

# Effect of Financial Inclusion on Economic Growth in Nigeria

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## ABSTRACT

This study investigates the effect of financial inclusion on economic growth in Nigeria from 1992 to 2023. Autoregressive Distributed Lag (ARDL) Model technique was used for the estimation of the parameters. After estimation of the long run model and error correction model using ARDL, the study found that financial inclusion has a significant positive effect on economic growth in Nigeria in the short run. Also, in the long run, financial inclusion significantly affects the growth of the Nigerian economy. However, this relationship is negative. Hence, it can be concluded that, to improve the growth of the Nigerian economy in the short run, the Nigerian government must lay emphasis on improving financial inclusion across the nation state in the short run. But to ensure increasing growth levels in the long run, the government must branch into other segments of the economy as financial inclusion alone cannot sustain increasing growth levels overtime. Therefore, the study recommends that the Central Bank of Nigeria (CBN) should strengthen credit support programs for SMEs and rural borrowers through the promotion of regulatory and policy support for digital banking adoption.

**Keywords:** Financial Inclusion, Economic Growth

## INTRODUCTION

“Financial inclusion” has rapidly become a global discourse having piqued the interest of global economists. Over the years, more research have been done to examine the effect of this phenomenon on standard of living, poverty, inflation, welfare, trade conditions and even on economies around the globe. One cannot wonder why there is so much global interest in the subject because without inclusion, exchange would become increasingly difficult in the 21<sup>st</sup> century as most economies are transitioning to being “cashless” societies. Financial inclusion has become so important at both global and national level by both government and nongovernmental institutions that even the World Bank group of G20, International Monetary Fund (IMF), Alliance for financial Inclusion (AFI) and Consultative Group to Assist the Poor (CGAP) came up with many policies and initiative to reduce financial exclusion throughout the world (Ibrahim et al., 2023).

The Centre for financial inclusion publication (2015) describes full financial inclusion as a state in which all people who can use financial services have access to a full suite of quality services, provided at affordable prices, in a convenient manner, and with dignity for the clients. Conversely, financial exclusion refers to the inability of an individual, household or group to access particularly the formal financial products and services (Uruakpa et al., 2019). The World Bank (2014) defines financial inclusion as the degree that households and small enterprises could gain an access to financial services, such as deposits, loans, payments, remittances, and insurance. In other words, the availability and equality of opportunities to access financial services, such as banking, loans, equity, and insurance, are referred to as financial inclusion (Onwukanjo et al., 2024).

This availability is not the responsibility of a single party. A variety of providers ensure that financial services are made available to all. Despite the presence of various providers, mainly in the private sector, there are still alarming degrees of financial exclusion. As such, financial inclusion has emerged as a crucial development policy priority for many nations including Nigeria. Nigeria, the giant of Africa is the most populous African nation with a population of over 200 million; and yet, her average for financial inclusion, defined as the percentage of adults with access to financial services, stands at less than 70% in 2024 (EFInA, 2023). As opined by Onwukanjo et al. (2024), a significant economic challenge in Nigeria has been financial exclusion, with the majority of money staying outside the banking system. The overarching aim of financial inclusion is to ensure

that all adult members of society have easy access to a comprehensive range of financial products tailored to their needs and offered at reasonable costs encompassing payments, savings, credit, insurance, and pensions (Abdulmalik & Umar, 2024). In recent times, POS stations have become a major tool to foster inclusion especially in rural areas where there is difficulty in accessing financial services.

Nigeria's financial inclusion history began in 1976, when a 14-member committee looked at how well-suited the country's financial system was for rapid development (Onwukanjo et al., 2024). Between the 1960s and the 1980s, the average ratio of currency outside of the banking sector to the narrow money supply fell from 61.1% to 44.3% and 40.9%, respectively. It was believed that government policies and rising literacy rates were the causes of this decline. Public confidence was damaged by the banking industry crisis in the 1990s, which increased the value of money outside of the banking system (Onwukanjo et al., 2024). The goal of government initiatives to strengthen the financial sector was enhanced through the bank consolidation program and economic reforms which led to the formal conceptualization of financial inclusion.

Most research such as Wakdok (2018), Nwansi & Dibiah, (2023), and Abdulmalik & Umar (2024) posits that the concept of financial inclusion was introduced in the early 2000s in response to research finding that emphasized poverty and low level of economic growth as a direct consequence of financial exclusion. This agrees with Nwafor & Aremu (2018) establishing how financial inclusion is a very essential tool, which the government uses to stimulate economic growth due to its capacity for efficient allocation of productive resources, thus decreasing the cost of capital. This practice can also be referred to as an inclusive financial system as it improves the daily activities pertaining to management of finances, and as well as reduces the growth of non-formal sources of credit (such as money lenders), which are often found to be manipulative or exploitative (Abdulmalik & Umar, 2024).

Hence, it has become an open secret that Economic Growth which is the major macroeconomic objective can be enhanced through financial inclusion. But one cannot say the Nigerian government is oblivious to this fact. In order to enhance the flow of financial services to Nigeria's rural areas, government has, in the past, initiated a series of publicly financed micro and rural credit schemes and policies targeted at the poor. Notable among such schemes were the rural banking programme, sectoral allocation of credit, a concessionary interest rate, and the agricultural credit guarantee funds scheme. Other institutional arrangements were the establishment of the Nigerian Agricultural and Co-operative Bank Ltd (NACB), the National Directorate of Employment (NDE), The Nigerian Agricultural Insurance Corporation (NAIC), the People's Bank of Nigeria (PBN), the Community Banks (CBs), and the Family Economic Advancement Programme (FEAP) (Otiwu et al., 2018).

However, even after Nigeria has been implementing financial inclusion for almost 40 years, the data that are currently available indicate that performance is still not at its best (Onwukanjo et al., 2024). Comparing Nigeria to other nations in its bracket is uninspiring. As of 2024, Nigeria ranks 30th globally in financial inclusion according to the Global Microscope report. This marks an improvement from its previous rank of 36th in 2019. Furthermore, the EFINA Access to Finance (A2F) Survey report has said that formal financial inclusion in Nigeria has grown significantly from 56% in 2020 to 64% in 2023. Also, that 26% of Nigerians are financially excluded, down from 32% in 2020 (EFINA, 2023). While Nigeria is making progress, it still trails behind countries like South Africa and Ghana in terms of inclusion efforts. Additionally, mobile money services have shown slower adoption in Nigeria compared to regional counterparts such as Kenya and Ghana (Ifediora et al., 2022).

The need and importance of financial inclusion cannot be emphasized in the 21<sup>st</sup> century economy. In fact, in the United Nations' (UN) Sustainable Development Goals (SDGs), financial inclusion features prominently as a target objective in eight (8) out of the 17 SDGs. For example, Ifediora et al (2022) points out that to achieve health and well-being for all (SDG 3) amidst the novel coronavirus pandemic, financial inclusion through digital financial services can help minimize community-based transmission in Africa. Digital finance does this through providing secure, low-cost and contactless financial instruments across ecosystems (Ifediora et al., 2022). This point was reiterated during discussions between the visiting UNSGSA and the former Governor of the Nigerian Central Bank, Godwin Emefiele. Additionally, a report published by the McKinsey Global Institute highlighted the potential economic benefits of digital financial inclusion for Nigeria. It suggested that it could boost the GDP by up to 12.4% by 2025, generate around USD 36 million in new deposits, create approximately 3 million jobs,

reduce annual government leakages by USD 2 billion, and include about 46 million more people in the financial system. (Onwukanjo et al., 2024).

The foregoing shows that despite all the efforts by the government at various levels over the years to improve inclusivity, levels of inclusion within Nigeria have remained low. Furthermore, theory has postulated that improved engagement with financial services will improve the growth of the economy by improving economic activities and thus increasing the GDP. Thus, there is pressing need to measure the exact relationship between financial inclusion and economic growth in Nigeria. Therefore, this study seeks to investigate the effect of financial inclusion on economic growth in Nigeria from 1992 to 2023.

To investigate the effect of financial inclusion on economic growth in Nigeria, this study must probe into the relationship between key indicators of financial inclusion and economic growth. As such, some specific questions will be asked in this study.

These questions are;

1. What is the effect of rural bank deposit on the growth of the Nigerian economy?
2. How has the loan portfolio (amount of loans) of rural bank branches affected economic growth in Nigeria?
3. What is the effect of bank branch spread on economic growth in Nigeria?
4. What is the effect of commercial bank loans to small and medium scale enterprises as a percentage of total credit on economic growth in Nigeria?

## REVIEW OF RELATED LITERATURE

### Concept of Financial Inclusion

Financial Inclusion is a global concept. Hence, there are several views on the subject by various authors and researchers. While several definitions of financial inclusion exist, the underlying idea of the subject remains the same. Financial inclusion, according to CBN, is a process or circumstance that makes it simple for people to access, find, and use formal financial services. It broadens the concept to include not encountering any kind of problem opening a bank account, having affordable access to credit, and regularly enjoying easy use of financial system services and goods. Indeed, the supply of financial services to diverse societal sectors is known as financial inclusion, including impoverished individuals, socially marginalized groups, micro, small, medium, and large-scale enterprises, and governments (Christopher et al., 2023). It aims to ensure that qualified financial service providers meet the financial and social security needs of these previously excluded groups, accommodating their circumstances and specific requirements (Christopher et al., 2023). Emphatically, the issues raised by the Nigerian apex bank that points to the extreme are that financial inclusion should encompass ease of access to financial services at affordable cost, broad range of financial products and services that meet the desires of the people (Nkwede, 2015).

This is supported by Ifediora et al. (2022) as they posit that financial inclusion is the “absence of price or non-price barriers in the use of financial services”. In their argument, they maintain firmly that the sole aim of financial inclusion is improvement in access of financial services that basically involve improving the degree to which financial services are available to all at a fair price. Financial inclusion is the enabling access to financial resources and service for different economic agents at an affordable cost, especially to those with lower income (Mbutor & Ibrahim, 2013). It could also be said to be the delivery of financial services at affordable costs to the unbanked and low-income segments of society

Therefore, Financial Inclusion is the process that ensures the ease of access, availability and usage of the formal financial system for all members of the economy. It means that people are well educated to be willing to use financial services and these services are readily available at low-cost to ensure they are able to be used. We can then say that financial inclusion is the willingness and ability of the entire population to use formal financial services. Financial Inclusion covers sustainable, relevant, cost-effective and meaningful financial services for the financially underserved population especially rural areas (Uruakpa et al., 2019).

## The concept of Financial Exclusion

Financial exclusion is the direct opposite of financial inclusion. So we can take financial exclusion to be what obtains when there is no financial inclusion. In a more concrete term, Eromosele (2021) defines financial exclusion as the “inability to access necessary financial services in an appropriate form and time”. He adds that financial exclusion can be possible as a result of difficulties with access, conditions, prices or marketing or sector exclusion in response to negative perception or experiences.

Financial exclusion refers to the lack of access to affordable and appropriate financial services by certain individuals or groups, which can prevent them from fully participating in the formal financial system. According to World Bank (2006), "Financial exclusion is the inability of individuals, households, or groups to access financial products and services in an appropriate form to meet their needs. This includes access to services like savings, loans, and insurance that are affordable and useful to people's financial well-being." Hence, financial exclusion speaks not only of availability but also affordability.

Financial exclusion occurs when people do not have access to mainstream financial services such as bank accounts, credit facilities, and savings opportunities, which hampers their ability to manage day-to-day transactions, plan for the future, and achieve financial security (Eromosele, 2021). These definitions highlight the broad understanding of financial exclusion, emphasizing barriers to accessing essential financial services, whether due to socio-economic, geographic, or systemic factors. Thus this paper posits that financial exclusion is an unpremeditated process where the poor but bankable adults are denied any or all sort of financial services in the society.

## Empirical Review

Abdulmalik & Umar (2024) investigated the effect of financial inclusion on economic development in Nigeria, with the aim of analysing the interplay between the two variables through a review of relevant literature and empirical evidence. They found a nuanced understanding of the multifaceted relationship between financial inclusion and economic growth, shedding light on both the positive and negative aspects. Using data from 1981-2022 and employing the ARDL Bound Test, it was revealed that a short- and long-run relationship exists between financial inclusion and economic growth in Nigeria measured using gross domestic product per capita. This finding corresponds with Onwukanjo, et al (2024). They examined the impact of financial inclusion on the Nigerian economic growth for the period 1980-2019 with the aid of vector error correction model (VECM) approach. Their results revealed a bidirectional nature of causality relationship between the variables in the model during the period of the study. Their empirical results support that one percent increase in the financial inclusion proxy by; deposit from the rural areas (DRA), loan to rural areas (LRA), account owners of any type (AA) and electronic money banking/payment system (EMB) at lag (-2) will lead to [38%(DRA)-2), 92%(LRA)-2), 59%(AA)-2) and 03%(EMB)-2)] increases on Per capita income (PCI) respectively in Nigeria. However, the use of GDP per capita as a measure of economic development and growth is questionable. There is need to probe into the subject performing econometric analysis with the use of economic growth rate and checking if same relationship can be observed.

Saranu, et al (2024) and Nwansi & Dibiah (2023) also towed the same line. Saranu, et al (2024) investigated the impact of financial inclusion on economic growth in Nigeria. The study established credit to the private sector is positively related to economic growth and is statistically significant, However, ATM transactions have a positive and statistically insignificant relationship with economic growth in Nigeria. Nwansi & Dibiah (2023) also examined the relationship between financial inclusion and economic growth in Nigeria using the Ordinary Least Square multiple regression to analyze the data obtained from secondary sources for the period 1991-2021. The findings revealed that combined effect of ratio of broad money to GDP, credit to private sector to GDP, aggregate loan-to deposit ratio and liquidity ratio of commercial banks influenced economic growth in Nigeria. In addition to using GDP as a proxy for growth, using credit to private sector as a major measure of inclusion by these studies is flawed. The nominal value of credit to private sector could keep increasing with all the funds channeled to the conglomerates and rural communities as well as small businesses can be excluded. The deposits and loans of rural branches of commercial banks which are major variables to explain inclusion was not captured in this study. This is a major gap that this research aims to fill.



## Theoretical Framework

This study chooses to found this study on sound theoretical footing and hence performed a comprehensive evaluation of several theories of financial inclusion and of Economic Growth. Theories on Financial Inclusion reviewed include the; Public good theory of financial inclusion, Finance-Growth Theory, Sustainability Theory, Financial Intermediation Theory, Stage of Development Hypothesis, Modern Development Theory, Financial Liberalization Theory, theory of financial inclusion and Systems theory of Financial Inclusion. In addition, the theories on Economic Growth reviewed include the; Keynesian Economic Theory, Classical Growth Theory, Endogenous Growth Theory, Solow Growth Model and Schumpeter Theory of Economic Growth.

From the robust reviews of these theories, it can be observed that each of these theories have a contribution to make regarding the importance of financial inclusion and its contribution to economic growth. Indeed the relationship between finance and real activity has been a topic of debate since the 1776s. However, this study would take its foundational root in the finance-growth theory as its theoretical framework. The Finance-Growth nexus can be traced back to the work of Bagehot during 1870s and was advanced by the contributions of Schumpeter (1934), Goldsmith (1969) and Shaw (1973). He hypothesized that financial arrangement plays an acute part in manipulating an extended period of economic growth rates. This assumption premised a kind of "supply-leading" association between the financial sector and economic growth in that an efficient financial sector uses the finite resources from surplus (excess) units to shortfall units; consequently, enhancing the growth of other sectors in the economy (McKinnon, 1973).

This theory will be adopted for the theoretical framework in this study because of the belief that financial development creates a dynamic productive environment for growth through "supply leading" or "demand-following" effect (Wakdok, 2018). This theory also recognizes the lack of access to finance as a critical factor responsible for persistent income inequality as well as sluggish growth (Nwansi & Dibiah, 2023). Studies on financial development have identified four distinct areas as the driving force of economic growth (Babajide et al., 2015). The main one is the provision of a low cost reliable means of payment to all, particularly the low income group. The second is the role financial intermediation plays in increasing the volume of transaction and allocation of resources from the surplus unit to the deficit unit of the economy and in the process improve resource distribution (Odeniran & Udeaja, 2010). The third has to do with the risk management effect, that the financial system provides by curtailing liquidity risks, thereby enabling the financing of risky but more productive investments and innovations within the economy (Greenwood & Jovanovic, 1990; Bencivenga & Smith, 1991) and lastly, the financial sector provides information on possible investment and availability of capital within the system, thereby ameliorating the effects of asymmetric information (Ross, 2004).

Thus, the key points from this theory as relates to Nigeria are: government through the CBN economic policies will help to encourage the formation of formal financial institutions like deposit money banks and microfinance banks which will in turn make financial products available abundantly at an affordable cost (Obayori & George-Anokwuru, 2020). Additionally, the effective availability and usage of financial goods can contribute to the expansion and development of the economy (Nnachi & Ositaufere, 2020). Therefore, it is acknowledged that having access to a safe, simple, and affordable source of financing is a prerequisite for accelerating economic development, reducing income inequality, and eradicating poverty (Saranu et al., 2024). This creates equal opportunities, and enables those who are economically and socially excluded to integrate better into the economy, actively contribute to its growth, and protect themselves from economic shocks (Nwansi & Dibiah, 2023). This theory is important to this study because it posits that if the populace has easy access to financial services, through proper implementation of financial inclusion, economic growth would be improved. Hence, the finance-growth model is the theoretical framework upon which this study will evaluate the effect of financial inclusion on economic growth in Nigeria.

## RESEARCH METHODOLOGY

### Research Design

The study intends to adopt the use of ex-post facto research design. The Ex post facto design is a quasi-experimental study which examines how an independent variable affects a dependent variable. A quasi-

experimental design means that the variables were not randomly assigned. The decision to use the ex-post facto design was influenced by the fact that the study seeks to determine a cause-and-effect relationship between an independent variable and the dependent variables. The study also intends to use this research design, because the variables in the research have already occurred necessitating the use of secondary data.

### Model Specification

To provide insight into the effect of financial inclusion on economic growth in Nigeria, this study will adapt the model of Nkwede (2015).

The model is presented below.

$$GDP_t = \beta_0 + \beta_1 DLSE_t + \beta_2 DRBC_t + \beta_3 AMTL_t + \beta_4 BBSP_t + \beta_5 BSDV_t + \beta_6 INFR_t + \mu_t$$

Where:

Gdp- represents real gross domestic product as proxy Nigeria economic growth,

Dlse -represents deposit money bank loans to small scale enterprise,

Drsc- represents deposit of rural banks branches,

Amtl- represents amount of loans by rural bank branches,

Bbsp- represents bank branch spread,

Bsdv - Banking system development,

Infr- inflation,

u- error terms.

A few alterations are made to make the model a good fit for this analysis.

First, Instead of a proxy, economic growth rate will be used directly for the analysis making the general form of my model to be;

$$ECGR = f(FINC)$$

Where ECGR = Economic Growth

And FINC = Financial Inclusion

In addition, instead of the exact values of deposit money bank loans to small scale enterprise which have been seen to consistently increase over the years; this study will use the percentage of commercial bank credit to small and medium scale enterprises to total credit to measure inclusion. Furthermore, banking system development and inflation that was used as control variables will not be used in this analysis to confirm the exact relationship.

Therefore, the model presented below will be used to measure the exact relationship between the variables under consideration.

$$ECGR = f(RBDP, RBLN, BBSP, LSPT) \dots \quad (3.1)$$

From the above equation Economic Growth (ECG) is a function of Deposits from rural branches of commercial banks (RBDP), Loans to rural branches of commercial banks (RBLN), Bank Branch Spread (BBSP); Commercial Bank loans to small and medium scale enterprises as a percentage of total credit (LSPT) such that a change in any of the independent variable will lead to a change in economic growth.

Thus, stated in its econometric form we have;

$$ECGR_t = \beta_0 + \beta_1RBDP_t + \beta_2RBLN_t + \beta_3BBSP_t + \beta_4LSPT_t + \mu_t \quad \dots \quad (3.2)$$

It is important the following from the unit root and cointegration tests conducted.

1. The data used are in different units of measurements and as such, to avoid a spurious regression result, the log form of RBDP and RBLN (which are presented in billions of naira) will be taken and used for the estimation.
2. Also, there is cointegration representing a long run relationship among variables. Hence, the long run form and an error correction model will be estimated to determine the short run dynamics and the long run relationship among the variables under review.

Hence, the error correction form of model 3.2 becomes 3.3 below.

$$ECGR_t = \beta_0 + \beta_1LRBDP_t + \beta_2LRBLN_t + \beta_3BBSP_t + \beta_4LSPT_t + \beta_5ECT_t + U_t \quad (3.3)$$

The given equation can be expressed in the generalized Autoregressive Distributive Lag (ARDL) form by including lagged values for both the dependent variable (ECGR) and the independent variables (LRBDP, LRBLN, BBSP, LSPT). The generalized ARDL model is specified as model 3.4 below.

$$ECGR_t = \alpha_0 + \sum_{i=1}^p \alpha_1 ECGR_{t-i} + \sum_{j=0}^{q1} \beta_1 LRBDP_{t-j} + \sum_{k=0}^{q2} \beta_2 LRBLN_{t-k} + \sum_{l=0}^{q3} \beta_3 BBSP_{t-l} + \sum_{m=0}^{q1} \beta_4 LSPT_{t-m} + U_t \quad \dots \quad (3.4)$$

Where;

$ECGR_t$  = Economic Growth at year t

$RBDP_t$  = Deposits from rural branches of commercial banks at year t

$RBLN_t$  = Loans to rural branches of commercial banks at year t

$BBSP_t$  = Bank Branch Spread at year t

$LSPT_t$  = Commercial Bank loans to small and medium scale enterprises as a percentage of total credit at year t.

$\mu_t$  is the error term

$\beta_0$  is the intercept which will capture the state of dependent variable (ECG) as other independent variables is constant.

$\beta_1, \beta_2$  and  $\beta_3$  are coefficients attached to independent variables, which will explain the effect of a unit change in the independent variables on dependent variable (ECG).

$ECGR_t$  is the dependent variable at time t.

$ECGR_{t-i}$  are the lagged values of the dependent variable.

$LRBDP_{t-j}, \beta_2LRBLN_{t-k}, \beta_3BBSP_{t-l}, \beta_4LSPT_{t-m}$  are the independent variables and their lagged values.

p is the number of lags of the dependent variable

q1, q2, q3, and q4 represent the number of lags for each independent variable respectively.

$\alpha_0$  is the intercept

$\alpha_1, \beta_1, \beta_2, \beta_3,$  and  $\beta_4$  are the coefficients to be estimated.

$u_t$  is the error term

This generalized form allows for both short-run and long-run relationships between the dependent and independent variables. This model is estimated with the aid of the E-views software for ease and to avoid human error.

## Nature and Sources of Data

In order to examine the effect of Financial Inclusion on the growth of the Nigerian economy, time series data will be used. This time series data will span from 1992 to 2023. The data for each variable to be used for this regression analysis are all obtained from the Statistical Bulletin of the Central Bank of Nigeria (CBN). The research variables are generally grouped into dependent variable (the endogenous factor) and independent variables (the exogenous factor). The Growth Rate of the Nigerian Economy is the dependent variable of the study. It is often measured by the Real Gross Domestic Product (Real GDP). This measure the monetary value of the total output of goods and service within the geographical boundary of a country in a given year in the nominal term after adjusted for inflation (Obayori & George-Anokwuru, 2020). The GDP is often chosen as a measure for economic growth on the justification that GDP is conventionally adopted as a strong indicator of economic growth (Nkwede, 2015). However, to guarantee the exactness of the results, this study will use the growth rate instead of a proxy. The data was sourced from CBN statistical bulletin (2023).

Deposits from rural branches of commercial banks: The amount saved with deposit money bank is used as a measure of usage of financial service (Obayori & George-Anokwuru, 2020). This variable is operationally defined as the ratio of total deposit of rural branches of deposit money banks in Nigeria; bearing in mind that greater proportion of adult population who are financially excluded are the rural dwellers. In term of financial services usage, this variable captures the number of rural dwellers that have an account with formal financial institutions in Nigeria (Nkwede, 2015). Thus, savers with deposit money banks are the declared number of deposit account owners at deposit money banks. The total deposits are in millions of naira so the logarithm will be taken to normalize the naira values with other values in ratio or percentage.

Loans of rural branches of commercial banks: The loans are defined in this study as the logarithm of total loan advanced by deposit money bank rural branches to individual citizens in the rural areas (Nkwede, 2015). The loans in rural banks branches indicate their accessibility to financial institutions and banking services including the availability of financial institutions to use. The loans are in absolute naira values and would also be logged to normalize the naira values with other values in ratio or percentage.

Bank Branch Spread (Number of Branches of Deposit Money Bank): Branches of commercial banks would also be used as a financial inclusion access indicator. Bank branches spread is defined in this study as the logarithm of the total number of bank branches in Nigeria both in the urban and rural areas (Nkwede, 2015). It was computed as the magnitude of deposit money bank branches per 100, 000 adults. This shows how accessible the banks are to the users (Obayori & George-Anokwuru, 2020). The justification for including banks branches of deposit money banks in the variables is not just because it measures the level of financial service availability in Nigeria; but because the major challenge to financial inclusion is that most unbanked adults of Nigerian population suffer non-availability of banking services brought about by bank branches located in very far distances (often the urban area).

Commercial Bank loans to small and medium scale enterprises as a percentage of total credit is also a major determinant of inclusion. From mere observation, the nominal values of loans to small and medium scale enterprises have increased over the years. Total credit has also increased over the years. However, it is important to see how the small and medium scale enterprises are included or captured in total credit. That goes a long way to measure inclusivity.



### A priori expectation of the parameters

The apriori expectation guiding this research will be based on the Finance-Growth Theory which serves as the theoretical underpinning of this research. The Finance-Growth theory posits that if the populace has easy access to financial services, through proper implementation of financial inclusion, economic growth would be improved.

Thus, when evaluating  $(\text{ECG}) = f(\text{FINC})$  the coefficient of Financial Inclusion is expected to be positive in line with theory, further proving that with more access to financial services equal opportunities are created, and those who are economically and socially excluded can be enabled to integrate better into the economy, actively contribute to its growth.

Hence, in the model  $ECGR_t = \beta_0 + \beta_1LRBDP_t + \beta_2LRBLN_t + \beta_3BBSP_t + \beta_4LSPT_t + U_t$ ;  $\beta_1, \beta_2, \beta_3,$  and  $\beta_4$  (which are the coefficients of the independent variables) are expected to be positive. The apriori expectation can be summarized below.

- $b_1 > 0$
- $b_2 > 0$
- $b_3 > 0$
- $b_4 > 0$

## RESULTS AND ANALYSIS

### Unit Root tests

These results are summarized in table 1 below. Analysing the result, it can be observed that the order of integration remains the same despite the choice of testing and whether the P-value or t-statistic is used to get the conclusion.

Table 1: Unit Root tests

| Augmented-Dickey Fuller test |             |                      |         |                     |                      |         |               |
|------------------------------|-------------|----------------------|---------|---------------------|----------------------|---------|---------------|
| At Level                     |             |                      |         | At First Difference |                      |         |               |
|                              | t-statistic | Critical value at 5% | P-value | t-statistic         | Critical value at 5% | P-value | Order of Int. |
| <b>ECGR</b>                  | -1.820204   | -1.952066            | 0.0659  | -7.832625           | -1.952473            | 0.0000  | I(1)          |
| <b>LRBDP</b>                 | -1.214916   | -1.952066            | 0.2005  | -2.273836           | -1.952473            | 0.0002  | I(1)          |
| <b>LRBLN</b>                 | 0.089069    | -1.952066            | 0.7035  | -6.277068           | -1.952910            | 0.0000  | I(1)          |
| <b>BBSP</b>                  | 1.541241    | -1.952066            | 0.9667  | -4.327149           | -1.952473            | 0.0001  | I(1)          |
| <b>LSPT</b>                  | -2.843774   | -1.952473            | 0.0060  | -7.135952           | -1.952473            | 0.0000  | I(0)          |
| Significance level is 5%     |             |                      |         |                     |                      |         |               |
| Phillip Perron test          |             |                      |         |                     |                      |         |               |
| At Level                     |             |                      |         | At First difference |                      |         |               |
|                              | t-statistic | Critical value at 5% | P-value | t-statistic         | Critical value at 5% | P-value | Order of Int. |
| <b>ECGR</b>                  | -1.809575   | -1.952066            | 0.0674  | -11.39918           | -1.952473            | 0.0000  | I(1)          |
| <b>LRBDP</b>                 | -0.853399   | -1.952066            | 0.3382  | -4.218118           | -1.952473            | 0.0001  | I(1)          |

|                          |          |           |        |           |           |        |      |
|--------------------------|----------|-----------|--------|-----------|-----------|--------|------|
| <b>LRBLN</b>             | 0.142072 | -1.952066 | 0.7202 | -8.708692 | -1.952473 | 0.0000 | I(1) |
| <b>BBSP</b>              | 1.253810 | -1.952066 | 0.9431 | -4.413826 | -1.952473 | 0.0001 | I(1) |
| <b>LSPT</b>              | -4959345 | -1.952066 | 0.0000 | -7.453039 | -1.952473 | 0.0000 | I(0) |
| Significance level is 5% |          |           |        |           |           |        |      |

Source: Author’s Computation using E-views 10, (2024).

Both the Augmented Dickey Fuller test and the Philip-Perron test for unit root were both used to ensure accuracy and the results of both tests agree with one another. Therefore, we can conclude from analysis that the variables in this study achieve stationarity at different levels. RBLN and LSPT achieved stationarity at level, while ECGR, RBDP and BBSP achieved stationarity at first difference since the order of integration is one. It follows therefore, that the variables used in this model are I(0) and I(1).

**Co integration test**

Because the variables are integrated at different levels, that is, a combination of I(0) and I(1); this study would employ the use of ARDL bounds test to check for co-integration. The summarized results can be seen in table 2 below.

Table 2: Bounds test result

| <b>F-Statistic</b> | <b>Level of Sig.</b> | <b>I(0)</b> | <b>I(1)</b> |
|--------------------|----------------------|-------------|-------------|
| 7.0919714          | 10%                  | 2.2         | 3.09        |
|                    | 5%                   | 2.56        | 3.49        |
|                    | 2.5%                 | 2.88        | 3.87        |
|                    | 1%                   | 3.29        | 4.37        |

Source: Computed by author using E-views 10 (2024).

From table 2, F-statistic is higher than the higher bound value at all levels of significance showing that there is co-integration among the variables at all levels. The presence of co-integration denotes the existence of a long run relationship among the variables. As such, there is need to estimate the error correction model. The error correction model is a model that captures both the short run dynamics and the long run relationship of the model. With the presence of a long run relationship, we need to follow due procedure and estimate a long run model and interpret it.

**Optimal Lag Selection Criteria**

Given the need to estimate a dynamic model, it is very important to choose the optimal lag length before the estimation is done. The result of the lag-order selection criteria is presented in table 3 below.

Table 3: Lag-order selection criteria

| Sample: 1996 thru 2023 |          |        |          | Number of obs = 28 |         |         |         |
|------------------------|----------|--------|----------|--------------------|---------|---------|---------|
| Lag                    | LL       | LR     | Df/p     | FPE                | AIC     | HQIC    | SBIC    |
| 0                      | -751.091 |        |          | 2.0e+17            | 54.0065 | 54.0792 | 54.2444 |
| 1                      | -632.176 | 237.83 | 25/0.000 | 2.5e+14            | 47.2983 | 47.7346 | 48.7256 |

|   |          |         |    |       |          |          |          |         |
|---|----------|---------|----|-------|----------|----------|----------|---------|
| 2 | -611.154 | 42.043  | 25 | 0.018 | 4.0e+14  | 47.5825  | 48.3825  | 50.1993 |
| 3 | -562.709 | 96.891  | 25 | 0.000 | 1.3e+14  | 45.9078  | 47.0714  | 49.7141 |
| 4 | -459.839 | 205.74* | 25 | 0.000 | 2.1e+12* | 40.3457* | 41.8729* | 45.3414 |

\*optimal lag

Source: Computation by author using Stata 10 (2024)

From the results presented above in table 4.4, it can be observed that the optimal lag is 4. Hence, the model will be estimated with 4 as the lag length. The model estimation is done in 4.4 below.

**Analysis of the Long Run Model**

Table 4: ARDL Long Run Form Regression Estimates tests results

| ARDL Long Run Form                       |             |            |             |        |
|--|-------------|------------|-------------|--------|
| Dependent Variable: D(ECGR)              |             |            |             |        |
| Selected Model: ARDL(4, 4, 4, 4, 4)      |             |            |             |        |
| Case 2: Restricted Constant and No Trend |             |            |             |        |
| <b>Levels Equation</b>                   |             |            |             |        |
| Case 2: Restricted Constant and No Trend |             |            |             |        |
| Variable                                 | Coefficient | Std. Error | t-Statistic | Prob.  |
| LRBDP                                    | 0.461398    | 0.071297   | 6.471496    | 0.0075 |
| LRBLN                                    | -2.635893   | 1.088047   | -2.422592   | 0.0940 |
| BBSP                                     | -0.001335   | 0.000891   | -1.498461   | 0.2310 |
| LSPT                                     | -0.840996   | 0.077236   | -10.88868   | 0.0017 |
| C  | 20.90774    | 0.809668   | 25.82261    | 0.0001 |

Source: Computation by author using E-Views 10 (2024)

Hence, rewriting our model with the long run estimates, we have:

$$\text{ECGR}_t = 20.90774 + 0.461398 \text{LRBDP}_t - 2.635893 \text{LRBLN}_t - 0.001335 \text{BBSP}_t + (-0.840996 \text{LSPT}_t) + U_t$$

From the results, it can be observed that:

The intercept term is. This shows the level of economic growth without any effect from financial inclusion. This coefficient is positive, showing that in the long run, growth can still be achieved without financial inclusion. This coefficient is statistically significant with a probability value of 0.001 which is less than 0.05.

The coefficient of Deposits of Rural Branches of Commercial Banks (RBDP) is positive. This result conforms to ‘a priori’ expectation. This implies a positive relationship between Deposits of Rural Branches of Commercial Banks and the rate of growth of the Nigerian economy. The coefficient shows that a 1% rise in Deposits of Rural Branches of Commercial Banks will increase economic growth by 46.14% in the long run. This result is statistically significant with the Probability value (0.0075) being less than 5% or 0.05.

The coefficient of loans of Rural Branches of Commercial Banks (RBLN) is negative. This long run relationship does not conform to ‘a priori’ expectation. This implies a negative relationship between loans of Rural Branches of Commercial Banks and the rate of growth of the Nigerian economy in the long run. The coefficient (-2.635893) shows that a 1% rise in loans of Rural Branches of Commercial Banks will decrease growth by 263.58% in the long run. This result is statistically significant at 10% level of significance but not statistically significant at 5% level of significance with the Probability value (0.0940) being less than 10% but greater than 5%. This shows that at 10% significance level, loans of Rural Branches of Commercial Banks significantly affect the growth of the Nigerian Economy.

The coefficient of bank branch spread (BBSP) is negative (-0.001335) in the long run. This also does not carry the expected sign and is contrary to ‘a priori’ expectation. The result shows that 1 % increase in bank branch spread decreases economic growth by 0.13% in the long run. This negates theoretical expectation as an increase in bank branch spread should improve accessibility and availability of financial services in the long run. This should in turn improve the rate of growth of the Nigerian Economy. This parameter estimate is statistically insignificant with the probability value (0.2310) being greater than 0.05 or 5%. One could say the reason this variable is insignificant is as a result of it not conforming to ‘a priori’ expectation, but there is not enough evidence to accept that bold assertion.

Finally, The coefficient of commercial bank loans to small and medium scale enterprises as a percentage of total credit (LSPT) is negative (-0.840996). This also does not carry the correct sign and is contrary to ‘a priori’ expectation. The result shows that 1 % increase in percentage of loans to small and medium scale enterprises to total credit decreases economic growth by 84.1% in the long run. But, the parameter is statistically significant with the probability value (0.0017) being greater than 0.05 or 5%.

**Analysis of the Error Correction Model**

The analysis above is the analysis of the long run relationship. While this is important, it is not sufficient to make conclusions about the variables under consideration. Hence, there is a need to analyse the short run dynamics and evaluate the speed of adjustment. These analysis are done with the aid of the error correction model. The results of the ARDL error correction is presented in table 5.

Table 4.6 ARDL ECM Regression Estimates tests results

|  |             |            |             |        |
|--|-------------|------------|-------------|--------|
| ARDL Error Correction Regression         |             |            |             |        |
| Dependent Variable: D(ECGR)              |             |            |             |        |
| Selected Model: ARDL(4, 4, 4, 4, 4)      |             |            |             |        |
| Case 2: Restricted Constant and No Trend |             |            |             |        |
| Date: 10/15/24 Time: 15:31               |             |            |             |        |
| Sample: 1992 2023                        |             |            |             |        |
| Included observations: 28                |             |            |             |        |
| ECM Regression                           |             |            |             |        |
| Case 2: Restricted Constant and No Trend |             |            |             |        |
| Variable                                 | Coefficient | Std. Error | t-Statistic | Prob.  |
| D(ECGR(-1))                              | 2.793998    | 0.337876   | 8.269307    | 0.0037 |

|  |           |                       |           |          |
|--|-----------|-----------------------|-----------|----------|
| D(ECGR(-2))  | 1.795231  | 0.215567              | 8.327932  | 0.0036   |
| D(ECGR(-3))  | 0.800774  | 0.112559              | 7.114268  | 0.0057   |
| D(LRBDP)   | 1.406502  | 0.200385              | 7.019001  | 0.0059   |
| D(LRBDP(-1))                                       | -0.075661 | 0.136830              | -0.552957 | 0.6188   |
| D(LRBDP(-2))                                       | 0.531414  | 0.183992              | 2.888239  | 0.0631   |
| D(LRBDP(-3))                                       | 2.142671  | 0.332762              | 6.439044  | 0.0076   |
| D(LRBLN)   | -0.975259 | 0.357750              | -2.726088 | 0.0722   |
| D(LRBLN(-1))                                       | 8.191054  | 0.632829              | 12.94354  | 0.0010   |
| D(LRBLN(-2))                                       | 7.933358  | 0.807777              | 9.821227  | 0.0022   |
| D(LRBLN(-3))                                       | 3.305422  | 0.411144              | 8.039583  | 0.0040   |
| D(BBSP)  | -0.003764 | 0.001258              | -2.991732 | 0.0581   |
| D(BBSP(-1))  | 0.012679  | 0.001596              | 7.943591  | 0.0042   |
| D(BBSP(-2))  | 0.023156  | 0.002770              | 8.358743  | 0.0036   |
| D(BBSP(-3))  | 0.013638  | 0.002305              | 5.917360  | 0.0096   |
| D(LSPT)  | 0.348413  | 0.119355              | 2.919142  | 0.0615   |
| D(LSPT(-1))  | 3.141249  | 0.326232              | 9.628893  | 0.0024   |
| D(LSPT(-2))  | 1.126748  | 0.134302              | 8.389657  | 0.0036   |
| D(LSPT(-3))  | 0.587282  | 0.115309              | 5.093116  | 0.0146   |
| CointEq(-1)*                                       | -5.181960 | 0.486464              | -10.65230 | 0.0018   |
| R-squared  | 0.985391  | Mean dependent var    |           | 0.100357 |
| Adjusted R-squared                                 | 0.950695  | S.D. dependent var    |           | 3.385277 |
| S.E. of regression                                 | 0.751689  | Akaike info criterion |           | 2.442820 |
| Sum squared resid                                  | 4.520292  | Schwarz criterion     |           | 3.394395 |
| Log likelihood                                     | -14.19949 | Hannan-Quinn criter.  |           | 2.733726 |
| Durbin-Watson stat                                 | 3.120855  |                       |           |          |
| * p-value incompatible with t-Bounds distribution. |           |                       |           |          |

Source: Computed by author using E-views 10 (2024)



CointEq(-1) represents the error correction term (ECT). The coefficient of the error term (-5.181960) is negative and the probability value (0.0018) is less than 0.05 which confirms the existence of cointegration or a long run relationship and shows the correctness of the use of the error correction model. This means that the error correction model is theoretically adequate. In addition, the coefficient of ECT is (-5.181960) which shows the speed of adjustment of the model towards equilibrium in the long run. Here, the speed of adjustment is 518.196% per unit time (in this case annually).

Furthermore, inferences can be made about the short run dynamics from the results presented in table 5. It can be observed, that in the short run, the deposits from rural branches of commercial banks (RBDP) have a significant positive relationship with the growth of the Nigerian economy. This can be inferred since the coefficient (1.406502) is positive and the probability value (0.0059) is less than 5%. Hence, an increase in the deposits of rural branches of commercial banks will lead to an increase in economic growth. The short run dynamics presented shows that this significant positive relationship continues across various lags and time periods except in the first lagged time period.

Loans of rural branches of commercial banks (RBLN) show a negative relationship with economic growth rate evidenced by the coefficient (-0.975259) in the immediate time period. Although this result is significant at 10%, it is not significant at 5% with the probability value (0.0722) being greater than 0.05 but less than 0.1. But, making a conclusion based on this value alone may be misleading as it can be observed from table 4.6 that overtime (across other lagged variables), the relationship between the loans of rural branches of commercial banks is not only positive but significant at 5% level of significance. Thus, we can conclude that in the short run (1-3 years), there exist a significant positive relationship between loans of rural branches of commercial banks and economic growth.

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The estimates of bank branch spread (BBSP) have similar characteristics with that of Loans of rural branches of commercial banks. Bank branch spread shows a negative relationship with economic growth rate evidenced by the coefficient (-0.003764) in the immediate time period. Although this result is significant at 10%, it is not significant at 5% with the probability value (0.0581) being greater than 0.05 but less than 0.1. But, making a conclusion based on this value alone may be misleading as it can be observed from table 5 that overtime (across other lagged variables), the relationship between bank branch spread and economic growth is not only positive but significant at 5% level of significance. Thus, we can conclude that in the short run (1-3 years), there exist a significant positive relationship between bank branch spread and economic growth in Nigeria.

From table 5, it can further be observed that the commercial bank loans to small and medium scale enterprises as a percentage of total credit (LSPT) has a positive and significant relationship with economic growth in the duration under review. This is evidenced by the fact that all coefficients across various lags are positive and the probability values across all levels are less than 0.05 (showing significance at 5% level) except at the first level which is less than 0.1 (showing significance at 10% level). Thus the result of the short run dynamics show a significant positive relationship between the commercial bank loans to small and medium scale enterprises as a percentage of total credit and the growth of the Nigerian economy.

The analysis above shows that in the short run, all variables conform to the apriori expectation of a positive relationship and all the variables were significant. In addition, we can make some inference about the model from the result.

First, the R squared shows a good fit of the model. This is further proven by the adjusted R-squared which is

95.07%. That implies that the percentage of changes in the dependent variable explained by the independent variables is over 95%.

The model has a negative serial correlation by the Durbin-Watson statistic being 3.12 which is greater than 2. However, another serial correlation test is performed in the post estimation tests below.

**Residual Diagnostics Tests**

Table 6: Residual Diagnostics summarized tests results.

| <b>Residual Diagnostic tests</b>               |              |
|--|--------------|
| <b>Type of test</b>                            | <b>Prob.</b> |
| Breusch-Godfrey Serial Correlation LM Test:    | 0.2606       |
| Heteroskedasticity Test: Breusch-Pagan-Godfrey | 0.4096       |
| Jarque-Bera histogram normality test           | 0.890426     |

Source: Computation by author using E-Views 10 (2024).

It is important to perform some diagnostics tests on the estimates presented in the study to be sure that the results are not spurious. The Breusch-Godfrey serial correlation test is used to test for serial correlation. The Breush-Pagan-Godfrey test is employed to test for heteroskedasticity. The Jarque-Bera histogram normality test is used to check if the errors are normally distributed.

The results of these tests are presented in appendix 5 and a summary is presented in table 4.7 above. The results are interpreted and explained below.

Table 6 gives the results for the Breusch-Godfrey Test of Serial correlation. The probability of 0.2606 is greater than 0.05, this indicates that the residuals of the variables are not serially correlated. It implies that there is no correlation between consecutive residuals or error term. Thus, the null hypothesis of no serial correlation is not rejected, which satisfies the assumption of no serial correlation. Consequently, the model shows a good precision, therefore could be used for forecasting.

Table 6 also shows the result of Heteroskedasticity test by Breush-Pagan-Godfrey test. Given that the probability of 0.4096 is greater than 0.05, it indicates that the residuals of the variables are homoscedastic. It implies that the error term is the same across all variables of the independent variable. Therefore, the coefficients of the variables are unbiased and could be used for forecasting.

The Jarque-Bera have a value of 0.232110 and a probability value of 0.890426, which is greater than 0.05, it indicates that the residuals of the variables are normally distributed which satisfies the normality assumption. In order words, it could be used for forecasting and policies.

Therefore, based on the residual diagnostic tests conducted above, the model has been shown to satisfy all the assumptions of OLS and is thus a good model.

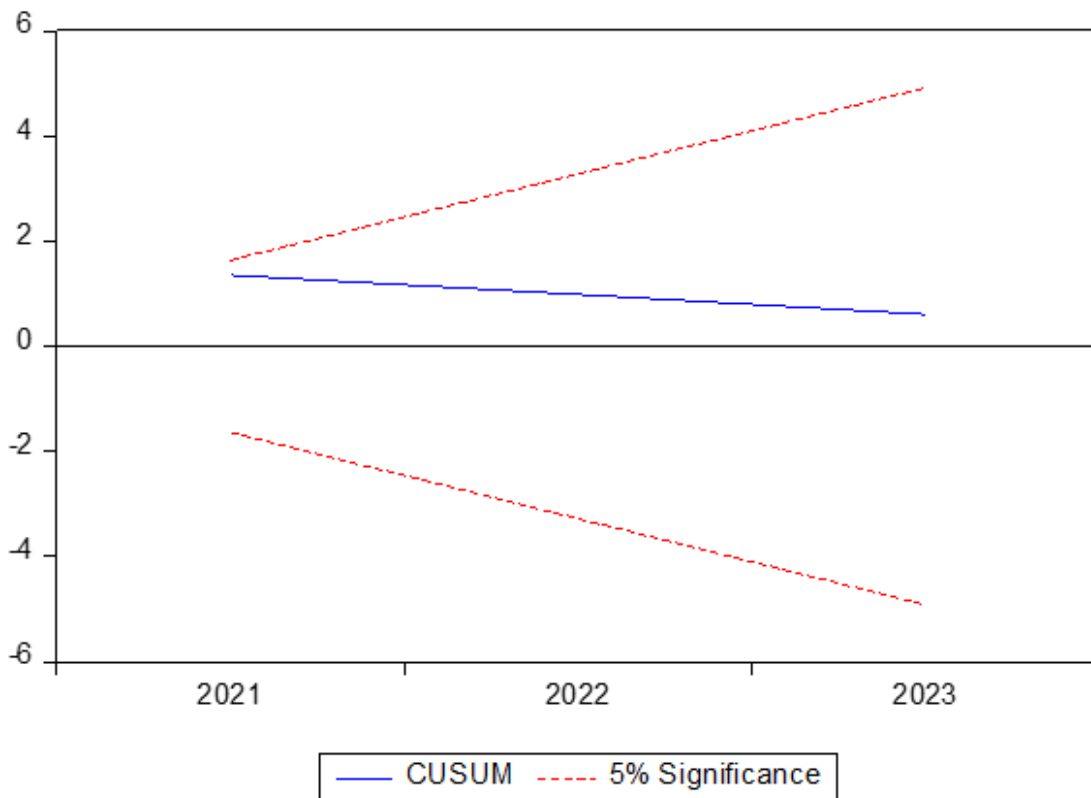
**CUSUM test of stability result.**

The stability test is carried out with the aid of the CUSUM test and the CUSUM of Squares test. These tests are used to check if the parameters are stable overtime.

Fig 1 shows that the results of the CUSUM test. The test results presented in Fig 4.5 above shows that the variables are stable as the graph for the model falls between the red lines. That means the model exhibits stability

over time and can be used for forecasting.

Fig 1: CUSUM stability test result



Source: Computation by author using E-Views 10 (2024).

## DISCUSSION OF FINDINGS

The first and perhaps most important point to note about the findings in this study is that it conforms to apriori expectations based on study. Before the commencement of this research, some expectations were listed based on the finance-growth theory and most of these expectations were met. Financial inclusion is recognized globally as a driver of economic growth, particularly in developing economies. The study’s confirmation of this theory underscores that when individuals and businesses gain access to financial services, they’re more empowered to invest, save, and grow economically. For Nigeria, where a significant portion of the population remains unbanked or underbanked, this insight is timely and essential.

In practice, the Nigerian government has actively pursued financial inclusion goals to integrate the informal economy with formal financial services. Programs like the National Financial Inclusion Strategy (NFIS) aim to bring more Nigerians into the banking system by 2025. As the findings show, when rural populations and SMEs have access to credit and savings channels, it can lead to substantial economic growth. However, reaching financial inclusion targets requires consistent policy interventions, such as reduced transaction fees, incentivized banking partnerships, and a regulatory environment that fosters fintech innovation.

In addition, the findings reveal Short-Term Economic Gains and Long-Term Credit Risks. In the short run, increased lending by rural bank branches and credit access for SMEs can stimulate economic activities, leading to job creation, improved productivity, and immediate growth in local economies. However, the study’s findings that these positive effects can become negative in the long run indicate that without a solid credit management framework, economic growth from these initiatives may be unsustainable.

Nigeria faces specific challenges with credit repayment among SMEs and rural borrowers, as well as high loan default rates. This is partly due to the volatility in the economy, high inflation, and limited financial literacy among borrowers, which often lead to poor loan repayment behavior. For the short-term benefits of financial

inclusion to persist into the long term, it's crucial to address these systemic issues.

Policymakers and financial institutions might focus on creating programs that educate borrowers about credit management and financial planning. Additionally, structured, lower-risk lending options—such as microloans tailored to specific sectors or conditional grants—could help mitigate default risks and sustain long-term economic benefits.

Furthermore, bank branch spread's significance in the short term illustrates the value of accessible banking for promoting financial inclusion, especially in rural and semi-urban areas. Many Nigerians still rely on physical banking infrastructure due to limited access to digital services or low digital literacy. Thus, increasing branch spread in underserved areas can have a quick positive impact by drawing in new bank users, increasing savings, and offering credit access.

However, as banking becomes increasingly digital, physical branches might become less critical. The findings underscore the transformative potential of digital financial services in Nigeria. With nearly 70% of Nigerians having access to mobile phones and the rapid adoption of fintech, digital banking could significantly boost financial inclusion without the costs associated with physical branch expansion. Nigeria is witnessing rapid adoption of digital financial solutions, with fintech companies playing a significant role in expanding access to financial services across demographics and regions. Mobile wallets, agency banking, and USSD codes allow even low-income, unbanked Nigerians to transact digitally, fostering financial inclusion without heavy reliance on physical branches.

To optimize long-term growth, the government and financial institutions should prioritize infrastructure that supports digital banking. This includes investing in internet connectivity, mobile penetration, and digital literacy initiatives and addressing cyber-security concerns that often deter people from using digital banking. Rather than expanding branch networks, efforts might shift toward empowering digital financial agents and establishing mobile banking kiosks, which can reach broader populations at a lower cost. Initiatives such as providing subsidies or tax incentives for fintech companies, particularly those focused on rural and low-income populations could accelerate digital adoption and financial inclusion.

Finally, the consistent significance of rural deposits highlights the importance of savings in driving economic stability and growth. Rural deposits indicate growing financial confidence and income stability among rural populations, which contribute to broader economic growth. Increased rural deposits also enable banks to fund more loans and investments within local communities, creating a positive economic cycle.

In Nigeria's context, fostering this trend requires targeted policies to encourage saving habits among rural populations. Strategies might include offering deposit insurance, financial education, and attractive interest rates for rural depositors. Additionally, micro-savings schemes, community-based savings programs, and digital savings platforms can encourage more rural Nigerians to save. By increasing deposit mobilization in rural areas, financial institutions can support capital accumulation that leads to more substantial investments in agriculture, small businesses, and rural infrastructure—sectors critical to Nigeria's overall economic development.

While the study primarily assesses growth, financial inclusion in Nigeria also holds the potential to reduce income inequality and alleviate poverty. Access to formal financial services can help low-income individuals, particularly those in rural areas, save, invest, and build credit, which can be transformative over time. By providing financial services to underserved populations, financial inclusion enables people to smooth consumption, invest in education, and improve their standard of living, contributing to poverty reduction.

In Nigeria, where income disparity is high, the study's findings on the positive impact of financial services on economic growth underscore the potential for inclusive financial practices to bridge economic gaps. With rural branches proving beneficial in driving deposits and short-term economic growth, the government could develop targeted programs to increase banking access in poverty-stricken areas. Such programs, which would include savings products and microcredit offerings, could empower low-income individuals, reducing income inequality and fostering an inclusive economy. To maximize this potential, financial literacy programs should target rural areas, equipping individuals with the knowledge to make informed financial decisions.

This finding aligns with policies from Nigeria's National Financial Inclusion Strategy (NFIS), which aims to bring 95% of the population into the formal financial system by 2024. However, achieving this goal requires a balanced approach to ensure that while financial inclusion is promoted, sustainable mechanisms for long-term credit are established to avoid defaults and economic disruptions.

The findings in this study offer critical insights into the role of financial inclusion in shaping Nigeria's economic growth. While short-term benefits from increased lending and banking infrastructure are promising, the transition to digital banking and the emphasis on sustainable credit practices will be essential to maintain these gains over the long term. Policymakers and financial institutions should focus on enhancing financial literacy, encouraging savings, and expanding digital services to fully harness financial inclusion's potential, paving the way for a resilient and inclusive Nigerian economy.

## CONCLUSION AND RECOMMENDATIONS

From the study conducted, it can be concluded that financial inclusion has a significant positive effect on economic growth in Nigeria in the short run. This conclusion was reached because from the short run analysis, most coefficients had the positive sign and were statistically significant. The coefficients for deposits and loans from rural branches of commercial banks demonstrate a significant positive relationship between financial inclusion and economic growth. This implies that, as rural communities become more included, demonstrated by an increase in their loans and deposits, the growth of the economy would be improved. Bank branch spread and commercial bank loans to small and medium scale enterprises as a percentage of total credit also show a significant positive relationship in the short run showing that access to financial services especially for the rural communities would improve their productivity and their engagement in economic activities. This would further improve the gross domestic product and enhance growth rate.

Also, in the long run, financial inclusion significantly affects the growth of the Nigerian economy. However, this relationship is negative. This conclusion is derived from the fact that three variables show the negative sign in the long run analysis and three variables are statistically significant in the long run.

Hence, it can be concluded that, to improve the growth of the Nigerian economy in the short run, the Nigerian government must lay emphasis on improving financial inclusion across the nation state. This shows that the bold assertion by McKinsey Global Institute cited in chapter 1.2 which suggested that financial inclusion could boost the GDP by up to 12.4% by 2025 could prove true. But to ensure increasing growth levels in the long run, the government must branch into other segments of the economy as financial inclusion alone cannot sustain increasing growth levels overtime.

Based on the findings regarding financial inclusion and economic growth in Nigeria, here are some targeted policy recommendations for the Nigerian government and the Central Bank of Nigeria (CBN) to enhance the short-term and long-term economic impacts of financial inclusion initiatives:

The CBN should Strengthen Credit Support Programs for SMEs and Rural Borrowers. The federal government should facilitate Digital Financial Services Expansion. Government at various levels should promote Savings and Deposits in Rural Areas. The government should encourage targeted Bank Branch Expansion and Financial Agents in key areas. The Government should Promote Regulatory and Policy Support for Digital Banking Adoption. The Government should Introduce Data-Driven Financial Product Development and Risk Management. Finally, the CBN should enhance the Monitoring and Evaluation Framework for Financial Inclusion Policies.

These recommendations, if effectively implemented, can strengthen the Nigerian economy by deepening financial inclusion, especially in rural areas and among SMEs. The combined focus on enhancing digital infrastructure, supporting responsible credit access, encouraging rural savings, and improving regulatory frameworks will create a foundation for sustainable growth and economic resilience. As these policies foster financial inclusion, Nigeria can expect broader economic participation, reduced poverty, and stronger, more inclusive economic growth in the years to come.



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