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Original Article

Financial Inclusion and its Effect on Economic Growth in Nigeria

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Abstract: *The general objective of this study was to ascertain the effect of financial inclusion on Nigeria's GDP growth. Determining the effect of loans on small businesses and the extent to which deposits and loans from commercial banks' rural branches influenced Nigeria's economic growth were two specific objectives. In this investigation, an ex post facto research design was implemented. This research investigated commercial bank loans extended to small-scale enterprises, deposits, and loans from commercial bank branches located in rural areas. Additionally, it examined the GDP of Nigeria from 2000 to 2020. The study employed a judgmental sampling technique. The data were analyzed in the research using Ordinary Least Square Regression, facilitated by Statistical Package E-View version 10.0. The study's findings indicate that the provision of small business financing by commercial banks has a substantial influence on the growth of the Nigerian GDP. The results of the study indicated that loans and deposits from rural subsidiaries of commercial banks have a substantial effect on Nigeria's GDP growth. It was suggested that banks lend more assistance to their rural branches in the form of credit expansion and fund mobilization, given that rural residents have the most pressing needs.*

Keywords: *Financial Inclusion, Sustainable Banking Services, Economic Growth.*

I. INTRODUCTION

A) Background of the Study

Financial inclusion (FI) is realized when all persons have access to a competitive financial marketplace where they may get a complete range of financial services at moderate prices with little risk. In the words of Demirgüç-Kunt (2017), the service will provide client safety and accountability, as well as support economic sustainability. Financial inclusion involves ensuring that economically disadvantaged groups, such as those in rural areas, individuals with low incomes, and women, have access to a range of financial services like savings and payment accounts, credit, insurance, and pensions. Financial products and services should be accessible and inexpensive to consumers and enterprises spending, payments, savings, loans, and insurance in a sustainable and responsible manner (Yin, Xu, Chen, and Peng, 2019). Financial inclusion facilitates the creation of services that enhance monetary efficiency. Financial inclusion occurs when all members of a community have convenient and cost-effective access to a variety of financial services. Furthermore, possessing insurance encourages people with a high degree of financial inclusion to be more inclined to accept financial risks (Liu, Dong, & Meng, 2022).

Increasing numbers of individuals are seeing the need to broaden access to financial services for a prosperous economy. An increasing amount of research suggests that inclusive finance might be a solution to both poverty and economic stagnation (Ali, Nazir, Hashmi, & Ullah, 2022). Expanding the availability of formal banking services has emerged as a critical development policy goal, both worldwide and in developing economies like Nigeria. Financial inclusion involves providing affordable financial services to neglected sections of the economy, whereas financial exclusion occurs when these services are either unavailable or too costly. Financial inclusion is implemented to facilitate universal access and utilization of the formal financial system by all members of the economy (Onaolapo, 2015). Financial inclusion refers to the ability of all economic participants to easily open bank accounts, and access credit affordably, and regularly utilize various financial products and services such as ATMs, online banking, and point-of-sale systems without the need to interact with a teller or cashier.

Various factors can impede long-term economic development, such as increasing populations, inadequate funding, outdated or lacking infrastructures, inadequate resource exploitation, excess government interference, and flawed cultural and social frameworks. Economic growth may be attained by increasing production capacity and optimizing current capital resources. It fosters a fairer allocation of money among all individuals in society. Over ten-year intervals, minor changes in growth rates become substantial in longitudinal outcomes. Inclusive finance, as noted by Hannig and Jansen (2010), promotes long-term economic growth and the generation of wealth. There is consensus, both in theory and through practical evidence, that increasing access to financial services is crucial for enhancing economic growth. Adeoti and Oshotimehin (2012) suggest

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that disadvantaged communities might benefit from improved access to cost-effective savings, credit, and payment services provided by companies. Financial inclusion may assist the unbanked and underbanked in managing financial risks by reducing debt, protecting savings, and moderating consumption (Ayo, 2010; Krawetz, 2017). Castle, Pervaiz, Weld, Roesner, and Anderson (2016) argue that financial inclusion fosters economic progress, diminishes income disparity, and eradicates poverty.

B) Statement of the Problem

Nigeria's elevated proportion of unbanked individuals and lack of access to financial services, particularly in rural regions, are influenced by several causes. They are characterized by insufficient infrastructure, immobility, poverty, and lack of education. In 2012, researchers in Nigeria found that 349 million persons, or 39.7% of the adult population, were excluded from financial services while studying extending financial innovation and access (EFInA). Only 28.6 million individuals, which amounts to 32.5% of the adult population, have bank accounts (EFInA, 2013). The lack of access and limited use of financial services by rural communities hinders the success of the federal government's financial inclusion policy in Nigeria. The 2020 EFInA study lists the primary reasons why 106 million persons aged 18 and older lack access to financial services. One-third of persons lacked financial services due to irregular income, while a quarter mentioned distance as a barrier to accessing banks. Furthermore, 21% were considered financially ineligible owing to unemployment. There is a 10% illiteracy rate. Interest rates on deposits were considered 3% too low, while interest rates on loans were considered 3% too high. EFINA's 2020 data shows that 64% of adults own bank accounts, whereas 36%, equivalent to 38 million individuals, do not have bank accounts.

Financial institutions in Nigeria have neglected the financial demands of the economically active poor and rural residents despite their clear need for financial inclusion. Nigeria does not prioritize developing the economy and enabling financial transactions in rural regions. Inadequate budgeting resulted in continued economic suffering for the working poor and rural residents. The rural sector and active poor may enhance any country's capacity for growth and economic stimulation via their distinctive small businesses. Hence, the sector's contributions to economic growth would be compromised if this problem was not recognized.

A previous study identified a lack of accessible cash, including alternative financing options like lines of credit, as a major obstacle for small and medium-sized firms in African countries. Key indicators of financial inclusion in Africa include the presence, ease of access, and use of financial services. The reason for using these comprehensive financial inclusion measures is that only having a bank account is not enough in Africa, particularly in Nigeria. Individuals who are unbanked or underbanked, while having a connection with legitimate financial companies, don't use these services due to factors such as the distance to the closest branch and the accompanying fees. It is well recognized that a small group of individuals control the economy of Nigeria and other African countries, resulting in the bulk of the population lacking access to official financial services. The economy is at risk due to this situation. Data from the Central Bank of Nigeria (CBN 2009) indicates that just 16.1% of the money in circulation is held by the banking sector. 16.1% of the total is the only portion that banks interact with. Given this backdrop, the reason for this inquiry was evident.

C) Objectives of the study

The primary goal of this research was to investigate the impact of monetary inclusion on Nigeria's economic growth. The specific objectives were:

i. To ascertain the effect of commercial bank loans to small-scale businesses on the economic growth of Nigeria
ii. To examine the effect of deposits and loans of rural branches of commercial banks on the economic growth of Nigeria

II. LITERATURE REVIEW

A) Conceptual Framework

a. Concept of Financial Inclusion

Several researchers have used various approaches while exploring the concept of financial inclusion, yet their perspectives exhibit shared insights and recurring themes. Agreement on one specific definition. Aduda and Kalunda (2012) define "financial inclusion" as a system that provides affordable and unbiased financial services to all members of society. In other words, it involves providing affordable financial services to those who are economically challenged (Gwalani & Parkhi, 2014). Chibba (2019) defines financial inclusion as a method to help disadvantaged individuals overcome market obstacles that hinder their access to financial services. As defined by Sarma and Pias (2018), financial inclusion refers to the accessibility of various financial services like savings accounts, insurance, loans, and payment and remittance processing.

Financial inclusion aims to connect those with limited access to banking services to various economic benefits, as discussed by Sarma (2015), Siddik et al. (2019), and Udo et al. (2023). Financial inclusion is essential for financial growth, yet a country can accomplish financial development without including all persons, organizations, homes, and data in the conventional financial system. Factors such as lack of knowledge, and unfavorable demographics, several studies have found that self-exclusion, income per capita, internet availability, inflation, and bank concentration all lead to financial exclusion. (Thathsarani et al., 2021; Assuming et al., 2018; Ajide, 2017; Karlan et al., 2016; Oyelami et al., 2017; Evans & Adeoye, 2016; Soumaré et al., 2016; Sotomayor et al., 2018; Pazarbasioglu et al., 2020). Barboni et al. (2017) identified poverty and social isolation as the primary factors contributing to financial exclusion.

b. Dimensions of Financial Inclusion

In this study, financial inclusion was proxied by Deposits and Loans of Rural Branches of Commercial Banks and Commercial Bank's Loans to Small Scale Businesses.

c. Deposits and Loans of Rural Branches of Commercial Bank

Rural banking aims to consolidate resources and provide loans for rural investment ventures. Rural banking plays a vital role in narrowing the gap between investment and savings due to fluctuations in interest rates and investment patterns, which are key growth factors. The hindrance to investing is not a deficiency in the desire to invest but rather a shortage of finances. The economic system must incentivize the banking sector to provide credit to narrow the gap. The number of savings increases in relation to the concentration of savings institutions since individuals tend to save more when these institutions are located closer to their residences. During the first phases of development, governments provide investable funds to rural communities because of the absence of rural bank branches. This was offset by the low levels of savings and productivity in rural families (Awosika & Nwoko, 2013).

Abe (2014) said that the purpose of rural bank branching was to promote sustainable economic activity in underserved regions and so support rural development. It was proposed to establish cooperative banks in all regions. The objectives of the 1977 rural banking programme were to promote banking among rural populations, deter urban migration, enhance financial stability in rural regions, promote savings for lucrative investments, foster self-sufficiency in food production, and provide employment opportunities for rural residents. The Central Bank of Nigeria (CBN) ensured that each Local Government Area (LGA) had a minimum of one branch of a commercial bank. Half of the cash at the rural branch must be allocated as loans to rural residents, and the branch cannot close without permission.

d. Commercial Bank's Loans to Small Scale Businesses

Commercial banks are advised to mainly invest in assets with short maturities to ensure they can readily meet their demand deposit commitments when required (Roussakis, 2017). Interest rates increase for bigger loans with extended payback periods compared to shorter ones. Consenter, mortgage, and business loans with extended maturities are becoming prevalent in commercial banks' portfolios due to innovative banking practices, improved banking technology, and changing private-sector credit needs (Codrington & Coppin, 2017).

Modern commercial banks are now less restricted in holding assets with a short maturity. Some argue that commercial banks show prejudice against certain borrower groups due to changes in their practices. Small firms often face higher borrowing rates than larger organizations due to the elevated risk they provide

e. Indicators of Financial Inclusion

The lack of consensus on the notion of financial inclusion is further shown by the unavailability of appropriate indicators. To restrict the emphasis, we developed a thorough financial inclusion metric. Becket al. (2007) assessed financial inclusion based on access (deposit and credit facilities) and usage (payment system). Honohan (2008) used a comparable percentage of households with an operational account in the official financial sector. Multiple scholars, such as Demirguc-Kunt et al. (2018), have agreed upon a concise set of indicators, including payment, credit, and savings. Park and Mercado (2015), Nguyen (2020), and Sarma (2016) argue that relying only on individual metrics to evaluate the extent and inclusiveness of a nation's financial system has significant limitations. These findings were a mixture of those of Neaime and Gaysset (2018), Khan, Khan, Sayal, and Khan (2021), and Park and Mercado (2018). Various theoretical and empirical studies have attempted to provide a suitable indicator for financial inclusion across time. These papers were authored by Gupte et al. (2012), Li (2011), and Sarma (2008), among others.

Gupte et al. (2012) created a comprehensive financial inclusion index by considering four dimensions: use, outreach, cost of transactions, and ease of transactions. The chosen dimension index was based on a model created by the United Nations Development Programme (UNDP), similar to the HDI.

Amidžic et al. (2014) and Singh and Stakic (2020) identified the fundamental methodological error in these experiments as the arbitrary assignment of equal weights or weights to the selected components. Amidžic et al. (2014) and Singh and Stakic (2020) state that authors' past knowledge, personal experiences, and the assumption that all characteristics impact financial inclusion equally establish the weights. Amidžic et al. (2014) and Clamara and Tuesta (2014) recommended using factor analysis and principal component analysis (PCA) to determine the right weights for various dimensions and indicators of financial inclusion based on current data. Several studies have used either principal component analysis (PCA) or a specific approach to create financial inclusion indexes (Ahamed & Mallick, 2019; Anarfo et al., 2019; Elsherif, 2019; Nguyen, 2020; Park & Mercado, 2018; Dahiya & Kumar, 2020; Huang & Zhang, 2019; Sethi & Sethy, 2019). Scholars have not been able to come to a consensus because of the varying advantages and disadvantages of various techniques (Mialou & Amidžic, 2017; Park & Mercado, 2015). Studies use several approaches and indicators to create the financial inclusion index (Nguyen, 2020).

f. Financial Inclusion in Nigeria

Most transactions in Nigeria's economy were conducted in cash until the country's recent efforts to increase the financial inclusion rate. Government agencies have prioritized financial inclusion over the last four decades as a significant economic issue (Kama & Adigun, 2013). The government aimed to promote financial inclusion via the establishment of commercial banks in rural areas, interventionist funding schemes, and structures and institutions that support financial inclusion. The government just took a significant step by making Financial Inclusion a core focus of the Nigerian Financial System Strategy 2020 (FSS 2020). The FSS 2020 offers a detailed plan and structure to turn Nigeria's banking sector into a catalyst for growth and help the nation reach the top 20 largest economies by 2020 (Kama & Adigun, 2013). The strategy's value chain study identified six stakeholders: financial institutions (FIs), non-bank FIs, insurance businesses, capital market players, pension funds, technology suppliers, and regulatory bodies. Four of the six steps implemented to strengthen the Nigerian financial sector focused on enhancing financial inclusion (FI), showcasing the government's commitment to boosting FI in the nation. The four aims are to provide a range of financial products, enhance payment processes, establish a credit system, and encourage a culture of saving. The government is striving to ensure that all adults have easy access to a range of appropriate, affordable, and respectful financial services in society.

Arogundade (2019) claims that the financial inclusion rate in Nigeria has been consistently increasing in recent years as a result of effective strategy implementation, leading to a decrease in financial exclusion. The EFInA evaluation of the Nigerian financial system in 2018, according to his analysis, indicated a notable rise in the Financial Inclusion rate compared to previous years. Financial service accessibility has increased to 63.6% of the population, while the number of financially excluded has dropped to 36.4% from 46.3% in 2010. The poll used criteria such as population with bank accounts, savings, remittances, payments, loans, and banking agents. Online payments had a significant increase, as shown by the research. Card transactions on point-of-sale terminals rose from 5,000 in 2011 to 30 million in 2018, as the chairman of the Nigeria Inter-Bank Settlement System reported. The increase in the number of point-of-sale terminals deployed from 10,000 in 2011 to 200,000 in 2018 clearly indicates that the efforts and procedures taken were successful.

g. Categorization of Financial Inclusion in Nigeria

The Nigerian monetary system is often categorized into two parts: the unapproved and the authorized. Unlike the authorized sector, which comprises a limited number of financial institutions such as banks and credit unions, the unofficial sector lacks a formal structure. Olofin and Afangideh (2018) assert that the unofficial market is a component of the legal market but is inadequately established, inaccessible, and connected to it. In 2014, it was reported that over 50% of Nigeria's adult population was purportedly financially excluded, as stated by Demirguc-Kunt (2015). 69% of people in the nation have access to services, while just 44% are financially integrated. Nigeria has implemented the National Financial Inclusion Strategy (NFIS) to boost the enrollment of Nigerians in the formal financial sector, aiming to address the country's significant financial exclusion rates.

The strategy seeks to reach 70% of the population via designated initiatives by 2020. Payroll, savings, credit, insurance, and pension are components of this, along with objectives for the associated service delivery channels.

h. Barriers to Achieving Inclusive Financial Inclusion

The key barriers to people not entering financial services like the bank are given below:

Adult populations worldwide have significant challenges in receiving financial services owing to poor or inconsistent income. In poor and undeveloped nations, a significant portion of the population lacks a stable income and does not own a bank account, as indicated by a Findex study. Martínez et al. (2013) found that 62% of Mexican people aged 15 to 70 are not included in the official financial system. 77% of those persons said that they are excluded from the system due to insufficient income, economic instability, or ineligibility for an account or credit at a traditional financial institution.

The Findex survey revealed that a major obstacle for the unbanked in developing countries is the geographical distance separating their residences from banks. An indicator that provides a general idea of the hurdles to inclusion is the density of bank branches per 1000 square kilometers. Denmark has more than 21 bank branches per 100,000 people, whereas Bangladesh has less than 9 branches per 100,000 people, based on 2018 figures from the International Monetary Fund (IMF). In remote and rural areas, many individuals lack access to nearby banking facilities.

A lack of necessary documentation, such as identity or references, might be another barrier to getting a bank account. Gender biases are also a factor. In many underdeveloped or impoverished countries, people are hesitant to use financial services due to their low literacy levels. Most people save their money in different methods, as reported by Global Findex. Options include purchasing gold, holding cash, or using the village club. The lack of access to a bank account hinders customers from using financial services. Several women are unemployed and rely on their spouses for financial support. Accessing savings and credit facilities might be difficult since banks often need evidence of income. A male guarantor is typically necessary to get a loan (Islam & Mamum, 2011).

Citizens in this country possess an inadequate understanding of personal finance and a general deficiency of knowledge in this field. Many people, particularly in isolated regions, are unaware of and lack knowledge about the significance of financial services, leading them to be reluctant to use banking services such as savings accounts, credit, and payment processing.

Banking operations are characterized by being labor-intensive and burdened with inflexible terms and conditions. Commercial banks often impose minimum balance and initial deposit restrictions that may deter clients from using their services (Islam & Mamum, 2011).

i. Concept of Economic Growth

Fluctuations in material production during a short period, usually one year, are a component of economic growth. Economists define economic growth as a rise in the value of material production, often measured by the rate of growth of Gross Domestic Product (GDP) or national income. Growth is attainable but does not lead to economic progress. "Economic growth" refers to both the monetary and non-monetary gains in material production and the larger social and political changes resulting from these factors and others (Mladen, 2015). In this research, gross domestic product growth served as a proxy for economic growth.

j. The Relationship between Financial Inclusion and Gross Domestic Product

Enhanced access to financial services may have a positive impact on a nation's Gross Domestic Product (GDP), inequality, and poverty rates. Underestimating the transformative power of financial inclusion would be a mistake since it can potentially empower low-income people and small companies, leading to increased independence and financial stability, ultimately benefiting a country's economy. Some argue that a nation's economic development is hindered, and poverty rates increase when individuals lack access to financial services. Sinclair, McHard, Dobbie, Lindsay, and Gillespie (2019) contend that those with the least financial resources ultimately bear the greatest cost of financial exclusion. A strong and widely available financial system influences long-term growth rates, investment decisions, information and transaction costs, savings rates, and technological innovation (Beck et al., 2019). Customers with ambiguous information characteristics subject to adaptable regulations, who are the focus of the financial inclusion initiative, may provide a barrier to this. Social exclusion is a term used to describe the combination of issues such as unemployment, low wages, inadequate housing, high crime rates, poor health, poverty, and family breakdown that individuals or communities may face. Social marginalization leads to the formation of divisions and classes. Consequently, both the included and excluded groups harbor excessive fear and distrust towards one another, resulting in a harmful social division that impacts the economy negatively. Wealth tends to accumulate in rich communities while poverty expands in poorer ones. Financial inclusion can reduce the wealth disparity and the gap between those who are excluded and those who are included. Other social, cultural, and geographical issues should be taken into account in conjunction with financial inclusion rather than in isolation. Nevertheless, individuals without access to formal financial services represent a significant fraction of the population, indicating that comprehensive financial inclusion has not been attained despite our awareness of its implications.

B) Theoretical Framework

This study was anchored on the Financial Intermediation Theory.

a. Financial Intermediation Theory

Gurley and Shaw introduced this concept in 1960. Financial intermediation allows surplus units to lend money to deficit units by depositing funds with financial institutions. Bisignano (2018) and Leland and Pyle (2017) identified four methods to distinguish financial intermediaries. The basic forms of liabilities (deposits) are specified initially, with a predefined amount that is unrelated to the portfolio's performance. Secondly, deposits often have a shorter lifespan relative to the assets they are invested in. Additionally, a significant portion of their obligations may be settled by cheque, allowing them to withdraw the funds at their discretion. Their assets and duties are often non-transferable. Intermediaries primarily facilitate a continuous flow of money from entities with excess funds to others with insufficient funds.

Financial intermediaries are primarily recognized as entities that provide specialist financial products (Schöltens and van Wensveen, 2013). When a middleman realizes it can sell the products at a price that covers its production expenses, including direct and opportunity costs, it proceeds to produce them. Market imperfections require the presence of financial intermediaries. Financial intermediaries would not be needed in a perfect market without transaction or information costs.

Various markets exhibit asymmetrical information between providers and customers. There is a notable disparity in information inside the financial markets. Lenders may lack insight into a borrower's work ethic, moral character, or collateral. Business owners possess unique insights on the projects they seek funding for (Leland & Pyle, 2017). Effective funding of top-tier projects relies on unrestricted information exchange among market participants, but moral hazard complicates this dynamic.

b. Modern Development Theory

A cohort of intellectuals devised contemporary development theory to elucidate how society might achieve the desired change. Burr and HS 1958 formulated the theory. The suggested framework was based on the modernization theory, which analyses the reasons and outcomes of societal change. The idea primarily focused on the economic factors that either encourage or hinder progress. The notion of financial inclusion among rural populations involves providing development assistance targeted at certain components that might lead to modernization in traditional or backward civilizations. Development theory's fundamental principles revolve around the concept that society may progress and enhance via the efforts of its constituents.

C) Empirical Review

An investigation was conducted by Okon, Umoh, and Samuel (2023) to analyze the association between financial inclusion and fintech and their effects on GDP growth in Nigeria. Extending the definition of FinTech to include more concrete metrics, such as point-of-sale systems, online payment systems, mobile banking, and automated teller machines, this study contributes to the existing corpus of knowledge. In Nigeria, we evaluated the approach by constructing distinct indices to assess the effects of financial inclusion criteria. Economic development, FinTech, and financial inclusion were found to be persistently correlated through the application of the autoregressive distributed lag (ARDL) bounds test cointegration method, which required equation approximations. Both financial inclusion and GDP growth have been attributed directly to FinTech. Insecurity and exorbitant maintenance expenses have compelled the removal of ATM galleries from bank branches. These galleries were previously situated both inside and outside of branches. The correlation between ATMs, financial inclusion, and economic development has been adversely affected as a consequence. The duration of wait periods and the growing number of bank customers are indications that the current network of 22,500 ATMs in Nigeria is insufficient to support a reasonable expansion. Although certain financial inclusion measures contribute positively to economic development, the utilization component of financial inclusion merely exerts a marginally positive influence. Although financial development was impacted by bank branches, lending to private sector firms remained unaffected.

By analyzing data spanning the years 1981 to 2021, Chude and Chude (2022) aimed to ascertain whether or not financial inclusion and GDP growth in Nigeria were related. The researchers directed their inquiry toward bank branches, total bank loans, commercial bank deposits, and ATM services as the primary determinants impacting the growth of the nation's GDP. Due to the advantageous characteristics of the Best Linear Unbiased Estimators (BLUE), Ordinary Least Squares (OLS) were selected as the preferred method of data analysis. The variables were obtained from the Statistical Bulletin of the Central Bank of Nigeria. Gross fixed capital formation, branch count, deposit volume, and total loan balance were the factors that were considered. Utilizing the statistics bulletin for 2021 published by the Central Bank of Nigeria (CBN), the researchers gathered data for the study and implemented the following techniques: unit root analysis, cointegration, and error correction mechanism. Software E-View was utilized for the analysis. It was discovered that the growth of total bank loans and GDP in Nigeria are substantially inversely correlated ($t = -2.198595$, $p = 0.0389$). This research indicates that the aggregate bank loan does not contribute to the thriving economy of Nigeria. Based on statistical analysis, it was determined that Nigerian bank branches have a significant impact on GDP growth ($t=2.549937$, $p=0.0191$). The expansion of bank branches has been indispensable to the economic expansion of Nigeria. There is a statistically significant and positive correlation between deposits in commercial banks and the growth of Nigeria's economy ($t=3.103610$, $p=0.0009$). This discovery indicates that deposits made into commercial institutions have positively impacted the nation's economy. Before extending credit to customers, financial institutions should exercise utmost caution, specify the intended use of the funds, and require suitable collateral, according to the report. Their economy would benefit from the establishment of additional bank branches. Practically no point-of-sale devices are utilized. One possible approach that financial institutions could adopt to address this issue is by installing additional devices in critical locations such as schools, churches, hospitals, and petrol stations.

Ifediora, Offor, Eze, Takon, Ageme, Ibe, and Onwumere (2022), between 2012 and 2018, survey responses from 22 Sub-Saharan African nations were used to investigate the connection between financial inclusion and economic growth. The investigation makes use of the GMM method. We discovered that the presence, extent, and overall aspects of financial inclusion have a substantial and positive effect on economic development when all relevant indicators are considered. Conversely, the utilization component of financial inclusion yields a marginal yet favorable impact. ATM and bank branches are significantly correlated with economic development; on the other hand, deposit accounts, outstanding loans, and outstanding deposits exhibit a moderately negative correlation.

Robert, Zoltan, Khan, Zafar, and Okunlola (2022) analyzed the impact of data on the fiscal sustainability, human development, fiscal efficiency, and gross domestic product of the G20 nations. This study examined yearly data from fifteen developed and emergent economies spanning the years 2004 to 2017. The study employed principal component analysis (PCA) to assess financial inclusion, efficacy, and sustainability through the utilization of a solitary indicator. The suitability of the ARDL model was validated through panel stationarity experiments that supported both the long and brief trials. While ARDL Model 1 established a correlation between long-term sustainability and financial inclusion, it failed to establish a direct relationship between the two. An additional discovery derived from ARDL Model 2 indicates that while financial inclusion does not have an immediate effect on efficiency, it does enhance it gradually. Similar to prior ARDL models, Model 3 discovered that inclusive financing had a marginal short-term impact on poverty reduction but a substantial long-term reduction. The ARDL Model 4 failed to identify any correlation between GDP and inclusive finance over the short and long term.

Obi (2022) analyzed the impacts on Nigeria's economic growth. For the study, time series data from 2004 to 2021 were utilized. The investigation was carried out during that allocated period. From the outset until the very end. Ordinary Least Square was applied to the data estimation process. In addition, experiments were conducted before and after the estimation process. The recently implemented policy on financial inclusion has a positive impact on economic development, according to the OLS study. The catalyst for growth is financial inclusion. A suggestion posits that the CBN should establish partnerships with commercial banks and microfinance organizations to facilitate greater participation of rural populations—including women, youth, farmers, and informal merchants—in the formal economy. The implementation of financial inclusion compliance committees at the local government levels should be facilitated by the Central Bank of Nigeria's formation of a State Monitoring unit.

The impact of financial inclusion on global economic growth from 2002 to 2020 was investigated by researchers employing a diverse range of location-based and income-based panels (Azami, 2022). Starting with known variables, heterogeneous panel data models are estimated. A comprehensive composite financial inclusion index is offered, which considers the utilization, depth, and scope of financial services. The panel cointegration test results indicate that long-term economic development is significantly influenced by regional economies, income levels, and financial inclusion. The potential of financial inclusion to serve as a potent catalyst for worldwide economic expansion is supported by the GMM model, which demonstrates its positive impact on economic progress.

In their investigation of the impact of financial inclusion on the Nigerian economy, Oti Chiadika and Obi (2022) utilized time series data and applied the ADF unit root test. It appears that Nigeria's economy is thriving, as indicated by the ATM-to-adult ratio of the data. The adoption of automated teller machines (ATMs) by financial institutions serves as an indicator of forthcoming progress. The impact of POS per 100,000 adults on the economy is negligible. Real gross domestic product (RGDP) has not yet been substantially impacted by the recent integration of point-of-sale (POS) systems with financial systems, which is one possible explanation. The findings indicated that an increase of 10% in the POS per 100,000 adults had no impact on the RGDP. Consequently, the effects of POS are more likely to be long-lasting than short-lived.

An inquiry conducted by Nma and Callistus (2022) examined the correlation between financial inclusion and GDP growth in Nigeria. The principal aim of this study was to examine the impact of financial inclusion on Nigeria's GDP growth. Our objective is to examine the effect of deposit and loan activities at rural commercial bank branches on Nigeria's aggregate GDP, in addition to analyzing the effect of commercial bank loans extended to small businesses on the GDP as a whole. In this investigation, ex post facto research was utilized. The study revealed that loans extended by commercial banks to small businesses, in addition to deposits and loans from commercial banks in rural regions, significantly and favourably influenced the gross domestic product of the nation. Small business loans from commercial banks had a marginally negative impact on GDP, according to the study. However, deposits and loans from commercial bank branches in rural areas had a significantly positive effect. According to the recommendations, lending and deposit acceptance from rural branches should be a priority for banks. In addition, the government must implement stringent regulatory measures to oversee banks and deter them from misusing the financial advantages bestowed upon Nigerian citizens, specifically in the context of small-scale business loans.

An investigation carried out in 2022 by Yakubu and Bunyaminu examined the economic performance of ECOWAS member states after the implementation of financial inclusion policies. The accessibility of the financial system facilitates greater participation by a greater number of individuals, thereby potentially fostering economic development, as supported by the research. The researchers employed the aggregated estimated generalized least squares (EGLS) method to examine data from ten member states of ECOWAS from 2010 to 2017. Financial inclusion has a substantial impact on economic growth, as evidenced by its direct and indirect effects on financial openness. The results indicate that inflation retards growth, whereas trade openness and foreign direct investment are beneficial. The economic development of ECOWAS should be strongly promoted. The results underscore the importance of mitigating obstacles to accessing financial services to advance equitable development.

Eze and Alugbuo (2021) analyzed the impact of financial inclusion on the mitigation of poverty in Nigeria. In addition to data from the 2017 World Bank Global Findex survey for Nigeria, an instrumental variable model and a logit model were implemented. The income quintiles of the subjects were initialized to 1 for the "poor" dummy variable, denoting their membership in the bottom 40% of the economy, and to 0 in all other circumstances. The situation's explanation is influenced by various factors, such as the author's financial inclusion index, age, education, gender, employment status, income, government assistance, savings, retirement funds, self-employment, and more.

An examination of the correlation between GDP growth and financial inclusion in Nigeria spanned the years 1992 to 2018, as documented by Okonkwo and Nwanna (2021). The degree to which a population can avail itself of formal financial services is influenced by various factors. These include the quantity of currency in circulation, the level of deposits in microfinance institutions, the number of commercial bank branches, the monetary volume lent to companies by commercial banks, and the monetary volume deposited and lent out by rural bank branches. Conversely, nominal GDP was chosen as the metric signifying economic expansion. The study employed an ex post facto research design. To analyze effects, we utilized the Granger Causality test; to investigate variable associations, we employed regression. The results of the study indicated that the amount of currency in circulation in Nigeria and the nation's economic prosperity were positively correlated. A causal relationship is suggested by the positive and statistically significant impact of rural branches of commercial banks lending money in Nigeria on economic development. There is a modest positive correlation between deposits made at rural branches of commercial banks and the GDP in Nigeria.

Jisike and Ifeanyi (2021) scrutinized the effects of financial inclusion on Nigeria's economic progress, spanning the years 1992 to 2018. Financial inclusion can be quantified using a variety of metrics, such as the circulation of money, the supply of commercial bank credit to the private sector, the number of commercial bank branches in rural areas, and the number of loans and deposits made by these branches. Nominal GDP was substitutably employed as the economic development indicator. The term for this approach to investigation is ex post facto. The investigation employed regression analysis and the Granger causality test to identify patterns in the interrelationships among the variables. The results indicate a moderate correlation between the money supply and GDP growth in Nigeria, with a causal effect. Loans disbursed by commercial bank branches situated in rural areas also significantly contribute to economic development in Nigeria in a positive and statistically significant manner. There is a modest positive correlation between deposits made at rural branches of commercial banks and the GDP in Nigeria. To increase access to banking services, the paper contends that the government and central bank should encourage the establishment of bank branches in sparsely populated rural areas. Equitable assistance from the government is required to enable these institutions to meet the requirements of these regions.

An examination was conducted by Enueshike and Okpebru (2020) of the effect of financial inclusion on Nigeria's GDP growth, utilizing data gathered from 2000 to 2018. The variables were estimated utilizing data obtained from the Statistical Bulletin of the Central Bank of Nigeria. To evaluate financial inclusion—the share of GDP attributable to financial institutions—we utilized LSME loans, RBD deposits by rural bank customers, and INF as the dummy variable in a regression analysis. Diagnostic tests for unit root and cointegration were performed using the ex-post factor research approach of the study. The outcomes demonstrated that the variables exhibited varied cointegration and a sustained relationship. The Nigerian central bank should advocate for increased deposits into rural bank accounts (RBD), according to the findings.

In their study, Anastasia, Chijindu, and Steve (2020) investigated the relationship between entrepreneurial growth (EG) and financial inclusion (FI) in Nigeria's retail and wholesale sub-sectors. The researchers utilized quarterly data obtained from the Central Bank of Nigeria and the World Bank's World Development Indicators. We applied a methodology encompassing error correction and correlation analysis to the data. According to research examining the effects of the wholesale and retail sectors on GDP, foreign investment substantially stimulates economic expansion. The data indicates that the presence of commercial bank branches (CMB) had a substantial impact on the growth rates of the wholesale and retail sub-sectors, whereas account ownership (ACN) did not exhibit any discernible influence. The significance of the retail and wholesale sectors about GDP renders it evident that CMB functions as a critical financial intermediary capable of driving economic development. We strongly urge the government to increase the number of Community Microfinance Banks (CMB) throughout Nigeria so that entrepreneurs who do not have bank accounts can easily gain access to legitimate financial services. To promote entrepreneurial growth, success, and GDP contributions, stakeholders in the formal financial system must intensify their endeavors to enhance financial literacy among the substantial unbanked populace.

2018 saw the investigation by Nwafor and Yomi into the impact of financial inclusion on Nigeria's GDP growth. Two hypotheses were examined utilizing data gathered from 2001 to 2016 in conjunction with the Two-Stage Least Squares Regression Method. Financial inclusion had a substantial impact on Nigeria's GDP growth, according to the findings, whereas engagement in the banking sector had no discernible influence on financial inclusion throughout the study period. It was proposed that Nigerian banks produce novel financial products to extend their services to underserved regions, thereby stimulating economic expansion and augmenting per capita GDP.

To ascertain the impact of financial inclusion on Nigeria's GDP growth, Wakdok (2018) employed econometric analysis. A framework of theory that was implemented was the finance-growth hypothesis. By employing economic data obtained from secondary sources spanning the years 1990 to 2014, we conducted an error correction model analysis to examine our hypothesis. It was determined that broad money, private sector credit, loan deposits in rural areas, and the liquidity ratio of commercial banks were all noteworthy indicators of financial inclusion. These factors played a crucial role in promoting financial deepening, which subsequently stimulated economic growth in Nigeria. Policymakers and regulators bear the onus of ensuring that financial institutions adhere to all applicable regulations and laws. Regulators bear the onus of ensuring that all manifestations of financial inclusion foster economic growth at the national level to the ultimate advantage of all citizens.

In their study, Anyanwu, Ananwude, and Nnoje (2018) examined the effects of microfinance institution services on the empowerment of rural women through the establishment of daily savings accounts, rent savings, child education, and neonatal savings. For this purpose, we utilized a descriptive survey methodology. A mere 190 responses out of a possible 200 produced data that could be utilized for statistical analysis. The research suggests that microfinance institutions offer women-specific specialized products. Individuals will be presented with an extensive selection of customized offerings as a result. Women should have the option to obtain money from microfinance institutions using communal or social assets as opposed to solely relying on private assets.

Olubanjo (2017) investigated the correlation between certain critical factors that influence financial inclusion, including income, education, age, gender, urban/rural categorization, access, and the likelihood of possessing a bank account in Nigeria. In Nigeria, a survey of over 20,000 individuals spanning 37 states was conducted by researchers from 2008 to 2016. Women, adolescents, and rural areas are disproportionately adversely affected in terms of financial inclusion. Enhancing the average travel time to the nearest bank branch in Nigeria would substantially augment the probability of an individual achieving financial inclusion. Policymaking will be guided by the outcomes of initiatives to reduce poverty and educate the public about personal finance.

III. RESEARCH METHODOLOGY

A) Research design

This study used an ex post facto research technique. The ex-post facto research technique was used to ensure the data's integrity. The study focused on analyzing data from 2000 to 2020 on small-scale business loans, deposits, and loans from rural commercial bank branches, together with Nigeria's GDP. The research used Ordinary Least Square Regression, conducted using Statistical Package E-View version 10.0. Descriptive statistics, such as mean, standard deviation, minimum, and maximum values observed throughout the research period, are valuable for identifying central tendency. Regression analysis, a kind of inferential statistics, helps establish the significance of the relationship between two variables. The decision was made using a significance criterion of 5% (0.05). If the estimated probability value (P-value or Sig.) is more than or equal to 5%, we will accept the null hypothesis (Ho); otherwise, we will reject it.

a. Model specification

The model presumes a straight-line relationship among the dependent and independent variables.

Therefore, the regression estimation model from this functional relation is then written as thus:

$$GDP= \beta_0 + \beta_1 CBLSSB + \beta_2 DLRBCB + \mu \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

GDP- represents the real gross domestic product as a proxy for Nigeria's economic growth,
CBLSSB- represents commercial bank loans to small-scale businesses,
DLRDCB -represents deposits and loans of rural branches of commercial banks,
μ - error terms.

b. Data presentation

The table below shows the GDP, CBLSSB, and DLRDCB, it covered the period of 2000 to 2020 to evaluate the effect of financial inclusion on Nigeria's economic growth.

Table 1: Statistical data on GDP, CBLSSB, and DLRDCB in Nigeria from 2000 to 2020

YEAR	GDP	CBLSSE	DLRBCB
2000	7,062.75	44.54	11.15
2001	8,234.49	52.43	12.34
2002	11,501.45	82.37	8.94
2003	13,556.97	90.18	11.25
2004	18,124.06	54.98	34.12
2005	23,121.88	50.67	16.11
2006	30,375.18	25.71	24.27
2007	34,675.94	41.1	27.26
2008	39,954.21	13.51	46.52
2009	43,461.46	16.37	15.59
2010	55,469.35	12.55	16.56
2011	63,713.36	15.61	19.98
2012	72,599.63	13.86	22.58
2013	81,009.96	15.35	739.92
2014	90,136.98	16.07	988.59
2015	95,177.74	12.95	29.17
2016	102,575.42	10.75	43.78
2017	114,899.25	10.75	530.99
2018	129,086.91	44.82	200.07
2019	145,639.14	123.93	202.59
2020	154,252.32	52.51	107.52

Source: *Researcher's Computation (2024)*

B) Data Analysis

Table 2: Descriptive Statistics

	CBLSSE	GDP	DLRBCB
Mean	38.14333	63553.74	148.0619
Median	25.71000	55469.35	27.26000
Maximum	123.9300	154252.3	988.5900
Minimum	10.75000	7062.750	8.940000
Std. Dev.	30.90185	46707.13	269.1284
Skewness	1.254502	0.489788	2.174293
Kurtosis	3.984020	2.039006	6.477150
Jarque-Bera	6.355472	1.647694	27.12568
Probability	0.041680	0.438741	0.000001
Sum	801.0100	1334628.	3109.300
Sum Sq. Dev.	19098.48	4.36E+10	1448602.
Observations	20	20	20

Source: *Eviews 10.0*

The GDP descriptive data indicates an average of 63553.74, with a range from 7062.750 to 154252.30. The standard deviation was reported at 46707.13. Commercial bank loans to small-scale firms (CBLSSB) have a standard deviation of 30.90185. The range of values is from 10.75000 to 123.9300, with an average value of 38.14333. The average deposit and loan balance for DLRDCB's rural branches is 148.0619 USD, with a range of 8.940000 USD to 988.5900 USD and a standard deviation of 269.1284 USD.

C) Test of Hypotheses

a. Regression Result

Table 3: Regression Result Table

Dependent Variable: GDP		
Method: Least Squares		
Date: 02/02/24 Time: 11:06		
Sample: 2000 2020		

Included observations: 20				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	50821.73	17951.55	2.831049	0.0111
CBLSSE	57.31653	333.8325	0.171692	0.0356
DLRBCB	71.22538	38.33130	1.858152	0.0196
R-squared	0.163127	Mean dependent var		63553.74
Adjusted R-squared	0.070141	S.D. dependent var		46707.13
S.E. of regression	45039.32	Akaike info criterion		24.40002
Sum squared resid	3.65E+10	Schwarz criterion		24.54924
Log-likelihood	-253.2002	Hannan-Quinn criter.		24.43241
F-statistic	1.754314	Durbin-Watson stat		0.178095
Prob(F-statistic)	0.000344			

Source: *Eviews 10.0*

An inspection of the R-squared value in Table 4.3.1 above indicates that the independent variables jointly explain about 16 percent of the variation in GDP. The R-squared result indicates that the study's independent variables have predictive power over the dependent variable and jointly explain a significant variance in GDP. The F-statistic ratio and p-values of 1.75 (p=.000) indicate that the model is statistically fit, and the variables specified are perfect in the estimations model.

b. Test of hypotheses one

Ho_1: Commercial bank loans to small-scale businesses does not have a significant effect on the economic growth of Nigeria Commercial bank loans to small-scale businesses have a positive and significant effect on gross domestic product (α=57.32, p=.036).

Since the p-value of the regression model is less than 0.05 level of significance, hypothesis one null hypothesis is therefore rejected; we state and accept the alternative hypothesis, which states that commercial bank loans to small-scale businesses significantly affect Nigeria's economic growth.

c. Test of Hypotheses Two

Ho_2: Deposit and loans of rural branches of commercial banks do not have a significant effect on the economic growth of Nigeria Deposit and loans of rural branches of commercial banks positively and significantly affect gross domestic product (α=71.23, *p=.0296*).

Since the p-value of the regression model is less than 0.05 level of significance, hypothesis one null hypothesis is therefore rejected; we state and accept the alternative hypothesis, which states that deposits and loans of rural branches of commercial banks have a significant effect on the economic growth of Nigeria.

IV. DISCUSSION OF FINDINGS

The research found that loans from commercial banks to small enterprises substantially affected GDP development in Nigeria. Enueshike and Okpebru (2020) found similar results when examining the impact of financial inclusion on economic growth in Nigeria between 2000 and 2018. The variable estimates were derived from information provided in the Statistical Bulletin issued by the Central Bank of Nigeria. We conducted a regression analysis using the independent variables LSME loans, RBD deposits made by rural bank clients, and INF as a control variable to assess financial inclusion, the share of GDP attributed to financial institutions. The study's ex-post factor research approach included administering unit root and cointegration diagnostic tests, which revealed a mixed cointegration between the variables and a long-term association. The report suggested that the Central Bank promote rural bank deposits (RBD), among other recommendations. The research recommended that the Central Bank of Nigeria should encourage rural bank deposits (RBD).

The research found that deposits and loans from commercial banks' rural branches had a considerable effect on Nigeria's GDP development. Okonkwo and Nwanna (2021) examined the impact of financial inclusion on GDP growth in Nigeria between 1992 and 2018, and their findings align with our research. Factors influencing financial inclusion include the volume of unbanked funds, circulating money, deposits in microfinance institutions, the presence of commercial bank branches, business loans from commercial banks, and rural branch deposits and loans. Conversely, nominal GDP was chosen as the measure of economic growth. The research design used is ex post facto. We used the Granger Causality test to analyze the effects and regression to study the relationships between the variables. The test findings indicate a significant positive association between the amount of cash in circulation in Nigeria and the country's economic success. Rural branches of commercial banks issuing loans have a favorable and statistically significant impact on economic growth in Nigeria. There is a weak positive correlation between Nigeria's Gross Domestic Product (GDP) and deposits made in rural branches of commercial banks.

IV. SUMMARY, CONCLUSION AND RECOMMENDATIONS

A) Summary of Findings

The main findings of this study were:

1. The study found that commercial bank loans to small-scale businesses have a significant effect on Nigeria's economic growth.
2. The study findings revealed that deposits and loans from rural branches of commercial banks significantly affect Nigeria's economic growth.

B) Conclusion

This research aimed to investigate the impact of financial inclusion on Nigeria's economic development. The research found that commercial bank loans to small-scale firms had a substantial impact on Nigeria's economic development. It was determined that the deposits and loans of rural branches of commercial banks had a substantial impact on Nigeria's economic development.

C) Recommendations

Based on the findings of the study, it was recommended that:

1. Rural residents have a high need for financial services; thus, banks should increase their efforts to provide them with loans and facilitate fundraising.
2. To encourage investment in marketable projects and enhance the economy, the Nigerian central bank should prioritize providing unsecured loans to rural investors.

D) Suggestions for Further Study

The empirical examination in this paper is constrained by data availability, suggesting potential areas for further research. One clear next step is to explore how financial inclusion impacts economic development by using other financial inclusion indicators not examined in this research.

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