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## Financial deepening and unemployment in Nigeria

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### Abstract

This study thoroughly examined the impact of financial deepening on the unemployment rate in Nigeria from 1981 to 2023. Data on unemployment rate, private sector credit as a percentage of GDP, broad money supply as a percentage of GDP, and interest rate were sourced from Nigeria's apex bank. The Autoregressive Distributed Lag - ARDL method was used to analyze the short-term and long-term relationships among these variables. Results showed that in both short and long terms, private sector credit as a percentage of GDP has a negative and significant relationship with the unemployment rate in Nigeria, indicating that it helps reduce unemployment. On the other hand, broad money supply as a percentage of GDP has a positive but insignificant relationship with unemployment, suggesting a detrimental effect. Interest rate was found to have a negative but insignificant association with unemployment. The study recommended promoting credit expansion to the private sector to stimulate investment and lower unemployment. Efforts should be made to improve access to credit and strengthen creditor rights. The government is advised to implement policies that strengthen the financial system and introduce new reforms. These policies should support Nigerian businesses in a fair and effective manner.

**Keywords:** Financial Deepening; Unemployment Rate; ARDL; Nigeria.

### 1. Introduction

Financial deepening means that financial institutions and markets in an economy become bigger, accessible, and more efficient. It is often measured by looking at indicators like the ratio of broad money supply to Gross Domestic Product (GDP), credit to the private sector, and financial inclusion levels (World Bank, 2020). A strong financial system helps collect savings, use resources wisely, and support investments, all of which are important for the economy to grow. The link between financial deepening and employment is grounded in financial intermediation theory and endogenous growth theory. Financial deepening makes it easier for small and medium businesses to get loans, which leads to more investment and more job opportunities (George-Anokwuru, 2026; McKinnon, 1973; Shaw, 1973). According to the McKinnon-Shaw hypothesis, when financial systems become more open, people save more and invest more, which helps the economy grow and create jobs.

Furthermore, financial deepening affects unemployment through various interconnected channels that link the financial sector to actual economic activities. These channels determine whether advancements in financial development lead to job creation or, in some instances, job losses. For example, financial deepening reduces unemployment by enhancing access to finance for businesses. As financial institutions grow and become more efficient, they offer more credit to the private sector, principally small and medium enterprises (SMEs). This allows firms to invest in productive activities, expand their operations, and employ more workers. In Nigeria, increased credit to the private sector, facilitated by the Central Bank of Nigeria's policies, has the potential to boost employment if the credit is used effectively (McKinnon, 1973; Shaw, 1973). However, if credit is directed toward non-labour-intensive sectors, the impact on employment may be minimal.

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A more robust financial system promotes savings by enhancing financial instruments and institutions. These savings are subsequently directed towards investments in infrastructure, manufacturing, and services, which can create employment opportunities. According to endogenous growth theory, sustained investment fueled by financial development leads to long-term job creation (Romer, 1990). In Nigeria, insufficient investment in labour-intensive sectors has diminished the effectiveness of this mechanism. Efficient financial markets generally reduce interest rate spreads, making borrowing more affordable for businesses. Lower interest rates encourage companies to take loans, increase production, and hire more workers. However, in Nigeria, high lending rates continue to exist despite financial sector reforms, restricting firms' access to affordable credit and hindering employment generation (World Bank, 2020).

Moreover, financial deepening fosters inclusion through microfinance institutions, mobile banking, and digital financial services. As more individuals gain access to banking services, they are able to launch small businesses, invest in education, and participate in income-generating activities, which in turn help reduce unemployment. While the expansion of financial inclusion efforts in Nigeria, supported by the Central Bank of Nigeria, has improved access, notable gaps persist, especially in rural areas (Demirguc-Kunt et al., 2018). A well-functioning financial system channels funds toward the most productive sectors of the economy, which are typically labour-intensive. Efficient resource allocation boosts productivity and job creation. Nevertheless, inefficiencies in financial intermediation, such as inadequate risk assessment and a preference for low-risk investments, often lead to funds being allocated to less productive uses, thus constraining employment growth (Sanusi, 2012).

Financial development stimulates economic growth by increasing capital buildup and productivity. Economic growth, in turn, leads to job creation through heightened labour demand. However, in Nigeria, growth has often been "jobless," implying that increases in GDP do not correspond with proportional employment gains (George-Anokwuru, 2026; National Bureau of Statistics, 2022). This undermines the effectiveness of this transmission mechanism. A robust financial system can reduce volatility, enhance the transmission of monetary policy, and build investor confidence. Stability encourages investment and business expansion, which leads to job creation. Nonetheless, macroeconomic instability in Nigeria, marked by inflation, exchange rate fluctuations, and policy uncertainty, has curtailed the positive effect of financial deepening on employment (Uddin et al., 2014).

Even though there have been ongoing changes in the financial sector meant to make Nigeria's financial system stronger, unemployment is still increasing, causing big problems for society and the economy. For instance, in 2015, the share of people without jobs in the workforce went up to 10.4%, which was higher than the 7.8% in 2014. By 2016, this figure increased even additional to 14.2% (George-Anokwuru & Okowa, 2021; CBN, 2017). The total number of people working also increased from 76.9 million at the end of December 2015 to 80.7 million by the end of December 2016, which is a 4.9% rise. The unemployment rate then climbed from 14.2% in the fourth quarter of 2016 to 18.8% in the third quarter of 2017 (George-Anokwuru & Okowa, 2021; CBN, 2018). This shows that making the financial system deeper has not led to more job creation.

One reason for this gap is that financial growth in Nigeria is mainly focused on big industries like oil and gas, which don't create many jobs (Aiyedogbon & Ohwofasa, 2012). Also, getting money is not the same for everyone, especially for small and medium businesses, which are important for creating jobs. High interest rates, strict rules for getting loans, and not having enough property to offer as security make it hard for businesses to get credit (World Bank, 2020). This makes it difficult for companies to grow and hire more people. Moreover, the way financial systems work isn't very efficient, so money isn't always used in areas that can create jobs. This means that even with more money, there isn't more work available. Other problems like bad roads, weak government systems, and unstable economy also stop financial growth from helping more people find jobs (Sanusi, 2012). These issues make financial policies less effective and reduce their chance of creating more jobs.

The available research on how financial deepening affects unemployment in Nigeria does not give a clear answer. Some studies suggest that financial deepening helps reduce unemployment by encouraging more economic activity (Osuka et al., 2019), while others believe that poor credit distribution and lack of access to financial services might reduce its impact on employment (Uddin et al., 2014). This disagreement shows that more research is needed. Because of this, this study looked at how financial deepening has influenced unemployment in Nigeria between 1980 and 2023. Introduction, literature review, techniques and materials, results and discussion, and suggestions make up the five sections of the paper.

## 2. Literature review

### 2.1. Conceptual Clarification and Stylised Issues

#### 2.1.1. Financial Deepening

Financial deepening means that financial institutions, markets, and tools in an economy become bigger, accessible, and work better. It shows how well the financial system can collect savings and use them for useful investments. Some common ways to measure this are the ratio of broad money (M2) to GDP and the percentage of credit given to private businesses compared to GDP (George-Anokwuru, 2026; Shaw, 1973; Levine, 2005). In a financially deep economy, people and businesses have easy access to financial services that help them grow and operate better. Key parts of financial deepening are more banking services, better access to loans, and a wider range of financial tools. As the financial system grows, more people and companies can get loans, save money, and invest. This makes it easier for money to move from those who have it to those who need it for business or growth (Levine, 2005). These things are important for helping the economy grow and create jobs.

Moreover, financial deepening supports economic growth by fostering capital accumulation, enhancing investment efficiency, and stimulating innovation. Financial institutions provide the necessary funds to productive sectors, enabling businesses to expand operations and boost output. Empirical studies indicate a significant positive connection between economic growth and financial development (King & Levine, 1993). Economic growth subsequently generates employment opportunities and helps reduce unemployment.

Financial deepening affects employment by influencing investment and business expansion. Access to credit allows firms to increase production, adopt new technologies, and hire more workers. Small and medium-sized enterprises (SMEs), which are key employment generators, especially benefit from enhanced access to finance. Therefore, a well-developed financial system can drive job creation and income generation (Arestis & Demetriades, 1997; George-Anokwuru, 2026).

The connection between financial deepening and unemployment works through different ways. First, when more credit is available, it helps businesses invest in areas that need a lot of workers. Second, when people have better access to financial services, they can start their own businesses, which create jobs for themselves and others. Third, when the financial system works better, it becomes cheaper for companies to get money, which makes them more likely to grow and hire more people. All these things together help lower unemployment when the financial system is running smoothly (Levine, 2005). In Nigeria, financial deepening has gotten better over time, especially after changes like the Structural Adjustment Programme (SAP) and the consolidation of the banking sector. Signs like the amount of credit given to private businesses and the total money in circulation have gone up, showing that the financial system is growing (Central Bank of Nigeria, 2015). However, not all parts of the economy have benefited equally from this growth.

Despite progress in financial deepening, unemployment remains a major issue in Nigeria, indicating that the link between financial development and employment is not straightforward. A significant share of credit is typically allocated to capital-intensive or short-term commercial ventures rather than labour-intensive industries that create jobs. High interest rates and restricted access to finance for small and medium enterprises (SMEs) further limit job creation (World Bank, 2020). Consequently, financial deepening has not effectively reduced unemployment. The limited effect of financial deepening on unemployment in Nigeria is due to structural issues such as low financial inclusion, inadequate infrastructure, and inefficient credit distribution. To improve the employment outcomes of financial deepening, policies should focus on enhancing access to finance for SMEs, lowering borrowing costs, and strengthening financial institutions. Encouraging investment in labour-intensive sectors is also vital for realizing employment benefits from financial development.

A close review of Nigeria's financial development indicators in 2011 reveals a mixed performance. The ratio of broad money supply (M2) to nominal GDP declined to 36.4 percent, down from 39.5% at the end of 2010. Despite this contraction, liquidity in the money market expanded by 24.7% by the close of 2011, largely driven by increased issuance of commercial papers, treasury bills, and government bonds. Interest rates on fixed-income securities, including government bonds and treasury bills, were higher in 2011 compared to the previous year. For most of the year, the yield curve maintained a normal upward slope but inverted toward the end, indicating a tightening monetary stance by the Central Bank of Nigeria. Overall, activities on the Nigerian Stock Exchange reflected a mixed performance (George-Anokwuru, 2026; CBN, 2011).

In the year 2013, financial development indicators in Nigeria reflected mixed outcomes. The ratio of broad money supply (M2) to nominal GDP declined slightly to 19.3 percent relative to its 2012 level. Similarly, the banking system's capacity to extend credit, measured by claims on the private sector as a share of GDP (CP/GDP), fell to 20.4 percent from 20.9 percent in the preceding year. In contrast, total money market assets expanded by 10.0 percent, driven largely by increases in Nigerian Treasury Bills, bankers' acceptances, commercial papers, and Federal Government bonds. Returns on fixed-income securities declined during the year, while most money market rates trended downward, reflecting improved liquidity conditions in the banking system. Meanwhile, the Nigerian Stock Exchange recorded a positive performance, with key market indicators exhibiting upward trends (CBN, 2013).

In 2014, financial sector developments also exhibited mixed performance. Financial intermediation efficiency improved, as indicated by a decline in the currency outside banks (COB) to M2 ratio from 9.2 percent to 7.6 percent. The M2 to GDP ratio rose to 21.0 percent, representing a 1.7 percentage point increase over 2013. The ratio of claims on the private sector to GDP (CPS/GDP) increased marginally to 20.1 percent from 20.0 percent in the previous year. Total money market assets grew by 12.4 percent, largely due to increases in Treasury Bills, bankers' acceptances, commercial papers, and Federal Government bonds. However, yields on fixed-income securities rose, influenced by tight monetary policy and excess liquidity conditions that dampened market activity. Money market rates remained relatively stable for most of the year but increased towards year-end following a 100 basis point rise in the benchmark interest rate to 13.0 percent. The Nigerian Stock Exchange, however, recorded a downturn, with most key indicators declining (CBN, 2014).

By 2015, financial sector performance continued to present mixed signals. The M2 to GDP ratio remained unchanged at 21.0 percent. Credit provision improved modestly, as the overall credit-to-GDP ratio rose to 22.7 percent from 21.4 percent in 2014. Nonetheless, private sector credit as a share of GDP declined slightly to 19.7 percent, largely due to increased government borrowing that crowded out private sector access to credit. Financial intermediation efficiency improved marginally, with the COB/M2 ratio declining to 7.3 percent from 7.6 percent. However, overall financial savings weakened. Money market assets increased significantly by 22.1 percent, driven by higher volumes of bankers' acceptances, certificates of deposit, and Federal Government bonds. Capital market performance remained mixed, as market capitalization rose slightly by 0.8 percent, while the All-Share Index, trading volume, and value declined (CBN, 2015).

In 2016, the financial sector recorded another mixed performance. The M2 to GDP ratio increased to 23.1 percent from 21.3 percent in 2015, indicating some improvement in financial deepening. Credit to GDP also rose to 26.7 percent, while private sector credit increased to 21.2 percent of GDP. However, financial system efficiency weakened, as reflected in a rise in the COB/M2 ratio to 7.8 percent. Although total savings (including quasi-money) increased slightly, their share of GDP declined marginally. Foreign currency deposits accounted for a larger share of savings, rising to 4.5 percent of GDP. Money market assets expanded significantly by 35.5 percent, driven mainly by increased issuance of Treasury Bills and government bonds. In contrast, capital market performance declined, with market capitalization and the All-Share Index falling by 4.8% and 6.2%, respectively. While trading volume increased slightly, the value of transactions dropped sharply (CBN, 2016).

In 2017, the financial sector experienced a general downturn. The M2 to GDP ratio fell to 20.3 percent from 23.2 percent in 2016. Similarly, aggregate credit to GDP declined to 23.3 percent, while private sector credit dropped to 19.2 percent of GDP. Despite this, financial intermediation efficiency improved, as the COB/M2 ratio decreased to 7.1 percent. Money market assets contracted sharply by 61.1 percent, largely due to reductions in Treasury Bills and Federal Government bonds. Conversely, the Nigerian Stock Exchange recorded strong growth, with market capitalization and the All-Share Index increasing significantly, alongside notable rises in trading volume and value (CBN, 2017).

In 2018, financial sector performance remained mixed. The ratio of M3 to GDP increased to 26.2 percent, indicating a slight improvement in financial depth. Financial savings also increased, while intermediation efficiency improved as the COB/M2 ratio declined to 5.7 percent. However, credit conditions weakened, with total credit to GDP falling to 21.6 percent and private sector credit declining to 17.8 percent. The ratio of banking sector assets to GDP also decreased. Money market assets contracted slightly due to reductions in bankers' acceptances and Treasury Bills. The banking structure remained stable, with 27 licensed banks. Capital market performance was weak, as both market capitalization and the All-Share Index declined significantly, despite a marginal increase in trading volume (CBN, 2018).

In 2019, financial sector indicators again showed mixed outcomes. The M3 to GDP ratio declined to 24.1 percent, while financial savings also decreased slightly. Intermediation efficiency showed marginal improvement, although the COB/M2 ratio rose slightly to 5.82 percent. Credit conditions improved, as domestic claims to GDP increased to 25.1 percent and private sector credit rose marginally to 18.5 percent. Interest rates generally declined, reflecting improved liquidity conditions. Money market assets grew by 6.2 percent, and the number of licensed banks increased to 29. Capital

market performance remained mixed, with declines in trading volume and value, despite some positive movements in stock market indicators (CBN, 2019).

In 2021, the financial sector remained relatively robust. Financial savings continued to grow, as reflected in the increase in other deposits (OD) to GDP to 14.8 percent. The ratio of banking system assets to GDP remained stable at 67.3 percent. Credit to both the private sector and other sectors improved, reflecting policy efforts to support domestic economic activity. However, financial system efficiency slightly weakened, as the COB/M2 ratio rose marginally to 6.7 percent (CBN, 2021).

In 2022, the financial sector sustained its positive performance. Financial savings increased further, with the ratio of other deposits to GDP rising to 15.6 percent. Additionally, the ratio of banking system assets to GDP rose to 71.4 percent, indicating continued strength and expansion of the financial sector (George-Anokwuru, 2026; CBN, 2022).

### *2.1.2. Unemployment*

Unemployment is when people who are ready and able to work, and are actively looking for a job, can't find jobs at the prevailing wage rate (ILO, 2020). In Nigeria, unemployment is a big problem because the economy isn't able to take in all the people who are looking for jobs. The country's population is growing quickly, but industrialization isn't happening fast enough, so there are more people looking for work than there are jobs. This leads to a lot of unemployment and underemployment. There are four main types of unemployment that are seen in Nigeria's job market (Blanchard, 2017). Frictional unemployment happens when people are moving from school to work, which is common for young Nigerians. Structural unemployment is a big issue because the education system doesn't always teach the skills that employers need. Cyclical unemployment happens when the economy is doing badly, like during a recession or when oil prices drop. Seasonal unemployment is common in areas that depend on farming, where jobs come and go with the seasons.

Unemployment in Nigeria is caused by many connected issues, like fast-growing population, not enough jobs being created, a weak industry, and too much reliance on the oil sector. The economy isn't varied enough, so there aren't enough jobs in useful areas. Also, problems with education and training lead to people not having the skills needed for jobs. Economic problems like instability, high prices, and unclear policies make it hard for businesses to invest and create jobs (Todaro & Smith, 2015). Akpakpan (1999) and Gbosi (2015) opined that modern unemployment in Nigeria is due to bad economic plans, poor education systems, corruption, weak small businesses, lack of clear market information, and quick population growth, among other things.

In Nigeria, unemployment is measured through labour force surveys carried out by organizations like the National Bureau of Statistics. The unemployment rate shows the percentage of people who are looking for work but can't find it (National Bureau of Statistics, 2020). But there are some difficulties in measuring it accurately because a large part of the workforce is in the informal sector. Many people in this sector do low-paying or basic work, and their activities are not always counted in official data. Unemployment in Nigeria has big economic and social impacts. Economically, it causes lower production, reduced incomes, and slower growth. Socially, it increases poverty, inequality, and the number of people depending on others for support. High unemployment, especially among young people, is also connected to crime and social problems. These issues put more pressure on government resources and slow down progress towards long-term development (Todaro & Smith, 2015).

Limited access to money is a big problem when it comes to creating jobs in Nigeria. Many small and medium-sized businesses, which are important for providing jobs, have a hard time getting cheap loans. High interest rates and strict rules about what you need to borrow from also make it harder for businesses to get the funds they need. Because of this, people who want to start or grow their own businesses often can't, which means fewer job opportunities are available. This shows how the development of the financial sector is connected to employment outcomes in an indirect way. Nigeria's job market is mostly made up of the informal sector, where a lot of workers are involved in low-paying and unregulated jobs. The formal part of the job market is small and can't take in all the people looking for work. Also, there is a mismatch between what people are learning in school and what jobs are available, which makes unemployment worse. These problems make it hard to reduce unemployment, even when the economy is growing.

Addressing unemployment in Nigeria necessitates comprehensive policy measures such as economic diversification, industrial growth, enhanced access to financial resources, and increased investment in education and skill development. Policies that foster entrepreneurship and support small and medium enterprises can greatly boost employment generation. Strengthening institutions and maintaining macroeconomic stability are also crucial for attracting

investment and creating more job opportunities. Hence, unemployment in Nigeria is a structural challenge that demands coordinated economic and social policy interventions.

Available statistics indicate that Nigeria's unemployment rate stood at 6.1 percent in 1985 but declined slightly to 5.3 percent in 1986 (George-Anokwuru, 2026). However, with the introduction of the Structural Adjustment Programme (SAP) in 1987, unemployment rose to 7.0 percent. The rate increased further to 7.5 percent in 1992 before declining to 7.2 percent, 6.8 percent, and 6.4% in 1993, 1994, and 1995, respectively. It rose again to 8.5% in 1997, declined to 7.6% in 1998, and subsequently increased to 8.5% in 1999 and 11.0% in 2000. In the early 2000s, unemployment fluctuated, recording 9.6 percent in 2001, 8.8% in 2002, 10.8% in 2003, and 10.2% in 2004 (Gbosi, 2015). According to the CBN (2003), this upward trend was largely attributed to the rapid expansion of the education sector, which increased labour market entrants past the capacity at which the economy can absorb it.

Between 2005 and 2011, unemployment continued on an upward trajectory, rising from 9.4% in 2005 to 14.6% in 2011. The situation worsened in 2008 when the rate peaked at 12.8% before moderating slightly to 11.2% and 11.5% in 2009 and 2010, respectively. In subsequent years, unemployment remained relatively high, standing at 12.4% in 2012 and 12.8% in both 2013 and 2014. However, in 2015, the unemployment rate declined to 10.4% from 7.8% in 2014, before rising again to 14.2 percent in 2016 (CBN, 2017). The labour force expanded significantly during this period, growing from 76.9 million in 2015 to 80.7 million in 2016, representing a 4.9 percent increase. Consequently, the proportion of unemployed persons rose to 13.9 percent in 2016 from 10.4 percent in 2015. By the third quarter of 2017, unemployment had increased sharply to 18.8 percent from 14.2% recorded in the fourth quarter of 2016 (George-Anokwuru, 2026; CBN, 2018).

More recent data reveal important labour market dynamics. Nigeria's labour force participation rate stood at 77.3% in the first quarter of 2024, with higher participation in rural areas (82.5 percent) compared to urban areas (74.0%). Gender disaggregation shows marginal differences, with male participation at 77.5% and female participation at 77.1 percent (NBS, 2024). However, this represents a decline from 79.9% recorded in the first quarter of 2023. Similarly, the employment-to-population ratio fell to 73.2% in Q1 2024 from 75.6 percent in Q3 2023, indicating a weakening in job absorption capacity. This decline was observed across both urban and rural areas as well as across gender groups.

In terms of employment structure, self-employment remains dominant, although it declined slightly from 86 percent in Q1 2023 to 84% in Q1 2024. Conversely, the proportion of paid employees increased from 12.7 percent in Q3 2023 to 16.0 percent in Q1 2024. Self-employment is more prevalent among females (87.9 percent) than males (79.9 percent), and significantly higher in rural areas (91.9 percent) compared to urban areas (78.2 percent). Informal employment continues to dominate Nigeria's labour market, rising marginally from 92.3 percent in Q3 2023 to 92.7 percent in Q1 2024. The incidence of informal employment is inversely related to educational attainment, with individuals lacking formal education more likely to be engaged in informal activities. Overall, approximately 92.7 million Nigerians were engaged in informal employment during the period. Informality is also more pronounced among women and rural dwellers, with rates of 97.6 percent in rural areas and 89.0 percent in urban areas (NBS, 2024).

Despite these structural challenges, the unemployment rate in Q1 2024 was relatively low at 5.3 percent, compared to 5.0% in Q3 2023. Disaggregation shows that unemployment was higher among females (6.2%) than males (4.3%), and higher in urban areas (6.0%) than in rural areas (4.3%). Youth unemployment remained a concern, standing at 8.4% in Q1 2024. Educational differences are also evident, with unemployment highest among individuals with post-secondary education (9.0%) and lowest among those with postgraduate qualifications (2.0%), suggesting a mismatch between educational attainment and labour market opportunities (George-Anokwuru, 2026; NBS, 2024).

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### 3. Theoretical Literature

#### 3.1. Financial Liberalization Theory (McKinnon-Shaw Hypothesis)

The Financial Liberalization Theory, commonly referred to as the McKinnon-Shaw Hypothesis, was independently formulated by Ronald McKinnon and Edward Shaw in 1973. The theory contends that government-imposed constraints on financial systems, such as high reserve requirements, interest rate ceilings, and directed credit policies, result in "financial repression," which hampers savings and investment and diminishes the efficiency of financial intermediation (George-Anokwuru, 2026; McKinnon, 1973; Shaw, 1973). It suggests that eliminating these restrictions enables market forces to set interest rates, thus enhancing resource allocation and stimulating economic growth.

A core idea of the McKinnon-Shaw framework is that elevated real interest rates, determined by market mechanisms, incentivize savings mobilization. An increase in savings broadens the pool of loanable funds accessible to financial

institutions, facilitating more effective credit distribution to productive investments (Shaw, 1973). This process boosts capital formation and fuels economic growth. McKinnon (1973) also underscores the synergy between money and physical capital, asserting that efficient financial systems are crucial for mobilizing resources for investment.

Financial liberalization helps make the financial system deeper, which means banks, financial tools, and markets become bigger and work better. The McKinnon-Shaw Hypothesis says that when financial systems are liberalized, people save more and invest more, which helps increase financial depth. This is shown by higher ratios like the amount of money (M2) compared to the country's total economic output (GDP) and the amount of credit given to businesses (McKinnon, 1973; Shaw, 1973). Studies also back this idea, showing that when financial systems are more open, they grow more and work more efficiently (Levine, 2005).

Having a deeper financial system can help reduce unemployment because it makes it easier for companies to get the money they need to grow, come up with new ideas, and make more products. This leads to more jobs and more income (Levine, 2005). In poorer countries, getting access to money is especially important for small and medium-sized businesses, which are key to creating jobs and driving the economy (Arestis & Demetriades, 1997).

In Nigeria, financial liberalization started in 1986 through the Structural Adjustment Programme (SAP). The changes included letting interest rates be set freely, removing limits on where banks could lend money, and encouraging private companies to take part in the financial system (Central Bank of Nigeria, 2015). These changes helped the financial system grow a bit, as seen in more banks, bigger financial markets, and higher money supply compared to the country's overall economic size.

Even though there was some growth in the financial system, unemployment is still quite high in Nigeria. This shows that the idea from the McKinnon-Shaw Hypothesis, which suggests that financial deepening can lower unemployment, isn't working very well in Nigeria. One big problem is that loans are not being given efficiently. A lot of money goes to areas that don't create jobs, instead of industries that do. Other issues include high interest rates, poor quality of financial institutions, and not enough people having access to banking services, which makes it hard for small businesses to get the loans they need (Sanusi, 2012; World Bank, 2020). Because of these problems, the hope that financial deepening would reduce unemployment hasn't really come true.

While the Financial Liberalization Theory establishes a strong theoretical connection between financial development and employment, its underlying assumptions may not apply effectively in developing economies facing structural challenges. In Nigeria, issues like inadequate regulatory frameworks, macroeconomic instability, and financial market imperfections hinder the success of liberalization policies (Arestis & Demetriades, 1997). Thus, to effectively reduce unemployment through financial deepening, additional reforms such as enhancing institutional capacity, improving credit access, and fostering productive investments are crucial.

### **3.2. Keynesian Theory of Employment**

The Keynesian Theory of Employment was created by John Maynard Keynes in his important book - *The General Theory of Employment, Interest and Money*. This theory says that how many people are working in an economy depends mostly on the total amount of spending, known as aggregate demand, rather than how flexible wages are. Keynes believed that an economy can end up with a lot of people without jobs if there isn't enough total spending (Keynes, 1936). This was different from classical economics, which thought that markets would automatically adjust to make everyone employed.

In Keynesian theory, the number of jobs depends on the level of aggregate demand, which includes what people spend on goods and services, what businesses invest in, what the government spends, and the difference between what countries sell and buy from each other. When there isn't enough spending, companies make less and have to let workers go, which increases unemployment. But when spending goes up, companies produce more and create more jobs (Keynes, 1936). Investment spending is especially important because it can change quickly and is affected by what people expect, interest rates, and how easy it is to get money.

Keynes pointed out that decisions about investing are affected by how much extra return people expect from capital and the interest rate. When interest rates are low, people are more likely to borrow and invest, which can boost production and jobs. But in some cases, like when there's a liquidity trap, even low interest rates might not get people to invest (Keynes, 1936). This shows how important it is for the financial system to work well so that monetary policies can affect investment and support economic activity.

In the Keynesian view, financial deepening is important because it makes credit more available and lowers the cost of borrowing. A stronger financial system helps more money flow into investments, which can increase overall demand. When banks and financial institutions effectively collect savings and give loans to useful areas of the economy, investment goes up, leading to more output and more jobs (Levine, 2005). So, financial deepening can help make the investment part of Keynesian theory work better.

According to the Keynesian idea, having more access to money helps companies grow their businesses and hire more people. Small and medium-sized businesses, which are important for creating jobs, especially gain from better access to financial resources. When there is more financial development, it becomes easier for businesses to get loans, which increases investment and overall spending. This, in turn, helps lower unemployment (Arestis & Demetriades, 1997). So, financial development works well with Keynesian policies that focus on managing demand to create more jobs.

In Nigeria, financial development has grown over time, as shown by the expansion of banks, more credit given to private businesses, and higher money supply.

However, the way Keynesian policies usually work is not very strong because of some structural problems. Even though there is more money available, it's not always used for investments that create jobs. Things like high interest rates, poor infrastructure, and inconsistent policies make it harder for financial growth to boost overall spending and reduce unemployment (Central Bank of Nigeria, 2015).

Even though there has been some improvement in the financial system, unemployment is still very high in Nigeria. This shows that the growth of the financial sector isn't leading to enough job creation in the real economy. From a Keynesian point of view, this means there's not enough demand in the economy to create jobs. Small businesses often can't get enough credit, loans are expensive, and there's not enough investment in industries, all of which stop new jobs from being created (World Bank, 2020). So, just improving the financial system on its own won't cut unemployment unless there are other policies to increase overall demand.

According to Keynesian theory, the government needs to step in to create more demand and lower unemployment. In Nigeria, this might mean spending more money on the economy, offering special credit programmes, and making it easier for people to access financial services. While a stronger financial system can help with investment and jobs, it needs to go along with efforts to manage demand and make better institutions. Therefore, combining Keynesian demand-focused policies with improvements in the financial sector are keys to solving the problem of high unemployment.

### **3.3. Endogenous Growth Theory**

The Endogenous Growth Theory says that economic growth comes from inside the economy, like improving human skills, creating new ideas, and sharing knowledge. This theory was developed by economists like Paul Romer and Robert Lucas Jr. in the 1980s. Unlike other models that say growth happens because of outside technology changes, this theory says that things like government policies, spending on education, and research and development help the economy grow over time (Romer, 1986; Lucas, 1988). So, more jobs are created when the economy keeps growing through new ideas and better productivity.

In this theory, jobs are made because companies keep getting more efficient and start new industries thanks to innovation. Spending on people's skills and new technologies makes workers more productive and leads to new job opportunities. As businesses grow and come up with new things, they need more workers, both skilled and not, which helps reduce unemployment (Lucas, 1988). So, job growth isn't just about people wanting to buy things, but also about the economy changing and getting better over time.

Financial systems are important for helping the economy grow from within by gathering savings and using them for investments that create value, like education, technology, and starting new businesses. A strong financial system helps cut down on costs, handle risks, and support new ideas and businesses by giving them money (Levine, 2005). This helps build more capital and drive technological improvements, which are key to ongoing economic growth and creating jobs. Financial deepening is a major part of this growth process. It shows how much better financial institutions are at collecting and distributing money. As financial deepening happens, more funds are available to invest in people's skills, physical structures, and areas that focus on innovation. This helps increase productivity and expand industries, which are important for creating jobs in the long run (Romer, 1986; Levine, 2005).

From the endogenous growth point of view, financial deepening helps reduce unemployment by encouraging entrepreneurship and innovation. When people and businesses have access to loans, they can start new businesses, grow their operations, and use better technology. This creates new industries and more jobs. Also, financial inclusion lets more people take part in the economy, which helps create more jobs (Aghion & Howitt, 1992).

In Nigeria, financial deepening has improved over time, as shown by the growth of banks, more credit options, and better financial markets. But the effect on employment has been limited because of structural problems. Even though there is money available, it is often not used for sectors that drive innovation, like manufacturing and technology. Instead, most of the loans go to areas like trade and the oil industry, which don't create as many jobs (Central Bank of Nigeria, 2015).

Despite the expansion of the financial sector, unemployment remains high in Nigeria, highlighting a weak connection between financial deepening and endogenous growth processes. Limited investment in human capital, insufficient support for research and development, and poor infrastructure hinder the economy's ability to create sustainable employment (World Bank, 2020). Additionally, restricted access to finance for small and innovative firms limits their job creation potential, undermining the employment outcomes anticipated by endogenous growth theory.

Endogenous growth theory posits that financial deepening can effectively lower unemployment only if it fosters innovation, human capital development, and entrepreneurship.

In Nigeria, this necessitates policies that enhance access to finance for productive sectors, invest in education and skill development, and encourage technological progress. Strengthening institutions and improving the efficiency of financial intermediation are also crucial. Thus, aligning financial deepening with endogenous growth factors is vital for sustained employment creation and unemployment reduction.

### *3.3.1. Empirical Literature*

Empirically, only a few studies have looked at how financial deepening connects to unemployment. For example, Bayar (2016) studied how unemployment, financial development, and domestic investment worked together in 16 emerging market countries between 2001 and 2014. They used panel data analysis. Their results showed that there was a long-term link between these factors. Domestic investment helped reduce unemployment, but financial development did not have a clear effect. Also, there was a one-way relationship where financial sector growth affected unemployment.

Also, from 1981 to 2015, Osuka et al. (2019) looked at the correlation between Nigeria's unemployment rate and the country's financial deepening. They used data from the Central Bank of Nigeria and the World Bank. They used the Error Correction Model and Granger causality test. Their findings showed that giving more credit to private businesses and increasing the money supply helped lower unemployment. This suggests that better access to money can lead to more job-creating investments. However, market capitalization did not have a strong effect on unemployment. In the long run, all these factors together influenced unemployment, with financial deepening having a one-way effect on it.

Moreover, Folorunsho (2020) looked at how financial development affects unemployment in Nigeria, but not in a simple way. They used a method called NARDL to study data from 1980 to 2017. Their findings showed that there is a long-term balance between the different factors they studied. The Wald test showed that financial development and unemployment are connected in both the long run and short run, but not in the same way. The study found that the good effects of financial development on reducing unemployment are stronger than the bad effects. The research suggests that there should be policies that help create jobs and improve employment opportunities by developing the financial market in a way that works well over time. Overall, the study shows that developing the financial sector is important for the economy and plays a key role in how unemployment changes, in both good and bad ways.

In addition, El-Bourainy, Salah and ElSherif (2020) explored how financial inclusion affects unemployment in developing countries. They made a new financial inclusion index for 43 developing countries using a multidimensional approach. This index looked at three things: access to financial services, how they are used, and the quality of those services. Then, they used a dynamic two-step system called Generalized Method of Moments (GMM) to study the effect of financial inclusion on unemployment in 35 developing countries from 2009 to 2018. Their study found that financial inclusion helps lower the unemployment rate in these countries. The results showed that when financial inclusion increases, unemployment tends to go down. They also found that higher levels of education, lower inflation, and better economic growth all help reduce unemployment. However, they also found that there is a two-way relationship between financial inclusion and unemployment, meaning each can influence the other.

Ngoc Bui, in 2020, studied how financial development affects employment in Asian countries. The study used data from six ASEAN countries between 2004 and 2017. The author used a method called generalized method of moment (GMM) to analyze the data. The findings showed for the first time that financial development influences employment in Asian countries. Specifically, credit given to the private sector helps increase employment. However, the size of the stock market had a negative effect on employment.

In 2023, Callistus, Ogonna, and Eklesiobi looked at how financial inclusion affects unemployment in Nigeria to 2021 from 1991. They used a technique called Autoregressive Distributed Lag (ARDL). Their results showed that financial inclusion has a significant effect on the unemployment rate.

Similarly, Owandjokuna (2023) did a study to look at how financial inclusion affects employment in East, West, and Southern Africa, with a special look at how economic growth plays a role. A total of seven East African, thirteen West African, and five Southern African nations provided data used in the analysis, which spanned 2009–2021. They used a method called FMOLS to analyze the data. The study found that financial inclusion had a big effect on economic growth in all the countries and models they looked at. They also found that there was a clear link between economic growth and employment. Based on these results, it is now more common to suggest that promoting financial inclusion can help boost economic growth and employment in sub-Saharan Africa.

Babatunde and Olabode (2023) examined how financial development affects job creation in Nigeria from 1999 to 2020. They used the ARDL bound-testing method. Their findings showed that financial development is directly linked to higher employment rates. They also found that there is a negative connection between the inflation rate and the unemployment rate.

In the same year, Samson and Edewhor studied how the growth of the financial sector in Nigeria affects job creation. They used four main factors in their study: how efficient the financial system is, how easy it is for people to access financial services, how deep the financial system is, and how stable the financial system is. They used data collected over many years, from 1980 up to 2023. To analyze the data, they used two methods: the parsimonious ECM framework and a technique called cointegration. Their findings showed that all these factors are connected in the long run. When they looked at the results more closely, they found that access to financial services and the depth of the financial system help create more jobs. However, financial stability and efficiency had a positive effect, but it wasn't strong enough to be statistically significant. Overall, the study shows that the development of the financial sector in Nigeria has an effect on creating jobs during the time period studied.

A careful scrutiny of the previous studies reveals that most research on financial deepening focuses on its (i.e., financial deepening) influence on economic growth rather than employment outcomes, creating a gap in understanding labour market effects. Also many studies use outdated datasets (pre-2015), which do not reflect recent developments. Therefore, this study investigated the influence of financial deepening on unemployment in Nigeria from 1981 to 2023.

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#### 4. Materials and methods

In this study, an ex-post facto research design was employed. The analysis utilized data covering the period from 1981 to 2023, sourced from a report by bureau of statistics and Nigeria's apex bank. To examine the impact of financial deepening on the unemployment rate in Nigeria, the study adapted a model proposed by Osuka, Ihejirika, and Chinweze (2019). Their original model explored the causal relationship between unemployment and financial deepening in Nigeria between 1981 and 2015, using the unemployment rate as the dependent variable. The independent variables included broad money supply as a ratio of GDP, private sector credit as a ratio of GDP, and market capitalization to GDP ratio. This study replaced market capitalization to GDP ratio with interest rate (monetary policy rate). So, here is how the study's model is laid out:

$$UER_t = \alpha_0 + \alpha_1 M_3/GDP_t + \alpha_2 CPS/GDP_t + \alpha_3 MPR + e_t \quad (1)$$

Where: UER is unemployment rate (in %), slope parameters =  $\alpha_1 - \alpha_3$ , error term = e, intercept parameter =  $\alpha_0$ , monetary policy rate – interest rate (in %) = MPR, private sector credit as a ratio of GDP in % = CPS/GDP, broad money supply as a ratio of GDP in % =  $M_3/GDP$ .

**On the apriori**, it is expected that;  $\alpha_1 - \alpha_2 < 0$ ; and  $\alpha_3 > 0$ .

**4.1. Techniques of Data Analysis**

The data was analysed using the Augmented Dickey Fuller test (ADF) and the Autoregressive Distributed Lag (ARDL) method. To find out if the data is stationary—that is, if it doesn't vary over time in a way that impacts results—the ADF test is useful. The ADF test can be generally expressed as:

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum \alpha_i \Delta y_i + \delta_t + U_t \tag{2}$$

In this context, y represents a time series, t denotes a linear time trend, Δ stands for the first difference operator, α0 is a constant, n suggests the ideal number of delays for the independent variables, and U is the random error factor. The research used the Autoregressive Distributed Lag - ARDL technique to examine the connection between financial deepening and the unemployment rate over the short and long term. By avoiding problems like endogeneity and autocorrelation, this approach produces efficient and unbiased findings. This research made use of the following ARDL model:

$$\begin{aligned} \Delta UER_{t,j} = & C_0 + C_1 UER_{t-1,j} + C_2 CPS/GDP_{t-1,j} + C_3 M3/GDP_{t-1,j} + C_4 MPR_{t-1,j} + \sum_{i=1}^{n1} a_{1i,j} \Delta UER_{t-1,j} \\ & + \sum_{i=0}^{n2} a_{2i,j} \Delta CPS/GDP_{t-1,j} + \sum_{i=0}^{n3} a_{3i,j} \Delta M3/GDP_{t-1,j} + \sum_{i=0}^{n4} a_{4i,j} \Delta MPR_{t-1,j} + \lambda ECM_{t-1} + \mu_t \end{aligned} \tag{3}$$

Where;  $ECM_{t-1}$  = error correction term obtained from the co-integration model,  $\mu_t$  = error term,  $C_1, C_2, C_3, C_4$  = long run elasticities,  $\alpha_1, \alpha_2, \alpha_3, \alpha_4$  = short run dynamics of the model, n = optimal lag length,  $\mu_t$  = white noise or error term, Δ = difference operator. The error coefficients ( $\lambda$ ) reveal the rate of imbalance correction or adjustment to long-run equilibrium by the co-integration model. It is anticipated that the ECM coefficient will be statistically significant and negative. If the  $ECM_{t-1}$  coefficient is negative and statistically significant, then any temporary change in the link between the explained and independent variables will lead back to the long-term association.

**5. Results and discussion**

Using the Augmented Dickey Fuller (ADF) test to ensure data stability, this study aimed to avoid drawing erroneous results. Both concepts are crucial to the test: One theory,  $H_0$ , states that the variable is unstable because it has a unit root, whereas the other,  $H_1$ , states that the variable is stable because it does not have a unit root. In Table 1 you can see the outcomes of the tests.

**Table 1** Unit Root Test Outcome via Augmented Dickey-Fuller

Variables	Level form		First difference		Order of integration
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value	
UER	0.860086	-2.936942	-7.437706	-2.936942	1(1)
CPS/GDP	-0.980213	-2.933158	-5.334850	-2.935001	1(1)
M3/GDP	-0.739509	-2.933158	-6.204884	-2.935001	1(1)
MPR	-3.389303	-2.933158	-	-	1(0)

**Recall:** UER, CPS/GDP, M3/GDP, and MPR as defined earlier.; **Source:** Authors' Computed Result from (E-views 10).

Because the ADF value is greater than the 5% critical values, MPR is stationary at level 1(0) at the 5% significance level, according to the ADF test results for each series in Table 1. But after the first difference, which is 1(1), UER, CPS/GDP, and M3/GDP become stationary. In order to test for a long-run relationship using an ARDL model, the variables must be integrated of order 1(0) and 1(1).

**Table 2** ARDL Bounds Test for Co-integration

<b>Model</b>		<b>F-Statistic = 5.699503</b>
UER= F(CPS/GDP, M3/GDP, MPR)		K = 3
Critical Values	Lower Bound	Upper Bound
5%	3.38	4.23

**Recall:** UER, CPS/GDP, M3/GDP and MPR as defined earlier.; **Source:** Authors' Computed Result from (E-views 10)

The variables (UER, CPS/GDP, M3/GDP, and MPR) are linked over the long term according to the ARDL limits test for co-integration. Reason being, at the 5% level of significance, the F-statistic (about 5.41) exceeds the upper critical value. The conclusion that these variables do in fact have a long-term association can be rejected in light of this finding. This rationale underpinned the research's pursuit of the dependent variable's long- and short-term impacts from the independent factors.

**Table 3** Estimated ARDL Long Run Coefficients. Dependent Variable: UER ARDL (1, 1, 3, 0)

Regressors	Coefficient	t-Statistic	P-Value
CPS/GDP	-1.405186	-2.780372	0.0093
M3/GDP	1.899865	3.195062	0.0033
MPR	-0.110539	-0.585347	0.5627

**Recall:** UER, CPS/GDP, M3/GDP and MPR as defined earlier.; **Source:** Authors' Computed Result from (E-views 10)

The long run coefficients from Table 3 show that in Nigeria, private sector credit as a ratio (share or ration) of GDP in % and the interest rate (monetary policy rate) have a negative association with unemployment rate. On the other hand, the broad money supply as a ration of GDP in % has a positive relationship with unemployment rate. Notably, private sector credit as a ratio of GDP in % and broad money supply as a ration of GDP in % have a strong effect on unemployment rate. However, interest rate (monetary policy rate) does not have a strong influence on unemployment rate. This suggests that changes in the private sector credit as a ratio of GDP in % and broad money supply as a ration of GDP in % over time will have a major effect on unemployment rate in Nigeria.

**Table 4** Error Correction Representation for the Selected ARDL Model ARDL (1, 1, 3, 0)

Regressors	Coefficients	t-Statistic	P-Value
CPS/GDP	-0.932983	-1.991044	0.0557
M3/GDP	0.532004	1.800894	0.0818
MPR	-0.089396	-0.580986	0.5656
ECM (-1)	-0.808729	-5.683061	0.0000
R-squared = 0.823996		D-W stat. = 2.144687	
Adjusted R-squared = 0.771194		Akaike info criterion = 5.186990	
Schwarz criterion = 5.609210		F-statistic = 15.60560	
Prob(F-statistic) = 0.000000			

**Recall:** UER, CPS/GDP, M3/GDP and MPR as defined earlier.; **Source:** Authors' Computed Result from (E-views 10)

The outcomes of the short-run dynamic coefficients linked to the long-run connections derived from the ECM equation are displayed in Table 4. There is a statistically significant negative sign to the model's Error Correction Term. This indicates that the model gradually settles into a state of long-term equilibrium. To rephrase, it reveals the model's transition from momentary stability to permanent stability. That means the unemployment rate will level out and get back to normal in the long run, regardless of how temporary the variations may be. With a DW value of 2.144687, autocorrelation is clearly not an issue with this model.

Also, in the short run, private sector credit as a percentage of GDP has a negative coefficient. An increase of 1% in private sector credit as a percentage of GDP will result in a decrease of around 0.932983 percent in the unemployment rate. This indicates that, over the examined time period, private sector credit as a percentage of GDP contributed to a decrease in Nigeria's unemployment rate. Based on their analysis of the correlation between financial deepening and unemployment in Nigeria from 1981 to 2015 using the Granger causality test and the Error Correction Model (ECM), Osuka, Ihejirika, and Chinweze (2019) came to similar conclusions. Their research showed that Nigeria's unemployment rate was negatively affected by the private sector loan to GDP ratio. On the other hand, there is a statistically significant coefficient for private sector loan as a percentage of GDP. As a result, we may say that private sector credit as a percentage of GDP and unemployment in Nigeria are strongly related. This outcome corroborates the empirical finding of Osuka, Ihejirika and Chinweze (2019) who in their study revealed that credit to the private sector significantly reduced unemployment, suggesting that increased access to finance promotes job-creating investments.

In addition, the short-run sign of the coefficient of broad money supply as a proportion of GDP is positive. Neither of us had anticipated this. This indicates that the unemployment rate will rise by 0.53204% whenever the broad money supply is increased as a proportion of GDP. This further demonstrates that throughout the time frame under consideration, the broad money supply had a negative impact on unemployment in Nigeria as expressed as a percentage of GDP. On the other hand, there is no statistically significant relationship between the broad money supply and GDP as a percentage. It follows that the broad money supply, measured as a proportion of GDP, is not significantly related to the unemployment rate in Nigeria. Also, within the time frame of this study, the unemployment rate in Nigeria was found to be negatively and insignificantly affected by the monetary policy rate, also known as the interest rate.

**5.1. Post Estimation Diagnostic Tests Results**

This study used diagnostic tests to determine the reliability of the model for policy prediction and recommendation making. For this objective, this research employed targeted assessments. The appropriate restriction of the coefficients was verified using the Wald test. To verify the existence of serial correlation, the Breusch-Godfrey (B-G) Lagrange Multiplier (LM) test was employed. Tables 5 and 6 display the outcomes of these tests.

*5.1.1. Wald Test*

One way to determine if the ECM model's causative variables' coefficients are significantly related is to utilise the Wald test. To determine this, the F-statistic from Tables 5 was utilised.

**Table 5** Wald Test Result

<b>Wald Test:</b>			
Equation: Untitled			
Test Statistic	Value	Df	Probability
F-statistic	73.47426	(4, 30)	0.0000
Chi-square	293.8970	4	0.0000

Source: Authors' Computed Result from (E-views 10)

According to Table 5, the F-statistic is close to 73, and the probability value of 0.0000 is less than the commonly used 5% significance level of 0.05. This indicates that the unemployment rate in Nigeria during the analysed period can be adequately explained by all of the model's variables taken together.

**5.2. Test for Serial Correlation**

An improved approach to determining whether or not serial correlation occurs in the ECM data at a 5% level of significance was to employ the Breusch-Godfrey Serial Correlation LM test, as opposed to the competing hypothesis that serial correlation does exist.

**Table 6** Breusch-Godfrey Test for Serial Correlation

<b>Breusch-Godfrey Serial Correlation LM Test:</b>			
F-statistic	0.479013	Prob. F(2,28)	0.6244
Obs*R-squared	1.323330	Prob. Chi-Square(2)	0.5160

Source: Authors' Computed Result from (E-views 10)

There is no serial autocorrelation problem with the error correction model, as seen in Table 6. The chi-square value and its related probability are more than 0.05, which is the reason behind this.

## 6. Conclusion and Recommendations

This study examined the influence of financial deepening on unemployment rate in Nigeria between 1981 and 2023. The research employed data on the unemployment rate, private sector credit as a proportion of GDP, broad money supply as a proportion of GDP, and the interest rate (monetary policy rate). The study utilized the ARDL method to analyze the relationship between these variables in both the short and long run. The study found a negative and statistically significant association between the unemployment rate in Nigeria over the study period and private sector credit as a proportion of GDP, both in the short and long term.

Broad money supply as a proportion of GDP showed a positive but insignificant relationship with unemployment. Additionally, the interest rate (monetary policy rate) had a negative and insignificant association with unemployment. Based on these findings, the study recommended promoting an expansion of credit to the private sector to encourage investment and reduce unemployment. Efforts should focus on improving access to credit and strengthening creditor rights. The government is advised to develop policies that strengthen the financial system and implement new financial reforms. These measures should support Nigerian businesses in a fair and effective manner. Future research could explore the influence of financial deepening on inflation in Nigeria.

## References

- [1] Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica*, 60(2), 323–351.
- [2] Aiyedogbon, J. O., & Ohwofasa, B. O. (2012). Poverty and youth unemployment in Nigeria, 1987–2011. *International Journal of Business and Social Science*, 3(20), 269–279.
- [3] Akpakpan, E. B. (1999). *The Economy: Towards a New Type of Economics*. Port Harcourt: New Generation Publishers.
- [4] Arestis, P., & Demetriades, P. (1997). Financial development and economic growth: Assessing the evidence. *The Economic Journal*, 107(442), 783–799.
- [5] Babatunde, M. O., & Olabode, E. O. (2023). Does Financial Development and Economic Growth Promote Employment in Nigeria? *Journal of Empirical Studies*, 10(1), 19-27.
- [6] Bayar, Y. (2016). Financial Development and Unemployment in Emerging Market Economies. *Scientific Annals of Economics and Business*, 63 (2), 237-245.
- [7] Blanchard, O. (2017). *Macroeconomics* (7th ed.). Pearson.
- [8] Callistus, T. O., Ogonna, E. I., & Ekesiobi, S. C. (2023). Financial Inclusion and Unemployment in Nigeria. *Journal of Advanced Research in Economics and Administrative Sciences*, 4(4), 28-47.
- [9] Central Bank of Nigeria (2011). Annual Economic Report, 31st December, 2011.
- [10] Central Bank of Nigeria (2012). Annual Economic Report, 31st December, 2012.
- [11] Central Bank of Nigeria (2013). Annual Economic Report, 31st December, 2013.
- [12] Central Bank of Nigeria (2014). *Annual Economic Report, 31st December, 2014*.
- [13] Central Bank of Nigeria (2015). *Annual Economic Report, 31st December, 2015*.
- [14] Central Bank of Nigeria (2016). *Annual Economic Report, 31st December, 2016*.
- [15] Central Bank of Nigeria (2017). *Annual Economic Report, 31st December, 2017*.

- [16] Central Bank of Nigeria (2018). *Annual Economic Report, 31<sup>st</sup> December, 2018*.
- [17] Central Bank of Nigeria (2019). *Annual Economic Report, 31<sup>st</sup> December, 2019*.
- [18] Central Bank of Nigeria (2021). *Annual Economic Report, 31<sup>st</sup> December, 2021*.
- [19] Central Bank of Nigeria (2022). *Annual Economic Report, 31<sup>st</sup> December, 2022*.
- [20] Central Bank of Nigeria. (2015). *Statistical bulletin*. Abuja: CBN.
- [21] Central Bank of Nigeria. (2015). *Statistical bulletin*. Abuja: CBN.
- [22] Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). *The Global Findex Database 2017: Measuring financial inclusion*. Washington, DC: World Bank.
- [23] El-Bourainy, M., Salah, A., & ElSherif, M. (2020). The Impact of Financial Inclusion on Unemployment Rate in Developing Countries. *International Journal of Economics and Financial Issues*, 11(1), 79-93.
- [24] Folorunsho, M. A. (2020). Asymmetric Influence of Financial Development on Unemployment in Nigeria. *Ilorin Journal of Economic Policy*, 7(2), 39-52.
- [25] Gbosi, N. G. (2015). *Contemporary Macroeconomic Problems and Stabilization Policies* (2<sup>nd</sup> edition). Spirit and Truth Publishers, Benin City, Nigeria.
- [26] George-Anokwuru, C. C. (2026). Financial deepening and poverty in Nigeria. *European Journal of Economic and Financial Research*, 10(1), 55-79.
- [27] George-Anokwuru, C. C. (2026). Public education expenditure and unemployment in Nigeria. *European Journal of Social Sciences Studies*, 12(1), 157-179.
- [28] George-Anokwuru, C. C., & Okowa, E. (2021). Company Income Tax and Unemployment in Nigeria. *South Asian Journal of Social Studies and Economics*, 9(2), 35-41.
- [29] International Labour Organization (ILO). (2020). *ILOSTAT database: Definitions and methodology*. Geneva: ILO.
- [30] Keynes, J. M. (1936). *The general theory of employment, interest and money*. London: Macmillan.
- [31] King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *The Quarterly Journal of Economics*, 108(3), 717-737.
- [32] Levine, R. (2005). Finance and growth: Theory and evidence. In P. Aghion & S. Durlauf (Eds.), *Handbook of economic growth* (Vol. 1, pp. 865-934). Elsevier.
- [33] Lucas, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.
- [34] McKinnon, R. I. (1973). *Money and capital in economic development*. Washington, DC: Brookings Institution.
- [35] National Bureau of Statistics. (2022). *Labour force statistics report*. Abuja: NBS.
- [36] NBS - Nigeria Labour Force Statistics Report Q1 2024.
- [37] Ngoc Bui, T. (2020). How does financial development affect the employment? Evidence from Asean countries. *Journal of Management Information and Decision Sciences*, 23(1), 1-6.
- [38] Osuka, B. O., Ihejirika, P. O., & Chinweze, C. (2019). Financial deepening and unemployment nexus in Nigeria (1981-2015). *Journal of Economics and Sustainable Development*, 10(5), 45-56.
- [39] Osuka, B. O., Ihejirika, P. O., & Chinweze, R. M. (2019). Financial Deepening and Unemployment in Nigeria: A Causal Analysis. *Journal of Resources Development and Management*, Vol.58, pp. 70-77.
- [40] Owandjokuna, F.(2023). The Impact of Financial Inclusion on Employment Based on East, West and Southern Africa: The Role of Economic Growth. *International Journal of Economics and Finance Studies*, 16(1), 449-469.
- [41] Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002-1037.
- [42] Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, 98(5), S71-S102.
- [43] Samson, E. B., & Edewhor, V. (2025). Impact of Financial Sector Development on Employment Generation in Nigeria. *Faculty of Natural and Applied Sciences Journal of Mathematical and Statistical Computing*, 2(2), 103-110.
- [44] Sanusi, L. S. (2012). Banking reform and its impact on the Nigerian economy. *CBN Journal of Applied Statistics*, 2(2), 115-122.

- [45] Shaw, E. S. (1973). *Financial deepening in economic development*. New York: Oxford University Press.
- [46] Todaro, M. P., & Smith, S. C. (2015). *Economic development* (12th ed.). Pearson.
- [47] Uddin, G. S., Shahbaz, M., Arouri, M., & Teulon, F. (2014). Financial development and unemployment nexus. *Economic Modelling*, 38, 426–437.
- [48] World Bank. (2020). *World development indicators*. Washington, DC: World Bank.