debt payment costs.

In their study, Ihedimmaa and Oparab (2020) examine the potential effects of remittances on Nigeria's unemployment rate. Calibration is performed on data from 1981 to 2019 to identify structural break points and to ensure stationarity in the face of regime changes. An Instrumental Variable Regression model was estimated and it was discovered that remittance positively and substantially influences unemployment, even though the data



was found to have been impacted by regime changes and stagnant in levels. Remittances to dependents in Nigeria, however, are associated with a decline in unemployment. The correlation between FDI and GDP growth was investigated by Otapo and Adekunle (2020). Therefore, this essay set out to examine the ever-changing nature of the connection between FDI and GDP growth in Nigeria from 1980 to 2018. Evidence from short-term empirical estimates indicated that domestic savings significantly reduced GDP. Foreign investment, domestic savings, government expenditure, and market capitalization are the factors that drive the long-term patterns in gross domestic product creation in Nigeria, according to the research. This is supported both empirically and conceptually.

The effect of FDI on Nigeria's unemployment rate from 1986 to 2018 was studied by Oloruntuyi (2020). The purpose of this study is to analyze the relationship between FDI and economic growth in Nigeria, as well as to assess the effects of FDI on unemployment in the country, both in the short and long term. The research found that FDI, UEM, and INF are at initial difference, whereas EXCH and GRRGDP are stable at level. A long-term link between uem, ggrgdp, fpi, exchr, infl, and FDI may be described This area is thought to have one of the highest unemployment rates in the world, so Mustafa and Azizun (2020) study six Middle Eastern and North African nations Egypt, Jordan, Lebanon, Morocco, Tunisia, and Turkey to determine how FDI affects unemployment. In the long term, the data demonstrated that FDI lowers the unemployment rate, both for men and women. The study's findings also show that foreign direct investment (FDI) and different types of unemployment do not have a short-term causal link, but that FDI and exports do have a bidirectional causal relationship according to the three economic models.

The potential effects of remittances on Nigeria's unemployment rate are the subject of Ihedimma and Opara (2020) research. Calibration is performed on data from 1981 to 2019 to identify structural break points and to ensure stationarity in the face of regime changes. An Instrumental Variable Regression model was estimated and it was discovered that remittance positively and substantially influences unemployment, even though the data was found to have been impacted by regime changes and stagnant in levels. Remittances to dependents in Nigeria, however, are associated with a decline in unemployment. Fiscal policy should include remittances as a means to reduce unemployment, according to the report. From 1986 to 2018, Adofu and Adegoriola (2020) analyze the correlation between FII and GDP growth in Nigeria. Gross Domestic Product (GDP) was negatively and insignificantly affected by the present value and one period lag of Foreign Portfolio Investment (FPI), according to the findings. The relationship between GDP and FPI is unidirectional. The relationship between GDP and FPI is causal. According to the research, Nigeria's economy requires comprehensive transformation if it wants to win back the trust of foreign investors, given the current degree of volatility in FPI entering the country.

The effect of FIIs on GDP growth in Nigeria between 1986 and 2017 (Ezeanyeji and Ifeako, 2019). The findings demonstrated that FIIs significantly contribute to GDP growth in Nigeria. Between 1988 and 2017, Adewunmi (2019) looked at the relationship between FPI and GDP growth in Nigeria. The empirical research concluded that the exchange rate is the

sole variable that significantly and positively affects economic development in Nigeria, whilst foreign portfolio investment and inflation rate do not. All right, Johnny et al. From 1980 to 2015, the effect of FDI on Nigeria's unemployment rate was studied (2018). The research included the unemployment rate as an explained variable in addition to two explanatory variables, namely foreign direct investment and capital creation. Findings showed that capital production had a positive and statistically significant correlation with the unemployment rate in Nigeria, whereas FDI had a negative and negligible correlation. The effect of FDI on joblessness in developing market economies was studied by Bayar and Sasmaz (2017). The empirical results showed that unemployment, foreign direct investments, and domestic investments all worked together. In addition, FDI had a beneficial long-term effect on unemployment, but local investments had the opposite effect. To what extent does FII Impact Job Creation in Nigeria? Elekwa et al. (2016) investigate. Portfolio investment has a positive and substantial long-term effect on employment growth, according to a single equation model using reduced form specification and data from 1980 to 2014.

Akinboyo et al. (2016) investigates the connection between the development of the Nigerian economy and the country's foreign reserves. A one-way causality linking foreign reserves to economic development has been confirmed by an analysis of the data from 2000:Q1 - 2013:Q2 using the modified Wald statistic of Toda and Yamamoto (1995). Both the short and long range perspectives of economic development in Nigeria are driven by foreign reserves, according to the research. The effect of foreign investment on economic development in the host nation is studied by Claudiu (2015). When looking at equities and investment fund instruments, the research finds that both direct and portfolio investments affect long-term economic development.

### **Gaps and Value Addition**

Accordingly, this research discourse reviewed a large body of relevant earlier works on cross-border capital flows, in relation unemployment. Notwithstanding the mixed and sometimes inconsistent results, research by Kokotovic and Kurecic (2022); Izuchukwu (2021); Muhammad and Kabir (2020); Otapo and Adekunle (2020); Oloruntuyi (2020); Mustafa and Azizun (2020) all established and concluded that components of cross-border capital flows such as foreign direct investment, remittance, external debt servings have the most prominent role in decreasing the unemployment as a stand-in for macroeconomic indicators. On the other hand, according to Mlambo (2023); Adama et al (2022); Efuntade et al (2021); Ihedimma and Adekunle (2020); Ihedimma and Opara (2020); Ezeanyej and Ifeako (2019); Bayer and Sasmaz (2017); Elekwa et al (2016); Akinboyo et al (2016); and Claudiu (2015) submitted that unemployment is worse-off under cross-border capital flows through foreign direct investment, remittance, external debt servings.

Additionally, this paper discovered that some of earlier studies conducted by Adofu and Adegioriola (2020); Adewunmi (2019); and Johnny et al (2018) in their study reported that components of cross-border capital flows via as foreign direct investment, remittance, external debt servings does not have any effect on unemployment. It was also found that

previous studies focused on foreign direct investment, external reserve, or remittance with respect to unemployment or economic growth using foreign direct investment, remittance, external debt servings to capture the explanatory variable. None of the previous studies holistically looked at the impact of cross-border capital flows using foreign direct investment, foreign portfolio investment, remittance, external debt service and external reserve on unemployment. Therefore, this study will be an addition to existing literature by including external debt service and external reserve to the explanatory variables which was not accounted for in previous literature. This suggests a hole in literature.

## VI. Methodology

The World Bank's development indicators and central bank of Nigeria statistical bulletin served as the secondary data source for this report, which used an ex-post facto research approach. This data source is considered trustworthy and dependable for this investigation. From 1991 to 2022, a total of thirty-two years' worth of data will be available. The following proxies were used to depict the movement of money across international borders: remittances, foreign portfolio investment, foreign direct investment inflow, external debt servicing, and external reserve. We used unemployment (UNE) as the dependent variable.

### Model Specification

Kokotovic and Kurecic (2022) research on the effects of FDI on various forms of unemployment in open economies is the basis for the model used in this study. The one they used was;

$$UNED = f(I, RMT, FDI, TR, GDP-PC, ES) \quad (1)$$

Where:

UNED = Unemployment, I = Inflation, FDI, = Foreign Direct Investment, TR = Tourism Revenue, GDP-PC = Gross Domestic Product per Capita, and ES = Education Spending

In order to achieve the purpose of this study, the researcher made adjustments to the model to incorporate additional elements. This compilation includes the Foreign Portfolio Investment (FPI), the External Debt Service (EDS), and the External Reserve (EXR). All three of these things together constitute what is known as cross-border capital flows. An assertion made by the newly expanded model is as follows:

$$UNE = f(FDII, FPI, RMT, EDS, EXR) \quad (2)$$

$$UNE = \beta_0 + \beta_1 FDII + \beta_2 FPI + \beta_3 RMT + \beta_4 EDS + \beta_5 EXR \quad (3)$$

$$UNE_t = \beta_0 + \beta_1 FDII_t + \beta_2 FPI_t + \beta_3 RMT_t + \beta_4 EDS_t + \beta_5 EXR + \mu_t \quad (4)$$

Where:

UNE = Unemployment, FDII = Foreign Direct Investment, FPI = Foreign Portfolio Investment, RMT = Remittance, EDS = External Debt Service, EXR = External Reserve,  $\mu$  = Error term,  $\beta_0$  = Constant and  $\beta_1$  to  $\beta_5$  = Parameter Estimates.

In theory, it is expected that  $\beta_1$ , and  $\beta_2$  will have a positive relationship with the commodity price index, since an increase in MPR and CRR will limit financial institutions from creating funds, leading to a higher cost of capital and, consequently, an increase in commodity price. On the other hand,  $\beta_3$ ,  $\beta_4$ , and  $\beta_5$  are expected to have a negative

relationship with commodity price. Here are the expectations:  $\beta_1$ , and  $\beta_2 > 0$ ,  $\beta_3$ ,  $\beta_4$ , and  $\beta_5 < 0$ .

## Description of Variables in the Model

### 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\$.

### Foreign Direct Investment Net Inflow (FDII)

When people, organizations, or governments from another nation put money into a company's activities or assets in another country, this is called foreign direct investment. It follows that a rise in FDI would boost capital creation, which in turn will encourage more spending on things like infrastructure, IT, and manufacturing capacity. That is why the authors of this article postulated that FDI flows into economies will fuel their expansion thereby leading to reduction in unemployment. The FDI inflow is a surrogate for cross-border capital flows and is expressed as a percentage of GDP. This paper expected a negative relationship between FDII & UNE.

### Foreign Portfolio Investment (FPI)

The term "foreign portfolio investment" (FPI) describes capital flowing from one nation to another, whether it be from private persons, organizations, or even governments. This suggests that as a result of an uptick in FPI, the liquidity of financial markets will rise, facilitating the purchase and sale of assets. Consequently, the authors of this article anticipate an inverse correlation between FPIs and UNE. The US dollar-measured foreign portfolio investment has served as a Stand-in for cross-border capital flows in this research.

### Remittance (RMT)

When people who work overseas send money back to their home countries, it's called remittances. These transactions may take place informally as well as via more official channels like banks or money transfer agencies. For many families in poor nations, like Nigeria, remittances provide a substantial income. Remittances provide additional income households, which can help support consumption. This increased consumption can stimulate local demand for goods and service, potentially leading to job creation in various sectors, such as retail construction, and services. Higher demand for local products and services can encourage businesses to expand and hire more employees, thereby reducing unemployment. Therefore, this paper hypothesized remittance will have a negative impact on unemployment. Remittance is used to proxy cross-border capital flows and is measured in US\$.



**External Reserve (EXR)**

Foreign currency assets are those owned by the central bank of a nation. A few examples of these reserves include gold, special drawing rights (SDRs), foreign currencies, and positions held by the International Monetary Fund (IMF). As a cushion against economic shocks, they are used to back obligations, sustain the national currency, and control exchange rates. The a priori expectations between external reserves and unemployment are based on several key assumptions. Adequate external reserves contribute to economic stability, which is crucial for maintaining investor confidence and promoting economic growth. When a country has substantial external reserves, it can manage its currency more effectively, reducing exchange volatility. A stable exchange rate environment encourages foreign and domestic investment by providing a predictable business climate. As a consequence, this study expects external reserve to have a negative impact on unemployment. External reserve is measured in US\$ and used to proxy cross-border capital flows.

**External Debt Service (EDS)**

This refers to the payments a country must take to cover the principal and interest on its external debt, which is debt borrowed from foreign lenders. These payments are usually scheduled periodically and must be made in foreign currencies. Repaying a large amount of foreign debt detracts from a country's ability to engage in economic projects or provide social services, putting a pressure on the budget. Government investment in infrastructure, schools, hospitals, and other areas vital to economic growth and job creation would be curbed as a result. This article is based on the assumption that there would be a positive relationship between unemployment and foreign debt service. The measurement of cross-border capital flows is done by looking at external debt service, which is expressed in US dollars.

**Empirical Data Analysis**

**Unit Root Test**

Researchers used the Augmented Dickey Fuller (ADF) unit root test to establish the proper sequence of variables to be integrated in order to reduce the occurrence of false regression. Choosing the right method becomes easier with this information.

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	-2.234529	-2.963972			1(0)	0.0272
LFDI	-2.627557	-2.963972	-6.445599	-2.971853	1(1)	0.0000
LFPI	-2.412638	-2.960411	-5.192141	-2.971853	1(1)	0.0002
LRMT	-2.079433	-2.986225	-2.629419	-1.956406	1(1)	0.0061
LEDS	-2.708945	-2.963972	-4.657527	-2.963972	1(1)	0.0008
LEXR	-4.294824	-2.960411			1(0)	0.0020





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

Table 1 displays the results of the Augmented Dickey-Fuller (ADF) unit root tests, which were used in this study to verify the order of variables' integration. The variables were found to be integrated in either a different order or a combination of the I(0) and I(1) series, according to the results. At level 1(0), the ADF result showed that LFDII, LFPI, LEDS, and LEDS are stationary; nevertheless, LUNE and LEXR become stationary after first differencing 1(1). To study the long-term connection between these variables, the Autoregressive Distributive Lag (ARDL) Bounds test method of co-integration is suitable under these conditions.

Table 2: ARDL Bound Test

Test Statistics	Value	K	
F-statistics	3.680139	5	
<b>Significance</b>	<b>I (0)</b>	<b>1(1)</b>	
10%	2.26	3.35	
5%	3.62	3.79	
2.5%	2.96	4.18	
1%	3.41	4.68	

Source: Authors Computation 2024

The long-term relationship between the variables is shown in Table 2 by the fact that the F-statistic, at 3.680139, is higher than the critical values of the lower but lower than the upper bound. The lack of a correlation over the long run leads us to adopt the null hypothesis. This proves that long-term capital movements across borders have little effect on Nigeria's unemployment. Consequently, the analysis concludes that there is a no long-run correlation between cross-border capital flows and unemployment rates below.

Table 3: ARDL Short-run Result (LUNE)

Variable	Coefficient	Std. Error	t-Statistic	Prob
<b>C</b>	0.174947	0.041037	4.263189	0.0053
D(LFDII)	-0.024302	0.012901	-1.883784	0.1086
D(LFDII(-1))	-0.004663	0.012093	-0.385591	0.7131
D(LFDII(-2))	0.029180	0.009871	-2.956189	0.0254
D(LFPI)	0.000155	0.005748	0.404346	0.9793
D(LFPI(-1))	-0.011553	0.005821	-1.984823	0.0944
D(LFPI(-2))	0.002473	0.006115	0.404346	0.7000
D(LRMT)	0.019671	0.017572	1.119446	0.3058
D(LRMT(-1))	0.021447	0.013121	1.634623	0.1532
D(LRMT(-2))	0.045714	0.011071	4.129082	0.0062
D(LEXR)	0.005766	0.019670	0.293131	0.7793
D(LEXR(-1))	-0.030986	0.020850	-1.486126	0.1878
D(LEXR(-2))	-0.055204	0.007117	-3.225104	0.0180
D(LEDs)	0.001551	0.000966	1.605328	0.1593
D(LEDs(-1))	0.002859	0.001262	2.264820	0.0641



D(LED <sub>S</sub> (-2))	0.000717	0.001003	0.715582	0.5041
Ecm (-1)	-0.204752	0.047628	-4.299015	0.0051
Adj R <sup>2</sup> = 0.566508, F-stat = 3.205308 (0.027872), DW = 2.287186				

Source: Authors computation 2024

At the 0.05 level of significance, the coefficient estimate for the error correcting component, ECM (-1) has a negative value. This finding is consistent with the model's predicted annual rate of 20% convergence toward long-run equilibrium. This suggests that the error from the prior year may be corrected with an annual adjustment speed of 20%. As per the corrected R-Square (R<sup>2</sup>) value, 57% of the total variation in the dependent variable (LUNE) can be explained by the independent variables (LFDII, LFPI, LRMT, LEXR & LED<sub>S</sub>). The model stands out when taken as a whole due to the substantial F-statistic at the 5% level of significance. Durbin-Watson statistics of 2.287186, which is close to 2, indicate that the model would not function without serial correlation.

The model's short-run results are shown in Table 3. The subsequent year periods showed a positive level of foreign direct investment (LFDII) of (+0.029180) when the log value of unemployment (LUNE) was used as the dependent variable. If the logarithm of FDI influx into Nigeria were to grow by one unit, the dependent variable known as the log value of unemployment (LUNE) would decrease by around 0.04% and 0.004%, respectively. A significant correlation (p=0.0254) exists between the log value of unemployment and FDI. This result is not predicted by economic theory. Higher levels of foreign direct investment are associated with lower log unemployment rates. The logarithm of foreign portfolio investment (LFPI) likewise has a negative value of -0.011553 when using the log value of unemployment (LUNE) as the dependent variable over the prior year. A 0.01% drop in the dependent variable, the log value of unemployment (LUNE), would result from a one-unit rise in the log value of foreign portfolio investment (LFPI) in Nigeria. There is no statistically significant relationship between foreign portfolio investment and the log value of unemployment (p = 0.0944). Economic theory lends credence to this result. An increase in foreign portfolio investment is expected to lead to a decrease in the log value of unemployment.

When applied to RMT, the log value of unemployment (LUNE) is positive (+0.045714), serving as a substitute for a macroeconomic indicator in the next year. If the log value of foreign remittances to Nigeria (LRMT) were to grow by one unit, the dependent variable, unemployment (LUNE), would see an increase of about 0.05%. There is a statistically significant association (p=0.0062) between the logarithm of unemployment and the logarithm of foreign remittances. This result is not predicted by economic theory. It is expected that the log value of unemployment would decrease as foreign remittances grow. This is because an increase in remittances, gift items, and products and services will contribute to an improvement in living standards and the creation of jobs. When applied to the log value of external reserve (LEXR), the log value of unemployment (LUNE) is negative (-0.055204), standing in for the dependent variable in the next year. As a result, for every one unit increase in Nigeria's log value of external reserves (LEXR), the



dependent variable, the log value of unemployment (LUNE), would fall by about 0.05%. With a p-value of just 0.0180, there is a statistically significant relationship between the logarithms of the external reserve and unemployment. This is what economists expect to happen. The expectation is that the excess of exports over imports will lead to a gain in foreign currency profits, which in turn will boost income, living standards, and the creation of jobs, causing the log value of unemployment to decrease as the external reserve grows. In conclusion, the logarithm of external debt service (LEDS) similarly has positive values of +0.001551, +0.002859, and +0.000717 when the log value of unemployment (LUNE) is used as a dependent variable for the present, previous, and next years. The dependent variable, log value of unemployment (LUNE), would increase by about 0.01% if the log value of external debt service (LEDS) in Nigeria were to increase by one unit. The results are supported by p-values of 0.1593, 0.0641, and 0.5041. The relationship between the log value of unemployment and external debt service is shown to be inconsequential. Economic theory lends credence to this result. As the external debt service rises, the expected result is that the unemployment rate's logarithm will rise as well.

**Diagnostic Test**

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

	F-Statistic	Prob-Value
Ramsey Reset Test	0.040028	0.8493
Breusch-Godfrey Serial Correlation LM Test	5.166838	0.0779
Breusch-Pagan-Godfrey Heteroskedasticity Test	0.855263	0.6404

Source: Authors computation 2024

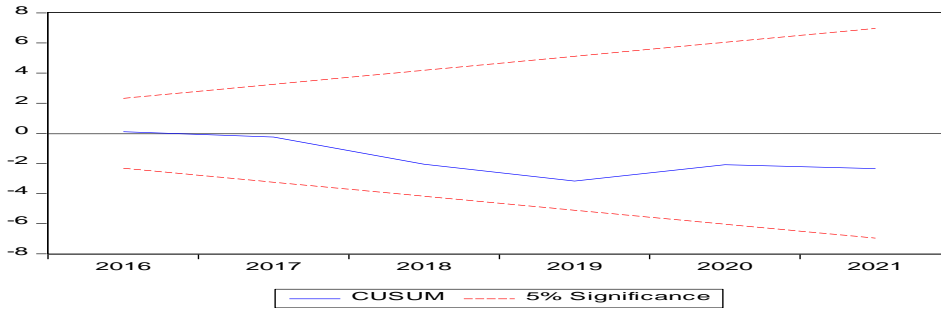
Ramsey Reset test for linearity yielded an f-statistic of 0.040028 and a calculated p-value of 0.8493, both above the 5% (0.05) threshold value, as shown in the diagnostic test results in Table 4. So, the model is well stated, and we can reject the null hypothesis. Based on the results of the Serial or Autocorrelation Test using the Breusch-Godfrey Serial Correlation LM Test, the f-statistic is 5.166838 and the Chi-Square probability value is 0.2203. Since the 5% cutoff is less than 8% (0.0779), this demonstrates that the model does not include serial correlation.

Heteroscedasticity testing using the Breusch-Pagan-Godfrey test yielded an f-statistic of 0.855263 and a Chi-Square probability value of 0.6404. There does not seem to be heteroskedasticity in the model, as shown by a probability Chi-square value more than 5% (P >0.05). This means that the residuals are perfect for regression since they are homoscedastic, or have a constant variance.

Figure 1: Stability Test

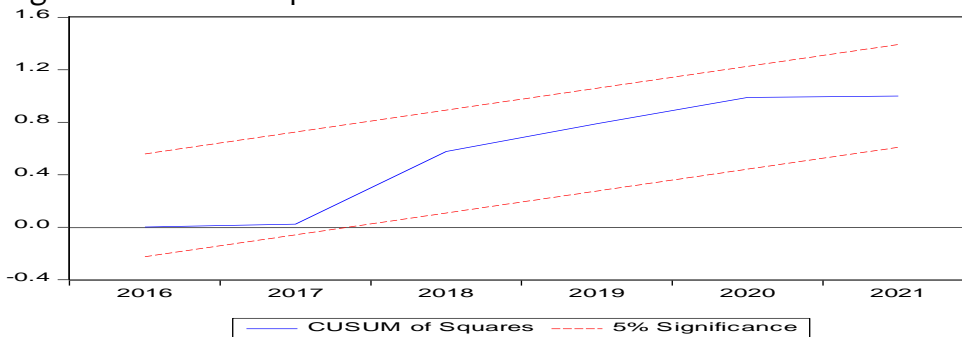






The stability test, summarized in Figure 1, confirmed the model's stability. The fact that the blue line is between the two red lines (-5 and +5) or is less than the significance threshold of 0.05 makes this very clear

Figure 2: Cusum of Squares



From the figure above, the dotted red lines also represented the critical bounds. The figure also shows that the sum of squares of the recursive residuals of the UNE is relatively stable especially for the period of cross-border capital flows. Most especially for the period under investigation UNE has remained within the critical bounds. The results imply that the null hypothesis of no stability of the short-run UNE can be rejected at 5% significance level.

### Normality Test

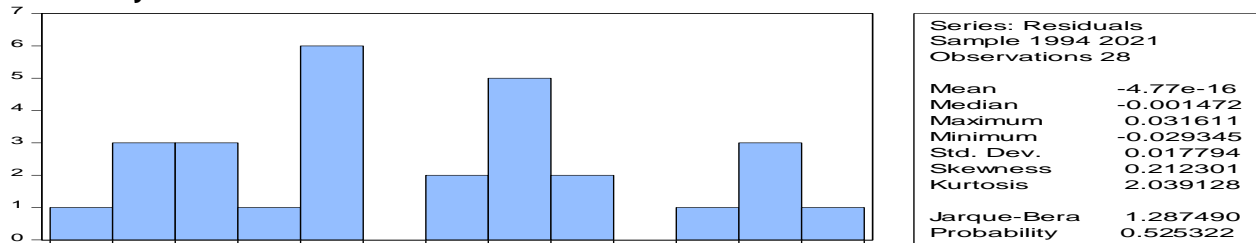


Figure 1 outlines the normality test and shows that the residuals follow a normal distribution. Both the related probability value of 0.525322 and the Jarque-Bara value of 1.287490 are more than the 0.05 significance level.

### Discussion of Findings

#### Foreign Direct Investment Inflow and Unemployment in Nigeria

Regression study employing the Auto-Regressive Distributive Lag (ARDL) approach in the next years' time frame of the short-run revealed that UNE is negatively associated with foreign direct investment inflow (FDII). It lends credence to the idea that a negative

correlation exists between UNE and FDII, or foreign direct investment. The population at large anticipates that a rise in FDI would boost the economy, which will lower unemployment rates via better infrastructure, more job opportunities, and enhanced skill sets. There is a statistically significant relationship between UNE and FDII, as shown by the p-value finding. So, it turns out that the FDII and UNE are strongly connected, contrary to the null hypothesis. Consistent with previous studies, this one finds the same thing as Mustafa and Azizun (2020) and Kokotovic and Kurecic (2022).

### **Foreign Portfolio Investment and Unemployment in Nigeria**

Regression study suggested a negative correlation between UNE and foreign portfolio investment (FPI). Since a rise in FPI brings extra money into the economy, supporting activities and development, the idea that FPI has a positive link with unemployment (UNE) does not align with economic theory. The stock market is a great place for international investors to put their money because as stock prices go up, both local investors and firms benefit. With this windfall, the economy will be able to take off, which may mean fewer people out of work. Based on the p-value of the study, foreign portfolio investment (FPI) does not have a statistically significant impact on unemployment (UNE). The results show that there is no statistically significant relationship between foreign portfolio investment (FPI) and unemployment (UNE), supporting the null hypothesis. This study's findings are consistent with those of previous work by Ezeanyeji and Ifeako (2019).

### **Foreign Remittance and Unemployment in Nigeria**

Data from the next year also shows a positive short-term correlation between RMT and UNE, or unemployment. It turns out that economists were wrong to assume a negative relationship between the RMT and the UNE. The expected decline in the unemployment rate is due to the influx of finances from loved ones. The p-value of the finding, on the other hand, indicates that the RMT significantly affects the UNE. Since there is a statistically significant link between the RMT and UNE, the findings of the research reject the null hypothesis. Consistent with previous work by Ihedimma and Opara, this investigation found the same thing (2020s).

### **External Reserve and Unemployment in Nigeria**

The relationship between the external reserve (EXR) and the unemployment rate (UNE) during the last year seems to be inverses in the near run. According to economic theory, the EXR and UNE should be inversely related. It is believed that an increase in the external reserve (EXR) would improve liquidity in the economy, which will lead to more economic activity and, ultimately, a decrease in unemployment. The p-value of the result indicates that EXR has a statistically significant impact on UNE. We reject the null hypothesis that there is no association between external reserve (EXR) and unemployment (UNE) because the study discovered a strong correlation between the two. Adama et al. (2022) and Akinboyo et al. (2016) found different things in their previous studies.

### **External Debt Service and Unemployment in Nigeria**

Last but not least, the findings of the estimated model demonstrated that UNE is temporarily affected by a positive external debt service (EDS) in the current, prior, and second year. There should be a positive relationship between UNE and the external debt service (EDS), according to economic theory. U.S. unemployment rates are likely to rise in response to a rise in the country's foreign debt. The p-value indicates that the relationship between EDS and UNE is not statistically significant. In light of this, we may say that the evidence does not support the null hypothesis that there is no statistically significant link between the EDS and the UNE. This study's findings corroborate those of Muhammad and Kabir (2020) prior work.

## VII. Conclusions and Recommendations

Various cross-border capitals flows factors, such as FDI inflow, remittances, portfolio, reserves, debt servicing, etc., have a substantial impact on macroeconomic stability, the research found. Using data from the second year, regression analysis revealed a negative and statistically significant correlation between the inflow rate of foreign direct investment and unemployment, while the correlation between foreign portfolio investment and unemployment was found to be weaker. It was also shown that, during the subsequent brief interval, there was a positive and statistically significant association between unemployment and foreign remittances. In addition, there is a positive correlation between unemployment and the second year of the short-term external reserve. Last but not least, the regression findings show a short-term positive but insignificant correlation between the payment of foreign debt and unemployment.

### Recommendations

*The federal ministry of investment alongside the Nigerian investment promotion commission should work to streamline bureaucratic processes, ensure political stability, and strengthen legal and regulatory framework.*

*It would be wise for the CBN and the Federal Ministry of Finance to implement.*

*Policies that encourage long-term foreign investments rather than short-term speculate investments. Measures such as tax incentives for long-term investors and regulations to discourage rapid capital withdrawal can stabilize FDP flows and make them more beneficial for the economy.*

*It would be wise for the CBN and the federal ministry of finance to institute measures that promote the useful use of remittances. This could include providing financial literacy programs to educate recipients on how to invest remittances in income-generating activities, such as small businesses and entrepreneurial ventures.*

*To boost economic development and employment, the CBN and the federal ministry of finance should focus on strategically using foreign reserves creation. This could include deploying a portion of the reserves into infrastructure projects, which can create jobs and improve the overall business environment.*

*The federal ministry of finance and the debt management office (DMO) should prioritize debt restructuring and refinancing to manage the debt service burden more effectively by negotiating better terms and longer maturities, Nigeria can reduce its*

*immediate debt service obligations, freeing up resources for investments in job-creating sectors.*

## References

- Adama, J. I., Ohwofasa, B., & Onabote, A. (2022). Empirical assessment of the impact of external reserves on economic growth in Nigeria. *Investment Management and Financial Innovations*, 19(2), 295-305.
- Adewunmi, K. A. (2019). Foreign portfolio investment and Nigerian economic growth. *Journal of Management Technology*, 5(1), 141-156 .
- Adofu, I., & Adegioriola, A. E. (2020). Foreign portfolio investment and economic growth in Nigeria (1986-2018). *Nigerian Defence Academy Journal of Economics and Finance*, 4(1), 90 – 104.
- Akinboyo, L. O., Omotosho, B. S., Oladunni, S., & Owolabi, O. H. (2016). External reserves and economic growth in Nigeria: An empirical investigation. *West African Financial and Economic Review*, 14(1), 53-78.
- Bayar, Y., & Sasmaz, M. U. (2017). Impact of foreign direct investments on unemployment in emerging market economies: A co-integration analysis. *International Journal of Business and Economic Sciences Applied Research (IJBESAR)*, 10(3), 90-96.
- Claudiu, T. A. (2015). Do foreign direct and portfolio investments affect long-term economic growth in central and Eastern Europe? *Procedia Economics and Finance*, 23(7), 507 – 512.
- Efuntade, A. O., Olaniyan, N. O., & Efuntade, O. O. (2021). The impact of debt service in stimulating economic growth in Nigeria: Mediating on its role on public sector financial management. *Acta Universitatis Danubius*, 17(1), 219 – 230.
- Elekwa, P., Aniebo, C., & Ogu, C. (2016). Does foreign portfolio investment affect employment growth in Nigeria? *Journal of Economics and Sustainable Development*, 7(12), 89 - 100.
- Ezeanyeji, C. I., & Ifeako, M. (2019). Foreign portfolio investment on economic growth of Nigeria: An impact analysis. *International Journal of Academic Management Science Research (IJAMSR)*, 3(3), 24-36.
- Ihedimaa, G. I., & Oparab, G. I. (2020). Remittance inflow and unemployment in Nigeria. *Iranian Economic Review*, 26(3), 693-705.
- Izuchukwu, C. O. (2021). Impact of international remittances on unemployment in Nigeria. *Journal of Economics and Sustainable Development*, 12(1), 31 – 50.
- Johnny, N., Timipere, E. T., Krokeme, O., & Markjackson, D. (2018). Impact of foreign direct investment on unemployment rate in Nigeria (1980-2015). *International Journal of Academic Research in Business and Social Sciences*, 8(3), 57–69.

- Kokotovic, F., & Kurecic, P. (2022). Examined the impact of foreign capital flows on different types of unemployment in small open economies: A regression analysis of Croatia and the Czech Republic. Free Press.
- Mlambo, C. (2022). The impact of international portfolio investment on economic growth: the case of selected African states. *International Journal of Research in Business and Social Science*, 11(10), 151-159.
- Muhammad, A. M., & Kabir, A. (2020). Impact of external debt servicing on economic growth in Nigeria: An ARDL approach. *International Journal of Business and Technopreneurship*, 10(2), 257-268.
- Mustafa, A., & Azizun, N. (2020). The impact of foreign direct investment on unemployment: Panel data approach. *Emerging Science Journal*, 4(4), 78 – 90.
- Okoli, K. C., & Callistus, T. O. (2024). Assessing the impact of foreign direct investment on unemployment rate in Nigeria. *Asian Journal of Economics, Business and Accounting* 24(4), 260-277.
- Oloruntuyi, A. O. (2020). The impact of foreign direct investment on unemployment rate in Nigeria (1986-2018). *International Journal of Economics, Business and Management Research*, 4(06), 231 – 243.
- Otapo, T. W., & Adekunle, O. E. (2020). Dynamic effects of foreign portfolio investment on economic growth in Nigeria. *Financial Markets, Institutions and Risks*, 4(3), 125 – 138.
- Ozigbu, J. C. (2020). Cross-border capital flows and poverty incidence in Nigeria. *International Journal of Economics, Commerce and Management United Kingdom*, 8(5), 278 – 300.