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Financial Sector Development and Real Sector Expansion in Nigeria

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ABSTRACT

This paper examined the effect of financial sector development on the growth of the real sector of the Nigerian economy from 1981 to 2022. Financial sector development was measured using the interest rate spread which measures the intermediation efficiency of the financial system while the growth rate of real gross domestic product was used to capture real sector expansion. The study utilized time series data which were obtained from the World Bank and the Central Bank of Nigeria statistical bulletin. The autoregressive distributed lag model (ARDL) model was utilized for the analysis. Findings from the study indicated that financial sector development exerted a negative and significant effect on economic growth in the short run while the effect becomes positive and significant in the long run. It was concluded that greater interest rate spread arises from high transaction cost associated in financial intermediation in developing economies with infrastructural deficiency. The paper recommended that there is need to further deepen the Nigerian financial system by a narrower interest rate spread. This can be achieved through provision of necessary infrastructure to cut down the transaction costs which are usually factored into the lending rate.

Keywords: *Financial Sector Development, Economic Growth, Financial Intermediation, Financial System Efficiency.*

INTRODUCTION

The interaction of the financial system with the real sector of the economy has been a point of argument in financial literature over the years. This led to different views hypothesizing the nature of the relationship between the financial and real sectors of the economy. At first, there is a view that development in the real sector will lead to the development in the financial sector of the economy. This is regarded as the demand-following financial hypothesis, which is associated with Robinson (1952). This finding suggests that causality runs from economic growth to financial development. Thus, an increase in the demand for financial services leads to growth in the financial sector growth (Calderón and Liu, 2002; Singh, 1999). In contrast, McKinnon (1973) explained that a well-functioning financial sector minimizes transaction costs and asymmetric information, leading to an improvement in financial intermediation that propels growth. This idea is known as the supply leading financial hypothesis, which (associated with Schumpeter, 1911; Shaw, 1973; McKinnon, 1973; and King and Levine, 1993) states that development in the financial sector could propel economic growth. This finance hypothesis also states that the supply of financial assets is directly associated with economic growth of an economy (Meltzer, 1969; Stein, 1970).

According to Ndebbio (2004), a country's economic growth and development are dictated by the extent to which money and financial services are available to citizens. Financial intermediation leads to financial deepening. He described financial deepening as growth in the amount of financial assets in the economy. Thus, the aggregate of all the financial asset indices equals the extent of financial

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deepening. The measure of financial deepening must cover a wide variety of assets such as broad money, liabilities of non-bank financial intermediaries, treasury bills, stock market share values, money market funds, and so on (Ndebbio, 2004; Igwe, Edeh and Ukpere, 2014). All of these variables influence economic growth through their respective activities and applications. A deepened financial system is often characterized by lower fund costs because of the availability of many financial products and effective intermediation by financial intermediaries, as opposed to a less developed financial sector. Deepening the financial sector reduces the risks encountered by enterprises and businesses in their production processes, improves portfolio diversification, and protects the economy from the vagaries of worldwide economic change (Nzotta and Okereke, 2009; Nwakobi, Oleka and Ananwude, 2019). Financial development improves competitive efficiency in financial markets, thereby benefiting the nonfinancial sectors of the economy (Nwafor and Aremu, 2016).

The creation of wealth and maintenance of economic growth are the results of financial development (Nwakobi, Oleka and Ananwude, 2019). The poor have better access to financial services, which lowers the rate of poverty. Financial service accessibility tends to promote entrepreneurship and reduce the economic income disparity. Regarding the rise in entrepreneurship, Paramaditha (2015) believes that for banks to lend to small- and medium-sized businesses, which are being displaced by larger corporations, there needs to be a deepened financial sector. This is because larger corporations can more easily raise capital through bonds and equity in a deeper financial sector. According to empirical evidence presented by John and Ibenta (2017), strengthening the financial sector will have a favorable impact on the growth of entrepreneurship in Nigeria. Findings from empirical research conducted worldwide have demonstrated the substantial role that financial development plays in promoting economic growth, reducing levels of poverty and inequality, reducing systemic risk, and maintaining financial stability. Additionally, because the market is more robust and has greater defenses against shocks, financial deepening can assist in mitigating their effects and keep the world from devolving into a worse economic catastrophe (Nwakobi, Oleka and Ananwude, 2019).

The effective functioning of the intermediary role of the financial system critically depends on financial depth and access to financial services. Financial depth can be viewed in terms of key indicators such as the number of bank accounts, number of commercial bank branches, and number of automated teller machines. The number of bank accounts is expressed per 1,000 adults, the number of commercial bank branches is expressed per 100,000 adults, and the number of automated teller machines (ATMs) is expressed per 100,000 adults. The number of bank accounts and commercial bank branches can be used to check the level at which financial services reach the entire population. A higher number of bank branches, coupled with a high number of commercial bank branches, could be a clear indication that a greater proportion of the total population has access to financial services.

Data from the World Bank (2022) indicate that there has been a consistent increase in the number of bank accounts per 1,000 adults, from about 473 in 2010 to 667 in 2015, with a further increase to 1,310 in 2020. The number of commercial bank branches (per 100,000 adults) on the other hand, has shown a declining trend from approximately seven (7) in 2010 to five (5) in 2015 and then to four (4) in 2021 (World Bank, 2021). This declining number of bank branches (per 100,000 adults) could be due to the rising population, with an increasing tendency for mergers and acquisitions within the banking industry. The number of ATMs (per 100,000 adults) has shown an increasing trend over the years, which has resulted in a reduced queue in banking halls and the resultant effect that could foster efficiency within the banking system. The number of ATMs (per 100,000 adults) increased from eleven (11) in 2010 to about sixteen (16) in 2015. Although the number has increased slightly to seventeen (17) in 2019, it has declined slightly to sixteen (16) in 2021.

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The fact that the number of commercial banks (per 100,000 adults) is very low portrays the fact that a greater segment of Nigerian society still does not have access to banking services. This is observable from the concentration of banks in urban areas, which makes people in rural areas travel long distances before they have access to banking services. Though this could have been mitigated by the Central Bank of Nigeria's policy on rural banking, which made it compulsory for commercial banks to have branches in rural areas, such policy could not work due to the low savings within the rural banks, thus making such branches cost centers. Due to the 2004 bank consolidation policy, the number of banks decreased from 89 in 2004 to 25 in 2005. Recent statistics indicate that the number of banks in Nigeria has increased from 26 in 2017 to 30 in 2020, with a further increase to 32 in 2022 (Central Bank of Nigeria (CBN), 2022). Similarly, the number of bank branches has increased from 5,564 in 2012 to 5,712 in 2017, but has declined to 4,861 in 2021, with a rising trend to 5,410 in 2022 (CBN, 2022).

It is worth noting that efficient functioning of a financial system requires an adequate number of borrowers and depositors. While depositors that represent the surplus unit facilitate provision savings, borrowers that represent the deficit unit ensure that such savings are channelled to productive investments. In 2010, the number of borrowers from commercial banks was approximately 31 per 1,000 adults, which declined slightly to 27 per 1,000 adults in 2011. Although there was an upward trend in the number between to the tune of 31 persons per 1,000 adults in 2014, the number declined afterwards for four consecutive years to the tune of 19 per 1,000 adults in 2018. Subsequently, the number of borrowers increased to 30 per 1,000 adults in 2020 and to 36 per 1,000 adults in 2021. Depositors in commercial banks exhibited an increasing trend over the years, with 47 per 10,000 adults in 2010 and 67 per 10,000 adults in 2015. This was followed by a total of 101 per 10,000 adults in 2018 and a further increase to 146 per 10,000 adults in 2021. Given the rising number of borrowers, the value of total savings within the economy also exhibited a rising trend from ₦5,941.37 billion in 2010 to ₦14,034.23 billion in 2016 and then to ₦25,589.29 billion in 2022. Statistics indicate that the total savings from the financial system was ₦30,240.02 billion in 2022, representing 14.94% of GDP (CBN, 2022).

It is worth noting that transaction costs also affect the proper functioning of the financial system to drive required growth. The financial system pays interest in savings (savings interest rate) and uses such deposits to grant loans, thereby charging borrowers' interest (lending interest rate). Therefore, the difference between the lending interest rate and the deposit interest rate gives rise to the interest rate, which becomes the profit of banks for the intermediation role. However, a higher interest rate spread arising from a higher lending rate implies higher transaction costs, which could adversely affect borrowing for investments. This could be associated with infrastructural deficiencies, particularly in the area of power. Banks incorporate these extra costs into the lending interest rate for borrowers to pay. The Nigerian case has been a continuously widening gap between the deposit interest rate and lending interest rate. Figure 1 presents a picture of the movements of these two rates over time.

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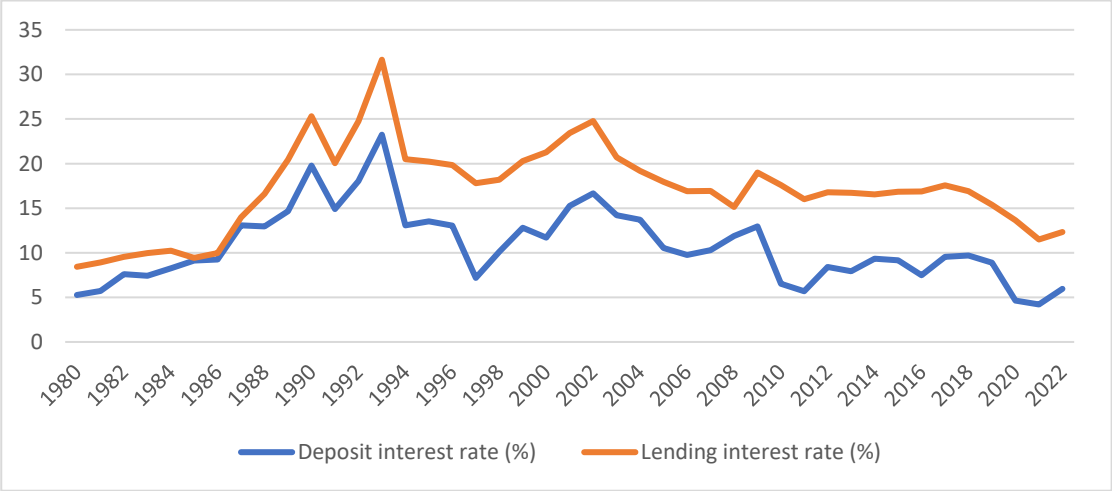

Figure 1: Trends in Deposit and Lending Interest Rate (%)

While a broad interest rate spread has been recorded over the years, only the periods 1985, 1986, and 1987 recorded narrow interest rate spreads of 0.32%, 0.72%, and 0.87%, respectively. This spread increased to 11.06% in 2010, declined to 9.37% in 2016, and then to 6.37% by 2022. The trends in the real GDP growth rate and interest rate spread are shown in Figure 2.

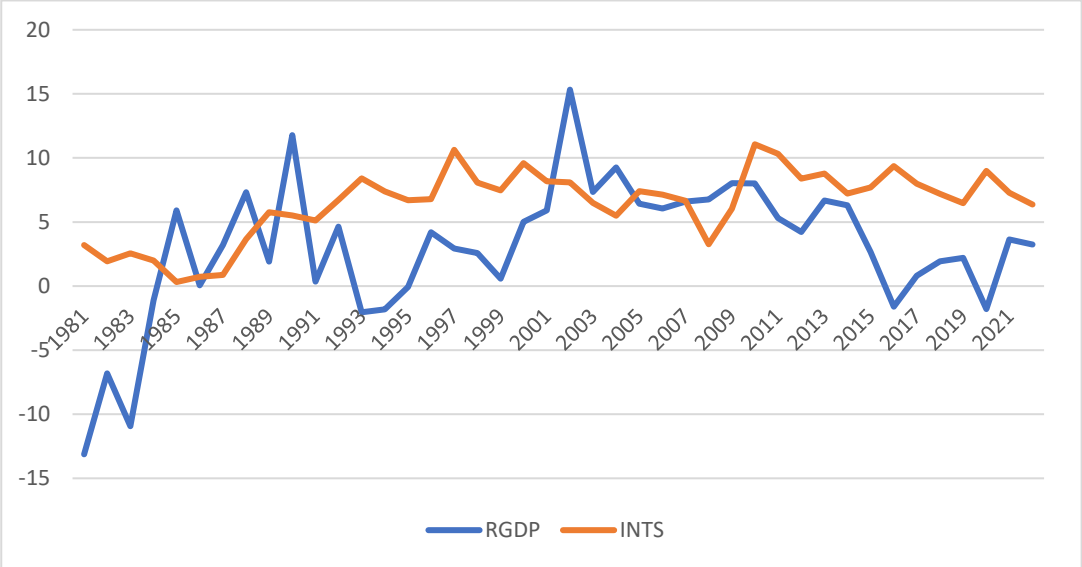

Figure 2: Trend in real GDP growth (RGDP) and interest rate spread (INTS).

It can be observed from Figure 2 that both the real GDP growth rate and interest rate spread exhibit a high degree of volatility over the years. The real GDP growth rate averaged -5.21% between 1981 and 1985 and maintained negative growth rates for four consecutive years (1981 – 1984), before recording a positive growth rate of 5.91% in 1985. From 1986 to 1989, real GDP recovered to an average growth rate of 3.13% before declining to 2.58% between 1990 and 1994. This declining growth rate continued to 2.05% between 1995 and 1999. Between 2000 and 2015, the real GDP growth rate was positive throughout the year, with an average growth rate of 6.87%. Nigerian economy returned to an average negative growth rate of 1.20% between 2016 and 2022 due to the Covid-19 pandemic.

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Indeed, the Nigerian financial system has seen some noteworthy changes, and there is still much to be accomplished, especially in the area of transaction costs, which affects efficiency in intermediation. High transaction costs could affect the efficient functioning of the financial system to drive the needed growth; hence, the aim of this study is to examine the influence of financial sector development, measured by the interest rate spread, on Nigeria's economic growth from 1981 to 2022. The remainder of this paper is structured into five sections. Following this introductory section is a literature review, which falls under section two of the paper. Section three presents the methodology of the study which section four presents the empirical findings. Finally, section five presents the summary, conclusion, and recommendations.

LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Solow-Swan Growth Model

Economic growth and financial depth have been associated with several theories. Solow (1956) and Swan (1956) independently created the fundamental neoclassical Solow–Swan model. The idea of long-term economic growth holds that technological advancements are the primary drivers of capital accumulation, labor/population increase, and productivity gains. According to Egbulonu and Ajudua (2017), this model argues that technological innovation has a crucial influence and is included as an independent variable in the growth equation because of its substantial role in maintaining growth. The theory, which is based on the following principles, states that the capital–labor ratio will tend to adjust itself over time in the direction of the equilibrium ratio with the technical coefficient. One composite commodity is produced; net output is defined as output less depreciation; labor is fully employed; the available capital stock is fully utilized; labor and capital are interchangeable; there is a constant return to scale, decreasing returns to a single input, and payment of capital and labor based on marginal physical productivity; technological developments that are neutral, a constant savings ratio, investment equals savings, a constant rate of capital depreciation, and a steady rate of population growth (Ajudua and Odishika, 2022).

According to the model, economic growth is boosted by an increase in the labor force and capital accumulation, but only temporarily because of decreasing returns. In an economy with just one worker, adding more workers results in a major increase in output. However, if the economy employs thousands of people, hiring more than one will not provide a noticeable increase in production. The economy will eventually develop gradually, with GDP rising at a pace commensurate with increases in the labor force and productivity. Under this stable condition, the nation's resources are depleted. The only factors that may accelerate economic growth at that point are technical innovation and advancement (Ajudua and Odishika, 2022).

The model anticipates "catch up growth" or convergence, which is the closing of the gap between developed and developing countries as a result of technical improvement. In other words, developing economies tend to overtake developed economies. This is because impoverished nations have less capital than affluent countries; therefore, each additional unit of capital will yield a higher return (Egbulonu & Ajudua, 2017). However, endogenous growth theory was created because the Solow-Swan neoclassical growth model was unable to explain long-term economic growth because of diminishing capital returns (Onyimadu, 2015) and because it was unable to explain the reason behind technological advancement (Orji, Ogbuabor & Anthony-Orji, 2015; Ajudua and Odishika, 2022).

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2.1.2 Endogenous Growth Theory

The endogenous growth theory holds that the long-term growth rate of an economy is set by endogenous factors. The theory contends that long-run growth is governed within the model and not by any exogenously determined factors (Egbulonu & Ajudua, 2017). Arrow (1962) was the first to formulate this theory. As it was previously believed that technological progress occurs exogenously rather than endogenously, he attempted to shed light on the roots of technological improvement, which is the primary engine behind economic growth (Ajudua and Odishika, 2022). The theories of Romer (1986) and Lucas (1988) represent significant advances in theory. Two distinct approaches for integrating human capital into economic growth models have been developed based on this theory. The first, which is based on Lucas's work, views the increase in human capital as the main factor driving growth, whereas Romer's second approach emphasizes the role that human capital plays in innovation and acceptance of new technology (Ajudua and Odishika, 2022).

Endogenous technological progress, determined by investment speed, capital stock size, and human capital stock, is encouraged by the hypothesis. Levine (1991) and Bencivenga and Smith (1991) initially proposed the Endogenous Growth Model as a way for financial institutions to impact long-term economic growth. Based on the idea that changes in wealth distribution, financial stability, and technological improvements affect growth outcomes, they provide both direct and indirect links. Therefore, the relationship between long-term societal development and financial advancement depends on the importance of productivity growth in financial markets, investments, development, and savings (Samuel-Hope, Ehimare & Osuma, 2020).

While both the Solow-Swan and the Endogenous models provide an explanation of how economies grow, they were unable to spur economic growth in less developed countries because of their assumptions about the symmetry of the economy's sectors or the existence of a single market for a particular product. Thus, scholars and other interested parties have proposed alternative hypotheses to explain the conditions necessary for economic growth, especially in less-developed countries.

2.1.3 Keynesian Theory on Financial Deepening

Theoretically, the development of the financial system and the actual economy are mutually reinforcing, as stated in the financial deepening equation, which draws on literature on finance and development. It describes how the government influences financial intermediation in determining financial pricing. The Keynesian theory of financial deepening makes the following assumptions. According to Orji *et al*. (2015), the Keynesian hypothesis of financial deepening, based on Keynes' theoretical work from 1936, calls for government intervention in financial markets. The hypothesis states that financial deepening requires an increase in government expenditure. Therefore, the idea contends that, to boost the economy and attain full employment, the government must raise expenditures.

Keynes asserted that government expenditure is a variable that may be included in policies aimed at promoting economic expansion. According to him, a shift in spending has doubled national revenue that double (Ajudua, 2018). This is because government spending raises income and aggregate demand, which, in turn, drives the need for money (Mckinnon, 1973). Monetary policy and macroeconomic modelling depend on the stability of money supply, which is also required for economic development (Okonkwo, Ajudua & Alozie, 2014). Since Keynes's theory was unable to address the issues of high rates of unemployment, inflation, and economic stagnation, its acceptance began to wane in the 1970s (Yilmaz & Keskin, 2018). Unfortunately, there are many similarities between this situation and the current situation in Nigeria. The theory's approach to financial

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repression was replaced with one that prioritizes financial liberalization, leading to the development of Mckinnon/Shaw theory.

2.1.4 Mckinnon/Shaw Theory

By abolishing credit regulations and enabling real interest rates to be decided by the market, among other things, the McKinnon (1973) and Shaw (1973) frameworks helped promote the notion of financial liberalization and the necessity of easing financial repression. Repression leads to excessive spending, poor investment, low savings, and slow economic progress. The primary way in which the McKinnon and Shaw models obstruct financial development is by pushing down interest rates, which is the result of any constraint or distortion placed on the banking sector, such as reserve and liquidity requirements and interest rate restrictions (Capannelli, Lee & Petri, 2009). According to the models, the rise in real interest rates resulting from interest rate liberalization boosts investment, raises savings, and eventually causes the economy to grow.

As a result, the McKinnon-Shaw method focuses on market inefficiencies caused by financial repression, which negatively impact bank performance and financial growth. According to Orji *et al*. (2015), McKinnon and Shaw argued that financial liberalization is a necessary instrument for emerging nations to build their finance sectors and accelerate real growth. Financial liberalization boosts savings by raising the real deposit rate and boosting private investment in significant economic areas, both of which promote economic development. The McKinnon-Shaw framework argues that for an economy to experience economic growth through more efficient capital accumulation and allocation, it is necessary to remove constraints on interest rates, credit management, and other financial rules.

2.1.5 Financial Development Hypothesis

The key hypothesis here is the demand following finance and supply leading hypothesis. The supply leading hypothesis establishes a nexus between financial deepening and economic growth, in which it is predicted that the supply of financial resources from the financial sector to the real sector of the economy stimulates economic growth. The finance lead growth hypothesis is traceable to the work of Schumpeter (1911), who explained that the services provided by financial intermediaries, such as mobilizing savings, giving loans to evaluate projects, managing risk, and facilitating transactions, are essential for technological innovation and economic development. This work was also supported by Shaw (1973), McKinnon (1973), King and Levine (1993), and more recently by Calderon and Lui (2002). Supply leading hypotheses suggest a causal link between finance and growth. Such causality is expected to flow from finance to economic growth, with no feedback effect. This means that a well-functioning financial sector is a precondition for economic growth. McKinnon (1973) explains that a well-functioning financial sector minimizes transaction costs and asymmetric information, leading to an improvement in financial intermediation.

An opposing view to the supply leading hypothesis is the demand-following hypothesis pioneered by Robinson (1952). According to this view, financial deepening depends on the growth that occurs in the real sector of the economy. This finding suggests that causality runs from economic growth to financial deepening. The underpinning of this idea is that an increase in demand for financial services leads to growth in the financial sector growth (Calderón and Liu, 2002). Singh (1999) further explains that when an economy expands, there is an increase in macroeconomic activities that results in increased demand for financial services, leading to developments in the financial sector. These opposing views may be supported by empirical evidence. However, Patrick's (1966) study explains why these opposing views exist in what may be referred to as the "stage of development". This study

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concludes that the causal relationship between financial deepening and economic growth depends on the level of economic development. Specifically, the supply leading hypothesis holds in economies in the early stages of development, whereas the demand-following hypothesis holds in economies in their advanced stages of development. The argument here is that when the economy is in the early stages of development, the financial sector plays a catalytic role in stimulating real sector growth, but when the economy is at an advanced level, there will be an increased demand for financial services, and hence, the real sector will play a leading role in financial sector development.

The theoretical framework of this study is based on the supply leading financial hypothesis, whereby development in the financial sector is expected to drive development in the real economic sector.

2.2 Empirical Literature Review

A vast body of research has been conducted on the relationship between financial development and economic growth. The most important studies on this subject (Goldsmith, 1969; Mckinnon, 1973; Shaw, 1973) provided the first evidence. Goldsmith (1969) investigated how the financial structure affected the development of 35 countries between 1860 and 1963. He reported a positive connection between these two. McKinnon (1973) examined the same problem in Argentina, Brazil, Chile, Germany, Indonesia, Korea, and Taiwan in the years following World War II. He found that quicker growth is stimulated by more efficient financial systems. Shaw (1973) presented corroborating results. He demonstrates how financial intermediaries use lending and borrowing to encourage investment and increase production growth.

Ozturk (2008) used the VAR framework to examine the link between Turkey's economic growth and its financial development between 1975 and 2004. The results demonstrate a two-way (bidirectional) causal relationship between economic expansion and financial development. Nzotta and Okereke (2009) examine the factors that influence Nigeria's financial deepening. This study utilized time-series variables from 1986 to 2007. This study used a trend analytical approach and a two-stage least square regression technique. The results show that financial deepening may be statistically predicted by interest rates, financial savings ratios, cheques to GDP ratios, and deposit money bank ratios to GDP. The analysis concludes that Nigeria has little ineffective financial deepening.

Omankhanlen (2012) examined financial sector changes and their effects on the Nigerian economy from 1980 to 2008 using the OLS technique. Even with the continued volatility of lending rates, the analysis shows that banking sector changes had a positive impact on the Nigerian economy. The analysis concluded that the financial sector's progress was due to factors other than the reforms implemented. To determine the impact of financial intermediation on economic growth in Nigeria, Shittu (2012) used secondary data from 1970 to 2010 and applied an error correction model and cointegration test. The study found that despite Nigeria's low financial index, financial intermediation has a significant impact on economic growth. The study concluded that the financial system failed to maintain effective financial intermediation, especially when it came to credit distribution and the substantial monetization of the economy.

Onwumere, Onodugo, and Ibe (2012) investigated how Nigeria's economic growth was impacted by financial deepening between 1992 and 2008. This study used the supply leading concept as its theoretical foundation. Broad money velocity, money stock diversity, market capitalization, market liquidity, and economic volatility are proxies for financial deepening, whereas the rate of gross domestic product is the proxy for the dependent variable. Research indicates that although broad money velocity and market liquidity contribute to economic growth, market capitalization, economic volatility, and stock diversity did not significantly influence economic growth within the studied time.

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As a result, the research suggests implementing a governmental strategy that would gradually raise the money supply, generating and increasing liquidity, encouraging saves, and enhancing overall economic efficiency.

Nguena and Abimbola (2013) used the West African Economic and Monetary Union (WAEMU) scenario to analyze the dynamics of financial deepening and its implications for financial policy coordination in a monetary union. To identify some stylized facts about this issue, this study used an empirical investigation in both static and dynamic panel data econometrics along with a hypothetical-deductive theoretical approach. The empirical investigation led to the following global recommendations regarding this issue. It is clear from the sub-region's convergent dynamics that harmonizing financial policies after five years has the best effect. This shows that a single, efficient monetary policy that indirectly targets the subregion's financial depth is feasible.

Using yearly time series data spanning 1960 to 2011, Aye (2013) examined the dynamic causal link between financial deepening, economic growth, and poverty in Nigeria. The long-term link between finance, growth, and poverty is investigated using the Johansen cointegration test. Using a modified Haio-Granger causality within a Vector Autoregressive (VAR) and Vector Error Correction Model (VECM) framework, the short- and long-term causality between these variables is investigated. The findings provide no indication of a long-term balance among poverty, economic development, and financial depth. The study's findings indicate a short-term unidirectional causal relationship between growth and poverty, conditional on financing. This bolsters the theory that money indirectly influences poverty through growth.

Igwe, Edeh, and Ukpere (2014) looked at how Nigeria's economic growth was affected by financial deepening between 1981 and 2012. The supply leading hypothesis was chosen as the study's theoretical foundation. The long-term association was tested using the Engle-Granger Cointegration approach and the Error Correction Model (ECM). The money supply has a positive and marginally significant impact on economic growth, according to the findings. Credit to the private sector, however, was unfavourable and insignificant in the near term. The ECM's adjustment speed is 25.51%, meaning that even in the event of short-term changes, GDP will converge at a rate of around 25.51% each period to its long-term equilibrium path. The conclusion is that Nigeria's economic growth is not being positively impacted by financial deepening as intended. Therefore, to promote investment and economic growth, access to private finance must be improved and expanded.

Mba (2015) used long-run estimates from the Ordinary Least Square approach to examine the effects of financial liberalization on economic growth in Nigeria between 1986 and 2011. The results demonstrated that financial liberalization has a negative effect on output growth in Nigeria when credit to the private sector is measured as a ratio of GDP. The study made the case that the credits given to the private sector were instead utilized to purchase and sell consumables rather than for productive endeavours that may have raised production. A long-term link between the variables was revealed by the cointegration result. According to the study, commercial banks should prioritize lending to legitimate private investors rather than the government and powerful borrowers.

Similarly, Ebiringa and Duruibe (2015) used the vector autoregressive model to examine the connection between Nigeria's economic growth and the development of its financial sector. The empirical findings showed that there is no long-term causal relationship between growth and financial system development indices. Financial development has a good short-term impact on economic growth. According to the research, to effectively support both short- and long-term growth, the financial system required to be further deepened by providing cutting-edge financial goods and services as well as prudent monetary policy formulation and execution.

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With time series data spanning from 1981 to 2010, Kibet and Agbelenko (2015) employed the General Moment Method (GMM) to assess the connection between financial development and economic growth in the West African Economic and Monetary Union. Their findings indicated a positive, statistically significant, bidirectional causal link between financial development and economic growth. It was suggested that measures to control inflation, encourage trade liberalization, and attract foreign direct investments be taken.

Ghildiyal, Pokhriyal, and Mohan (2015) used the Granger ECM approach and the autoregressive distributed lag (ARDL) Bound testing strategy to examine the causal relationship between financial depth and Indian economic growth. The study concluded that financial development and economic growth are correlated over the long run. Furthermore, the study indicated areas for improvement in financial depth and showed how it fosters economic growth over the long and short terms.

Using the autoregressive distributed lag (ARDL) method of cointegration analysis, Iheanacho (2016) conducted an empirical investigation of the link between the development of financial intermediaries and economic growth in Nigeria from 1981 to 2011. The findings demonstrated that there is a strong short-term negative correlation and an insignificant long-term negative correlation between financial development and economic growth in Nigeria. The findings emphasized how important the oil industry is to Nigeria's economy. By creating an institutional framework that would direct financial resources in the economy towards profitable investments, the research suggested bolstering the financial system's intermediary role in the Nigerian economy.

Ndako (2017) investigated the relationship between financial development, investment, and economic growth in Nigeria using the conventional Johansen VAR framework and the endogenous and exogenous Johansen cointegration structural break frameworks. In Nigeria, a long-term correlation was found between financial development, investment, and economic growth. The study also showed that investment is a crucial conduit via which financial innovations influence economic expansion.

For the years 1970–2013, Karimo and Ogbonna (2017) investigated the relationship between financial deepening and economic growth in Nigeria. The supply-leading theory is supported by the findings of the study, which used the Toda-Yamamoto augmented Granger causality test to examine the relationship between growth and financial deepening in Nigeria. According to the study, governmental initiatives should be focused on reducing barriers that impede the expansion of lending to the private sector and on regaining investors' trust in the functioning of the stock market.

Paul (2017) evaluated how financial development affected Nigeria's economic growth using secondary data covering the years 1986 to 2015. As estimation techniques, cointegration, the ECM, and the OLS method were applied. The study proved that the financial depth indices influenced Nigeria's economic growth over the long run. Additionally, the study showed a positive and substantial correlation between economic growth and financial depth. The paper recommended financial inclusion, financial reforms, infrastructural development, and an efficient payment system as ways to boost savings. To promote investment and effective resource allocation, it was also recommended to increase public trust in the currency and stock markets.

Osisanwo (2017) used yearly time series data from 1980 to 2014 to investigate the relationship between financial development and economic growth in Nigeria. Prior to utilizing the ordinary least square estimation approach to assess the long-run estimations, the study examines for the unit root and cointegration to ascertain the time series features of the variables. The findings demonstrate that every financial development measure, with the exception of the private sector credit ratio, positively

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affects Nigeria's economic expansion. Accordingly, the study contended that for the nation to witness finance-led growth, the central bank should guarantee that low-interest loans are accessible to regional industrial investors.

From 1970 to 2016, Ademola and Marshal (2018) looked on how financial deepening affected Nigerian manufacturing companies' performance. The Autoregressive Distributed Lag model and Mann-Whitney U-test were used to evaluate the hypotheses once the model was established. Robust regression findings were ensured by running the Breusch-Pagan-Godfrey, Phillips-Perron, and Augmented Dickey-Fuller tests. The study's findings showed that market capitalization has a direct and statistically insignificant impact on the index of manufacturing production in the short term, but an indirect and statistically significant impact on the index of manufacturing production in the long term. Credit to the private sector also had an indirect and statistically insignificant impact on the index of manufacturing production in Nigeria.

The impact of financial deepening on Nigeria's economic growth between 1986 and 2018 was assessed by Nwakobi *et al*. (2019). The Granger Causality analysis was used to evaluate the influence of the model using the Auto-regressive Distributive Lag (ARDL) technique. According to the study, financial deepening has no impact on Nigeria's economic growth. The study also indicated that the degree of development in the banking industry is influenced by the rate of economic growth. Accordingly, to facilitate the effective and efficient mobilization of resources to quicken the expansion of the Nigerian economy, the Securities and Exchange Commission and the Central Bank of Nigeria should develop and put into action policies aimed at strengthening the banking industry and the capital markets.

The link between financial deepening and economic development in Nigeria between 1981 and 2018 was studied by Bassey and Effiong (2020). The ratio of private sector credit to GDP served as the financial deepening indicator. The unit root test, bounds test, Granger causality test, and error correction mechanism were all used in the study. The supply-leading finance hypothesis was likely true, as indicated by the Granger causality test results, which showed a unidirectional causal relationship between financial deepening and economic growth in Nigeria. Furthermore, financial development and economic growth have a favourable and substantial association over the long term as well as in the short term.

Ajudua and Odishika (2022) looked at how Nigeria's economic growth was affected by financial evelopment between 1986 and 2020. Upon specification of the model, the variables were tested for existence of a unit root, and stationarity was either attained at order zero I(0) or order one I(1). Thus, the ARDL and ECM estimating approaches were used to analyze the model. The long-term and ECM estimates demonstrate that while lending rates and credit to the private sector had no appreciable influence on Nigeria's economic development over the research period, the money supply, market capitalization, and liquid liabilities did. It was suggested, considering the empirical results, that financial service providers be allowed to lend to the private sector at acceptable rates by altering the lending rate. This will increase investment and savings, both of which are essential for growth.

It can be observed from the empirical review that most of the studies focuses on two key financial development variables – broad money supply as a ratio of GDP and credit to the private sector as a ration of GDP – as they affect economic growth. These measures of financial development have been over flogged in empirical works. In this study, we divert our attention to a different index of financial development – interest rate spread – which measures intermediation efficiency of the financial system. The empirical result further revealed mixed findings regarding the influence of financial development on growth, thereby creating research gap. This study therefore utilizes recent data that

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covers the period 1981 to 2022 to explore the effect of financial sector development on the growth of the Nigerian economy.

METHOD

3.1 Model Specification

In order to investigate the influence of financial development on economic growth in Nigeria, the study utilizes a modified model of Igwe, Edeh & Ukpere (2014). In their study, they modelled economic growth (RGDP) as a function of broad money supply as a ratio of GDP (MS) and credit to the private sector as a ratio of GDP (CPS). Following that the literature have been over flogged with the use of the CPS and MS as a measure of financial development, the model for this study is thus specified by using the interest rate spread as a measure of financial development. This index measures the intermediation efficiency of the financial system in an economy. The model for this study with further modification is therefore specified as follows:

$$RGDP_t = f(GFCF_t, LABF_t, INTS_t, ESTR_t, EXCR_t, INFR_t, GOVT_t) \quad (3.1)$$

Where RGDP is the growth rate of real gross domestic product (measuring economic growth), GFCF is the gross fixed capital formation (% of GDP), LABF is the growth rate of labour force, INTS is interest rate spread which measures intermediation efficiency, ESTR is the economic structure which measures the extent of industrial to manufacturing production (measured as a ratio of industrial output to agricultural output), EXCR is average naira-dollar official exchange rate, INFR is the inflation rate, and GOVT is the total government expenditure (% of GDP).

The model specified in Equation (3.1) is therefore expressed in an explicit form to capture the necessary parameters to be estimated and the stochastic term. This is shown as follows:

$$RGDP_t = \beta_0 + \beta_1 GFCF_t + \beta_2 LABF_t + \beta_3 INTS_t + \beta_4 ESTR_t + \beta_5 EXCR_t + \beta_6 INFR_t + \beta_7 GOVT_t + \mu_t \quad (3.2)$$

3.2 Nature and Sources of Data

The data for this study are secondary data which covers the period 1981 to 2022. These data on the variables of interest were obtained from the Central Bank of Nigeria statistical bulletin and the World Bank database. While data on labour force and real GDP growth rate were obtained from the World Bank, data on the rest of the variables were either obtained directly or constructed from data from the Central Bank of Nigeria (CBN) statistical bulletin. For instance, data on economic structure were constructed using data on agricultural output and industrial output which were obtained from the CBN bulletin. A summary of data, sources, and unit of measurement is presented in Table 3.1 for all the variables use in the study.

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Table 3.1: The description and sources of data

S/N	Variable	Description	Measurement	Source
1.	INFR	Inflation Rate	Annual inflation rate (%)	Central Bank of Nigeria (CBN)
2.	LABF	Labour Force	Growth rate of population aged 15-64 years.	Computed from data derived from World Bank
3.	GOVT	Government Expenditure	Total government expenditure, % of GDP.	Computed from data derived from CBN
4.	EXCR	Official naira-dollar Exchange Rate	Monthly Averages	CBN
5.	ESTR	Economic Structure	Total Industrial output divided by total agricultural output.	Constructed from data derived from CBN
6.	INTS	Interest Rate Spread (intermediation efficiency)	Lending interest rate less deposit rate, %. A narrow spread implies low transaction costs, which lessens the costs of funds for investment, critical to economic growth.	CBN
7.	GFCF	Investment	Goss fixed capital formation, % of GDP.	Computed from data derived from CBN
8.	RGDP	Economic Growth	The growth rate of real gross domestic product at 2010 market prices.	World Bank

Source: Compiled by the Researcher.

The financial sector's efficiency in intermediation is measured by the interest rate spread, which is the difference between the cost of mobilizing liabilities and the earnings on assets, as previously mentioned in Table 3.1. Low transaction costs, which lower the cost of capital for investment — a vital component of economic growth — are indicative of a narrow spread.

3.4 Technique of Analysis

3.4.1 Diagnostic Test

The conduct of diagnostic test in this study, by examining the unit root properties of the variables, is necessitated due to the fact that our variables are time series in nature. The unit root test is conducted to establish the order of integration (or stationarity) of a given time series variable. In testing for the stationarity of the series, the Augmented Dickey-Fuller (ADF) and the Phillip-Peron unit root test were applied. The test is conducted under the constant and trend assumption on the level and first difference. The determination of the order of integration is of utmost importance as it directs the researcher on the appropriate technique of analysis to be utilized. This is because regressing a non-

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stationary time series variable with another non-stationary time series variable will produce a spurious result. Given a time series variable Y, the test equation is presented below:

$$\Delta Y_t = \alpha_0 + \alpha_1 Y_{t-1} + \sum_{i=1}^{m} \alpha_2 \Delta Y_{t-i} + \varepsilon_t \quad (3.3)$$

And that

$$\Delta Y_t = \alpha_0 + \delta t + \alpha_1 Y_{t-1} + \sum_{i=1}^{m} \alpha_2 \Delta Y_{t-i} + \varepsilon_t \quad (3.4)$$

Where Y_t is a time series, t is a linear time trend, Δ is the first difference operator, β_0 is a constant, i is the optimum number of lags in the independent variables, and ε_t is random error term. Equation (3.3) represents the ADF unit root test based on the constant with no trend assumption, while Equation (3.4) follows the constant with a linear deterministic time trend assumption. The null hypothesis for the test is that Y_t contains a unit root and is specified as follows:

H_0: $\alpha_1 = 1$

Against the alternative hypothesis, that there is no unit root, expressed as:

H_1: $\alpha_1 < 0$

If the estimated α_1 is significantly less than 0 as measured by a τ-statistic (read as tau statistic), then we can reject the null hypothesis of a unit root; this implies that the variable is stationary. If the estimated α_1 is not significantly less than 0, then we cannot reject the null hypothesis of a unit root; this implies that the variable is non-stationary.

3.4.2 Autoregressive Distributed Lag (ARDL) Approach

Succeeding the unit root test, the study ensues to study short- and long run bond among the variables. This is completed using ARDL approach called the "bound test approach to cointegration". The ARDL model developed by Pesaran, Shin and Smith (1996) and later promoted by Pesaran, Shin and Smith (2001) is more expedient to other cointegration measures as it can be used when the variables under concern are integrated of order zero I(0) and order one I(1). With this, bound test eradicates the capriciousness in the order of integration against cointegration approach. Also, it produces superior outcome since the error correction mechanism (ECM) can be gotten through simple linear transformation, which integrates short-run adjustments with long-run equilibrium without losing any information in the long run. Also, for a sample size of 42 observations (1981–2022), the approach is more suitable.

Two sets of adjusted critical values put forward by Pesaran *et al*. (2001) are the lower and the upper bounds. The former assumes that all variables are stationary at levels, while the later indicates that they are all stationary at first difference. The decision rule is that the null hypothesis of no cointegration is overruled if the F-statistics is beyond the critical upper bound test, while the null hypothesis cannot be overruled if it falls below the lower bound. Lastly, the outcome would be considered as indecisive if it falls between the lower and upper bound.

In line with Pesaran *et al*. (2001), the unrestricted error correction mechanism for testing cointegration among the variables used in this study is stated as in Equation (3.5).

$$\Delta RGDP_t = \varphi_0 + \sum_{i=1}^{p} \varphi_1 \Delta RGDP_{t-i} + \sum_{i=0}^{q} \varphi_2 \Delta GFCF_{t-i} + \sum_{i=0}^{q} \varphi_3 \Delta LABF_{t-i} + \sum_{i=0}^{q} \varphi_{4i} \Delta INTS_{t-i} + \sum_{i=0}^{q} \varphi_5 \Delta ESTR_{t-i} + \sum_{i=0}^{q} \varphi_5 \Delta EXCR_{t-i} + \sum_{i=0}^{q} \varphi_6 \Delta INFR_{t-i} + \sum_{i=0}^{q} \varphi_7 \Delta GOVT_{t-i} + \theta ECM_{t-1} + \mu_t \quad (3.5)$$

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Where p and q are the optimal lag length for the dependent and explanatory variables respectively; θ_1 measures the speed of adjustment of the system to its long run equilibrium; and ECM is the error correction model. It is expected that for the model to adjust to long run equilibrium, θ must be negative ($\theta < 0$) and statistically significant.

4. Empirical Findings

4.1 Descriptive Statistics

The descriptive properties of the variables are given in Table 1. The analysis is done for a total of forty-two (42) observations.

Table 1: Descriptive properties of the variable

	RGDP	GFCF	LABF	INTS	INFR	EXCR	GOVT
Mean	3.046	28.192	2.206	6.414	18.947	115.656	5.944
Median	3.449	26.598	2.216	6.960	12.942	114.899	3.728
Maximum	15.329	79.954	2.263	11.064	72.836	425.979	32.683
Minimum	-13.128	13.787	2.138	0.317	5.388	0.618	0.058
Std. Dev.	5.319	14.997	0.047	2.699	16.455	119.183	7.894
Skewness	-0.832	1.623	-0.169	-0.675	1.877	1.025	1.948
Kurtosis	4.736	6.003	1.362	2.813	5.437	3.230	6.128
Jarque-Bera	10.119	34.211	4.898	3.247	35.058	7.452	43.699
Probability	0.006	0.000	0.086	0.197	0.000	0.024	0.000
Observations	42	42	42	42	42	42	42

Source: Researcher Computation.

It is observed from Table 1 that the real GDP growth rate averaged 3.046% and having a standard deviation of 5.319. Its maximum and minimum values were 15.329% and -13.128% respectively. The distribution of the variable is negatively skewed and leptokurtic in nature. The gross fixed capital formation (% of GDP) and labour force growth rate averaged 28.192% and 2.206% and has the standard deviation of 14.997 and 0.047 respectively. Their maximum values were respectively 79.954% and 2.263% while their minimum values were 13.787% and 2.138% respectively. While the distribution of GFCF was positively skewed, LABF was negatively skewed; and while GFCF was leptokurtic, LABF was platykurtic.

The index of financial development, interest rate spread, averaged 6.414% and has a standard deviation of 2.699, while its minimum and maximum values were 0.317% and 11.064% respectively. The distribution of INTS is negatively skewed and platykurtic in nature. Inflation rate recorded a mean value of 18.947% with a standard deviation of 16.455, having recorded a minimum value of 5.388% and a maximum value of 72.942%. The distribution of the variable is positively skewed and leptokurtic in nature. The naira-dollar official exchange rate averaged ₦115.66/$1 and recorded a minimum and maximum values of ₦0.62/$1 and ₦425.98/$1 during the study period. The variable has a standard deviation of 119.18 and it is positively skewed and leptokurtic in nature. Lastly, government expenditure (% of GDP) averaged 5.94% with a minimum and maximum values of

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0.07% and 32.68% respectively. The standard deviation is 7.89 and the variable has a positively skewed and leptokurtic distribution.

4.2 Correlation Analysis

The Pearson correlation coefficients presented in Table 2 are obtained to check on the degree of association between variables in the model. It also aids in detecting the possibility of multicollinearity in the model.

Table 2: Correlation matrix

	RGDP	EXCR	GFCF	GOVT	INFR	INTS	LABF
RGDP	1						
EXCR	0.146	1					
GFCF	-0.643	-0.687	1				
GOVT	0.061	0.640	-0.573	1			
INFR	-0.207	-0.290	0.177	-0.222	1		
INTS	0.283	0.437	-0.535	0.316	0.004	1	
LABF	-0.168	-0.783	0.633	-0.668	0.362	-0.397	1

Source: Researcher Computation.

The correlation matrix presented in Table 2 portrays that real GDP (economic growth) was positively correlate with exchange rate, government expenditure, and interest rate spread. Implying that real GDP moved in the same direction with the movements in the variables. However, real GDP correlated negatively with gross fixed capital formation, inflation rate, and labour force growth rate. This implies that real GDP moved in the opposite direction with the movement in the variables. It is also observed that apart from a strong negative relationship between real GDP and gross fixed capital formation, real GDP had a weak correlation with the rest of the explanatory variables. Further, the explanatory variables do not exhibit any perfect linear combination with each other hence, there is no possibility of multicollinearity in the model.

4.3 Unit Root Test

The unit root test is conducted to check the order of integration of the time series variables. the test is conducted using the augmented Dickey-Fuller (ADF) unit root test with constant and trend assumption. The result is presented in Table 3 where I(0) implies that the time series variable is stationary at level while I(1) implies that it is stationary at first difference.

Table 3: Augmented Dickey-Fuller (ADF) unit root test result.

	ADF Statistic				Order of
Variables	Level	P-Value	First Difference	P-Value	Integration
RGDP	-2.8836	0.1783	-10.6861	0.0000***	I(1)
EXCR	0.0963	0.9962	-4.9312	0.0014***	I(1)
GFCF	-3.8874	0.0224**	------	------	I(0)
GOVT	1.8346	1.0000	-5.5105	0.0003***	I(1)

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INFR	-4.1301	0.0121**	------	------	I(0)
INTS	-2.6917	0.2452	-6.7329	0.0000***	I(1)
LABR	-4.1954	0.0023**	-------	------	I(0)

*Note: ** and *** portrays significance at 5% and 1% respectively.*
Source: Researcher Computation.

The unit root test result presented in Table 3 portrays a mixed order of integration of the time series variables. In particular, the variables were integrated in mixture of levels and first difference. While gross fixed capital formation, inflation rate, and labour force growth rate were stationary at level, real GDP, exchange rate, government expenditure, and interest rate spread were stationary at first difference. This mixed order of integration requires the need to check for the existence of a long run relationship in the model using the Bounds test for cointegration.

4.4 Cointegration Test

The Bounds test for cointegration is conducted to check for the existence of long run relationship in the model since the time series variables were integrated at mixture of I(0) and I(1). For cointegration to exists, the F-statistic must lie outside the 5% critical lower and upper Bounds. The result is therefore presented in Table 4.

Table 4: Bounds test for cointegration result

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Significance	I(0)	I(1)
F-statistic	3.4995**	10%	1.99	2.94
k	6	5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

*Note: ** denotes significance at the 5% level.*
Source: Researcher Computation.

Given the result in Table 4, the test result indicated an F-statistic of 3.4995 with a 5% I(0) bound of 2.27 and I(1) Bound of 3.28. It is evident that the F-statistic lies outside the 5% I(0) and I(1) Bounds hence, there is a long run relationship in the model and the null hypothesis is rejected.

4.5 Autoregressive Distributed Lag (ARDL) Short Run Error Correction Model

The Bounds test have presented evidence of long run relationship in the model. Consequently, ARDL error correction model is estimated to check how the short run distortions in the model is corrected for equilibrium to be restored in the long run. Table 5 presents the result. The result shows that the error correction term is negative and statistically significant at the 1% level. it follows that 94.98% of the total distortions in the short run are corrected on the annual basis for equilibrium to be restored in the long run.

The result in Table 5 indicated that changes in labour force exerted a positive but insignificant short run effect on economic growth during the study period. However, the lags in the variable exerted negative and significant effect. Thus, the first and second period lags of labour force reduced

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economic growth by 0.3427% and 0.2246% respectively. The implication of this is that past period labour force could not bring about growth in the economy. The reason for this is not far-fetched since the labour force in Nigeria is ridiculed with high underutilization of labour which has a dampening effect on aggregate output.

The short run effect of changes in the capital-output ratio on economic growth is negative but insignificant but its lags exerted negative and significant effect. This negative effect aligns with the Harrod-Domar growth model where changes in output is positively related with the savings rate and negatively related with the capital-output ratio. It follows from the coefficients that the first and second period lags of GFCF reduced economic growth by 1.1832% and 0.5868% respectively.

Table 5: Short Run Error Correction Model Estimates

Dependent Variable: D(RGDP)				
Selected Model: ARDL(1, 3, 3, 2, 1, 1, 3, 2)				
Variable	Coefficient	Std. Error	t-Statistic	Probability
D(LABR)	0.0261	0.0689	0.3783	0.7113
D(LABR(-1))	-0.3427	0.0680	-5.0370	0.0002***
D(LABR(-2))	-0.2246	0.0824	-2.7249	0.0173*
D(GFCF)	-0.0760	0.1681	-0.4522	0.6586
D(GFCF(-1))	-1.1832	0.2265	-5.2236	0.0002***
D(GFCF(-2))	-0.5868	0.1934	-3.0335	0.0096*
D(INTS)	-0.9598	0.2752	-3.4870	0.0040**
D(INTS(-1))	-0.5692	0.2310	-2.4640	0.0285*
D(ESTR)	-6.1086	2.8913	-2.1128	0.0545*
D(INFR)	-0.00004	0.00003	-1.75100	0.1018
D(GOVT)	-0.6235	0.2507	-2.4871	0.0272*
D(GOVT(-1))	-0.8709	0.2837	-3.0701	0.0089*
D(GOVT(-2))	-0.9908	0.2945	-3.3642	0.0051*
D(EXCR)	-0.1027	0.0237	-4.3329	0.0008**
D(EXCR(-1))	-0.0944	0.0351	-2.6887	0.0186*
ECM(-1)	-0.9498	0.1209	-7.8554	0.0000***
R-squared	0.8401	Mean dependent var		0.0015
Adjusted R-squared	0.7282	S.D. dependent var		4.3694
S.E. of regression	2.2780	Akaike info criterion		4.7820
Sum squared resid	103.7856	Schwarz criterion		5.4486
Log likelihood	-68.6850	Hannan-Quinn criterion		5.0121
Durbin-Watson stat	2.1029			

*Note: *, ** and *** portrays significance at 10%, 5% and 1% respectively.*
Source: Researcher Computation.

The index of financial development (interest rate spread) is observed to exert a negative and significant short run effect on economic growth during the study period. This aligns with the a priori expectations. It follows that a 1% increase in interest rate spread will lead to a 0.9598% decrease in economic growth. Also, its one period lag exerted a negative and significant short run effect on

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economic growth during the study period. It follows that the previous year's INTS reduced the current economic growth by 0.5692%. This therefore points to the fact that intermediation efficiency accompanied with lower interest rate spread will increase growth within the Nigerian economy.

The economic structure was observed to exert negative and significant short run effect on economic growth during the period of analysis. Thus, a 1% increase in economic structure will reduce the growth rate of the economy by 6.1086%. The implication of this is that the dominance of the agricultural sector over the industrial sector of the economy will not bring about the needed externalities that can drive growth. Inflation was also observed to exert a negative but insignificant effect on growth.

The effect of changes in government expenditure and its lags were observed to negatively impact on the growth rate of the economy. This is associated with the high level of corruption and misappropriation of funds within the Nigerian political space. As pointed out by Collin Clerk, once the share of government activity to total economic activity exceeds 25%, inflation occurs even under a balanced budget. Nigeria have exceeded the 25% critical limit as such, public spending may not bring about the desired effect on growth. Therefore, a 1% increase in government spending (% of GDP) will lead to a 0.6235% decline in growth while the first and second period lags of government expenditure (% of GDP) reduced output growth by 0.8709% and 0.9908% respectively.

Exchange rate and its one-period lag exerted negative and significant short run effect on economic growth in Nigeria. Thus, exchange rate depreciation stifle growth while appreciation propels growth. It follows that a 1% increase in the exchange rate will lead to a 0.1027% decrease in economic growth while the previous years' exchange rate reduced the current years' output growth by 0.0944% on the average.

The -squared indicated that the explanatory variables in the model accounted for about 84.01% of the total variations in economic growth in Nigeria during the period of analysis. The represents a good fit of the regression line. This explanatory power of the model remains at 72.82% after adjusting for the degree of freedom.

4.6 Long Run Estimates

Having explored the short run effect of the variables, it is therefore pertinent to check how the variables behave in the long run. The result is presented in Table 6.

Table 6: Long Run Model Result

Variable	Coefficient	Std. Error	t-Statistic	Probability
LABR	0.3272	0.0839	3.9012	0.0018**
GFCF	1.0245	0.3121	3.2830	0.0059**
INTS	0.8225	0.4060	2.0259	0.0638*
ESTR	12.7377	3.4487	3.6935	0.0027**
INFR	0.0007	0.0020	0.3714	0.7159
GOVT	0.0601	0.2364	0.2544	0.8032
EXCR	-0.0195	0.0303	-0.6433	0.5312
C	-9.9864	7.2778	-1.3722	0.1932

*Note: *, **, and *** portrays significance at 10%, 5% and 1% respectively.*
Source: Researcher Computation.

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In the long run, both labour force and gross fixed capital formation exerted a positive and significant effect on economic growth. Thus, adjustments over time will ensure that the appropriate capital-output ratio is utilized, and the labour force is fully employed. Hence, a 1% increase in labour force growth rate will lead to a 0.3272% increase in economic growth, while a 1% increase in capital-output ratio will lead to a 1.0245% increase in economic growth in Nigeria.

The long run effect of interest rate spread is observed to be positive and significant in influencing economic growth. Thus, a 1% increase in interest rate spread will lead to a 0.8225% increase in economic growth in the long run. Therefore, financial efficiency ensures financial intermediation in mobilizing resources for investments which is crucial for growth.

The economic structure exerts a positive and significant long run effect on economic growth. Thus, a 1% increase in economic structure will lead to a 12.7377% increase in economic growth. While inflation rate and government spending exert positive but insignificant long run effect on economic growth, the long run effect of exchange rate on growth remains negative and insignificant in influencing growth.

4.8 Discussion of Findings

The major finding of this study is that financial sector development negatively affects growth in the short run but positively affects it in the long run. In the short run, there are some sort of structural bottlenecks which affects the transaction costs of the financial system. Such include the cost of energy which accounts for a greater part of the running cost of the banks. As such, banks will factor this into the lending rate causing a greater increase in the cost of borrowing which stifles investments and growth. Over time, adjustments will take place such that the interest rate spread becomes very narrow, thereby portraying lower cost of intermediation. This will ensure more mobilization of savings at a lower cost and granting of loans for investment at a lower cost too. Thus, investment is stimulated, and the overall growth of the economy is achieved.

CONCLUSION

The role of the financial system in propelling growth has been explored in the financial literature, portraying the intermediation of the financial system in mobilizing financial resources for investments. This intermediation role ensures that financial resources are mobilized from areas of surplus (with little or no productivity) to a more productive sector for investments. This intermediation role therefore points to the fact that developed financial system has great roles to play in the expansion of the real sector of the economy. As such, this paper focuses on exploring how financial sector development in terms of efficiency in intermediation as it affects the growth of the Nigerian economy. The study utilized time series data from 1981 to 2022 and the autoregressive distributed lag (ARDL) model as the technique of estimation. The data used for the study were subjected to the augmented Dickey-Fuller (ADF) unit root test to ascertain the order of integration of the time series variables. The result indicated that gross fixed capital formation, inflation rate, and labour force growth were stationary at level while real GDP growth rate, exchange rate, government expenditure (% of GDP), and interest rate spread were all stationary at first difference. This led to the use of the ARDL Bounds test for cointegration to ascertain the existence of long run relationship in the model. The test result indicated that there is a long run relationship among variables in the model.

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Hence, the study utilized the ARDL Error Correction Model to estimate both the short run and the long run models.

The key findings from the analysis are as follows: Interest rate spread exerted a negative and significant short run effect on economic growth in the short run, but a positive and significant effect in the long run. Therefore, increased interest rate spread could be detrimental to the short run growth of the economy as it presents evidence of high transaction cost in financial intermediation. In the long run, the economy will be able to adjust to distortions in the interest rate spread and therefore experiences a positive effect of financial intermediation efficiency on growth. Economic structure exerted a negative and significant short run effect on economic growth in Nigeria. This is because increased dominance of the agricultural sector relative to the industrial sector will not create the needed structural transformation to drive growth. In the long run, economic structure exerted a positive and significant effect on economic growth.

Exchange rat exerted a negative and significant effect on economic growth. This implies that continuous depreciation of the domestic currency will create lack of confidence on the economy's investment climate. Government expenditure (% of GDP) exerted a negative and significant effect on economic growth in the short run while the effect is positive but insignificant in the long run. Thus, increased government share on total economic activity in Nigeria is detrimental to growth. This arises from the poor institutional quality prevalent in Nigeria.

Given the findings of the study, it is therefore concluded that rising interest rate spread arises from high transaction cost associated in financial intermediation in developing economies with infrastructural deficiency. Hence, financial development is crucial for the growth of the real sector of the Nigerian economy. The paper recommended that there is need to further develop the Nigerian financial system by a narrower interest rate spread. This can be achieved through provision of necessary infrastructure such as power supply to cut down the transaction costs which are usually factored into the lending rate. Also, monetary policy decisions should not only be geared towardss increasing the lending interest rate. The deposit interest rate should also be favourably adjusted to encourage savings and provide customers with the time value of their money. In this way, more surplus units will be willing to save which provide a pool of fund for productive investments.

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