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Financial Inclusion and Economic Growth in Nigeria: Evidence from SME Lending and Rural Bank Branch Activities (2010–2023)

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Abstract: Financial inclusion has become of global interest as a significant growth driver for inclusive development's sake in the world, more specifically in emerging economies such as Nigeria. The paper analyses the implications of financial inclusion to growth in Nigeria, with emphasis on the role of small savings and small loans extended on the deposit money bank's, small and medium enterprises(SMEs), and through rural bank branches. With an ex post facto design, annual time series data was collected from the Central Bank of Nigeria (CBN) and National Bureau of Statistics (NBS) from 2010-2023. Data were analyzed by Simple Linear Regression and Pearson Correlation with SPSS version 20.0. The findings show that there is a strong and positive significant relationship between DMB loans to SMEs and the GDP and that between rural banking operations and Nigeria's external reserves. They indicate the relevance of a targeted financial policy in the improvement of macroeconomic aggregates. The research suggests that Central Bank of Nigeria should increase financial inclusion among the excluded rural population towards accessible loans without collateral and enhanced SME credit schemes to enhance inclusive growth.

Keywords: *lInFinancial Inclusion, Economic Growth, Deposit Money Banks, SMEs, Rural Banking, External Reserves, Nigeria.*

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I. INTRODUCTION

- *Background to the Study*

ThIn the context of low- and middle-income developing countries, financial inclusion has been playing a very important tool used for promoting sustainable economic growth. Conceptualized as financial and economic development, financial inclusion is the provision of formal financial services (savings, credit, insurance, and payments) by the formal financial sector at affordable costs to the economically disadvantaged (Nwanne, 2015; Onaolapo, 2015), it seeks to remove the obstacles that prevent people and businesses from becoming fully involved in the financial system. In Nigeria, financial exclusion is still a significant problem, and large numbers of the populace, particularly in rural areas have no access to even basic financial services. This works against national endeavor to foster inclusive economic growth and minimise poverty.

In acknowledgement of the potential of financial inclusion, Nigeria unveiled the National Financial Inclusion Strategy (NFIS) in 2012 which targeted reducing the national adult population who were financially excluded from accessing or using financial services from 46% in 2010 to 20% by 2020. This was reinforced by Financial System Strategy 2020 (FSS2020), aimed at making the financial sector an engine for economic growth. Despite these efforts, financial exclusion is still prevalent with the 2018 EFInA survey showing 36.8% of Nigerian adults (36.6 million adults) living without access to the formal financial system, with women and people in rural areas disproportionately represented.

Empirical evidence (e.g., Hannig & Jansen, 2010; McKinsey Global Institute, 2016) has also indicated that financial inclusion promotes capital accumulation, spurs entrepreneurship and encourages efficient use of resources, which are vital for economic growth. Nonetheless, the relatively large size of the financially excluded and bank

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infrastructure only in urban areas limit the inclusiveness of the banking system in Nigeria. It is crucial to mention that rural banking and SME finance sector has been recognised as a critical channel through which financial inclusion can change macroeconomic endogenous such as GDP and external reserves.

This study thus, examines the nexus between financial inclusion and economic growth in Nigeria by considering the two dimensions of (i) loans to SMEs by deposit money banks, and (ii) deposits and loans to rural bank branches. As opposed to former studies, whose concern was mainly on GDP and its relevance with regard to financial inclusion among Nigerians, this study attempts to build on EWD and CEG through introducing external reserves as one of the macroeconomic aggregates of interest in order to bring about a globalization ambit of financial inclusion discourse within which Nigerian consideration falls.

➢ *Statement of the Problem*

Nigerian financial institutions failed to meet the financial needs of the active poor and rural dwellers, who obviously needed to be included in the financial sector. Nigeria does not focus on its rural region economy growth and financial transations. Insufficient fiscal provisioning meant that the working poor and villagers continued to suffer economic hardship. Their cottage industries can increase any country's potential for prosperity and economic stimulation through the rural and working poor. Thus, the role of the sector to economic prosperity would be undermined should the issue not be identified (Odumusor, Sackey, & Abiji, 2024).

Research on the empirical evidence of the effects of financial inclusion on economic growth has gained this is reflected in the recent literature on this subject (Van, Vo, Nguyen, & Vo, QR Mwaitete & George, 2018; Gretta, 2017; Iqbal & Sami, 2017; Saidi & Emara, 2017; Okoyo et al., 2017,.Lenka & Sharma, 2017; Sharma, 2016; Nkwede, 2015; Onaolapo, 2015; Michael & Sharon, 2014; Wang'oo, 2013; Oreo, 2013; Bruce et.al, 2013; Hariharan & Marktanner, 2012; Andrianaivos Kpodar, 2012; Swamy, 2012). These researchers, for example, observed that financial inclusion leads to economic growth, supply leading hypothesis (Lenka & Sharma, 2017; Uchenna & Anyanwaokoro, 2017; Okoye et al., 2017; Iqbal & Sami, 2017; Sharma, 2016).

One of the key barriers to small and medium-sized enterprises in African countries is the lack of available cash (including alternative finance options such as lines of credit), as highlighted by previous research. Crucial attributes of financial inclusion in Africa are the availability, accessibility and utilization of financial services. Why using these holistic financial inclusion metrics is that merely having a bank account is not sufficient in Africa, Nigeria in particular. "Unbanked and underbanked individuals do have relationships with real financial businesses, but they do not use these businesses because of things like distance to the nearest branch and the fees associated with the +product. It is common knowledge that a handful of people own the economy of Nigeria and many other African countries, which means that a great deal of the members of the society do not have access to formal financial services. It is putting the economy in danger. As at 2021, according to Central Bank of Nigeria (CBN 2022), only 17.1% of money in circulation is with the banking sector. 17.1% of the whole is all that banks touch. This is what this study sets out to address in the literature.

➢ *Objectives of the Study*

The primary goal of this research is to investigate the impact of financial inclusion on Nigeria's economic growth. More specifically, the study seeks to:

- To ascertain the effect of deposit money bank loans to small and medium scale enterprises on gross domestic product in Nigeria.
- To examine the effect of deposits and loans to rural branches of deposit money banks on external reserves in Nigeria

➢ *Research Questions*

This study further seeks to proffer answers to the following questions:

- To what extent is the effect of deposit money bank loans to small and medium scale enterprises on the gross domestic product in Nigeria?
- How does deposit and loans to rural branches of deposit money banks affect external reserves in Nigeria?

➢ *Research Hypotheses*

- H01: Bank loans to small and medium scale enterprises has no significant relationship on gross domestic product.
- H02: Deposit and Loans to rural branches of deposit money banks has no significant relationship on external reserves in Nigeria.

➢ *Justification for the Study*

From literature, financial inclusion appears to be very ultrasensitive due to its conspicuous pre-eminence in economic growth. The effectiveness of financial sector is much crucial for an economy to function well. There is consensus that financial system is supposed to allocate resources towards most profitable areas in any economy. This may involve the extension of loans to private and public and also urban and rural community for the investment directed at the increase of national output development of agricultural production, export trade and providing infrastructure.

➢ *Significance of the Study*

Financial inclusion improves intermediation efficiency, increases savings mobilization by the financial sector and entrepreneurial activities and ultimately drives

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economic development. The findings and recommendations of this study will be useful to people, corporate bodies, government and external financial institutions to improve employment opportunities to rural households. The adoption of the recommendations will also result in more economic involvement by the rural people and increase in disposable income of the rural folk. This in turn will trigger more savings and deposit gathering that would end up catalyzing economic growth through the multiplier effect.

II. LITERATURE REVIEW

A. Conceptual Clarification

A detailed definition section establishes mutual understanding between readers and researchers regarding the fundamental ideas of the impact of financial incllusion on economic growth.

➢ *Ideology of Financial Inclusion*

MFinancial Inclusion has emerged as a key development policy issue across the globe, with a greater emphasis in many of the developing countries, including Nigeria. Financial Inclusion has been described as providing of financial services at affordable cost to disadvantaged and low income group of the society (as against financial exclusion that individuals lack access to affordable financial products and services) (Nwanne, 2015). Onaolapo (2015) defines financial inclusion as one in which is a way of bringing access to and usage of mainstream financial services by everyone in the country. This also includes easing the process of bank account opening, access to credit and smooth usage of financial products and services. Stephen et al. (2019) as quoted in Central Bank of Nigeria (CBN) (2013), financial inclusion thus became a condition where all citizens have access to banking and insurance services and have knowledge and capabilities to use them.

But, enabling wide access to financial services without price or non-price barriers can help rural and poor people to overcome poverty, increase their income and stimulate economic growth (Eton, 2019). Consequently, until the financial system penetrates unbanked rural populace where a significant proportion of resources and contributions are circulating outside of the financial system, the level of productivity and economic growth may be retarded (Ele & Ogbonna 2023). As of our knowledge, these rural population and the productive family units, are the fundamental basis of agricultural activity, sector that is one of the principle props of national economy.

Economic expansion refers to the positive change in a country's capacity to produce goods and services not only in numerical terms but also in the way things are produced the efficiency gained to produce goods. It(GDP) is a monetary measure of the market value of all the final goods and services produced in a period of time, often annually or quarterly (of specific intervals of that time period as examined). Economic growth must be ongoing for a developing economy to get out of poverty and achieve sustainable development (Ele & Ogbonna, 2023).

Private sector credit: Freear (1980) stated that credit to the private sector is based on the definition of Monetary and International Financial Statistics (MIFS) which is financial resources provided to the private sector by financial corporations, such as loans and advances, purchases of nonequity securities, trade credits, and other accounts receivable

Economic growth: this is "a long-term expansion of the economy's productive capacity, resulting in relatively high standard of living and relatively low inflation." It is typically quantified in terms of gross domestic product (GDP). (Schultz 1961).

Gross Domestic Product (GDP): According to the OECD (2022, p. 1), the gross domestic product (GDP) is a widely used indicator of the value of collected material goods and services produced in a country within a specific period of time. It also takes into account the income from that production or the end-selling price of those goods and services. This is a performance measure of the economy. It is a measure of how much the economy is growing or shrinking. Real GDP is the best indicator of an economy's growth rate.

➢ *Financial Inclusion*

Financial inclusion was proxied by Deposits and Loans of Rural Branches of Commercial Bank s and Commercial Bank s Loans to Small Scale Businesses in the study.

➢ *Deposits and Loans of Rural Branches of Commercial Bank*

The principle of rural banking is the concentration of resources and their lending for rural enterprises. Rural banking is important in reducing the spread between investment and savings on account of interest rate and investment patterns being growth inducers. The obstacle for investment is not a lack of investment wishes but a lack of money. The third challenge is that the economic system has to induce the banking sector to enlarge credit so that the gap could be narrowed. The same thing happens with the number of savings regarding the share of savings institutions, as people are inclined to save more money when there is more saving such institutions closer to their home. At the early stage of development rural communities are given investable funds by the government due to the lack of rural bank branches. However, this was in contrast with low levels of savings and productivity in the rural households (Awosika & Nwoko, 2013).

According to Abe (2014), the objective of branching of rural banks is to enhance sustainable economic activity in areas deprived of adequate banking and to access to resources and alleviate rural poverty. The formation of cooperative banks in all localities was suggested. The aims of the 1977 rural banking programme were to inculcate banking habits among the rural people, discourage migration to urban areas, strengthen financial stability in rural areas, advance savings for economically productive purposes, generate self-reliance in food production, and to create job

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opportunities for the rural folk. The Central Bank of Nigeria (CBN) made it mandatory for each Local Goverment Area (LGA) to have at least one branch of a commercial bank. Half of the deposits at the rural bank essentially must be lent to rural residents, and the bank is not allowed to fold without approval.

- *Commercial Bank's Loans to Small Scale Businesses*

It is important for commercial banks to have short maturity assets to by their demand depo sit o bligations immediately when needed (Roussakis, 2017). Interest rates are higher for larger loans with longer payback periods than for smaller ones. Mortgage, busines loans, consenters with long- term repayment period are increasingly featuring in commercial banks portfolio, this is because of innovations in banking services, improvement of banking technology, private sector credit needs are changing (Codrington & Coppin,2017 Ref: 12).

Banking regulations now constrain less the holding of short-term assets by modern commercial banks. Some people believe the lender commercial banks are biased to some borrower groups because of changes in their behavior. Small businesses regularly face higher interest rates than larger companies, which reflect higher risk.

- *Financial Inclusion and Gross Domestic Product*

Increased entry into the financial services can have favorable influence on country's Gross Domestic Product (GDP), inequality and poverty. The transformational power of financial inclusion cannot be underestimated because it has the potential to empower the poor and small firms to become more creditworthy, which would make them more self-reliant and financially stable and, consequently, indirectly benefit the country's economy. Some contend that there is an impediment to a nation's economic growth and higher poverty rates when people lack access to financial service. According to Sinclair, McHard, Dobbie, Lindsay, and Gillespie (2019), it is "some of the poorest in society who pay the highest price for financial exclusion". The development of a sound, accessible and efficient financial system affects the rates of long-run growth, investment, information and transaction costs, saving and technological advances (Beck et al. 2019). These are the characteritics to which financial inclusion is targetted to: to customers with uncertain information structure being subject to flexible regulations, for which the above reasoning may act as a hindrance. Social exclusion is a term to include a range of problems (and which can be problems in themselves) including unemployment, low income, bad housing, high crime and poor health and obesity, poverty, and family breakdown which people or communities can face. Social isolation results in sections and classes. These two groups included and excluded are both excessively afraid and suspicious of one another and this damaging social division works against the economy. Rich communities get richer while poor communities get poorer." Wealth disparity and the exclusion and inclusion gap may be reduced by financial inclusion. There are other social, cultural and geographic factors which need to be considered with financial inclusion, rather than separate.

"However, people who lack access to formal financial services still constitute a substantial proportion of the population" showing that we haven't achieved universal financial inclusion despite understanding the repercussions.

B. Theoretical Review

The study was rooted in the Finance-growth Theory. The Finance-Growth theory is considered as the theoretical framework in this study as the Financial-Growth Nexus takes the view that financial development creates dynamic productive climate for growth via 'supply leading' or 'demand-following' effect. This theory also acknowledges that the lack of financial access is one of the main reasons that can lead to continued income disparity and lack of momentum. Thus availability of secure, simple and affordable finance is recognized as a pre-requisite for accelerating growth and reducing income disparities and poverty that promotes equal opportunity that facilitate the economically and socially marginalised to participate in economic development and add their voice and energy and be immunized against economic vulnerabilities. (Serrao, Sequeira, & Hans, 2012).

Financial Inclusion has been challenged in Nigeria by the very low level of financial literacy, especially amongst the rural dwellers that the operator's clients are the bank and the operators of other financial services. Furthermore, knowledge of telephone and information communication is low in the country, a situation that prevents people from accessing financial services.

Misintention, and appropriateness or completeness of awareness campaign at other times hinder the depth understanding of financial transaction and subopts the chances of the illiterates in order to make use of the opportunities in financial services. At the heart of awareness is the language barrier between the target and education languages which thus impairs the communication efficiency. financial services cannot be effectively used by an uninformed population (Migap et al, 2015).

C. Empirical Review

In addition, Anastasia, Chijindu, & Steve (2020) examined EG and FI in the retail and wholesale subsector of the Nigerian economy. The investigators used quarterly data sourced from both the central bank of Nigeria as well as from the world development indicators estimates of the world bank. We considered an error correction and a correlation analysis to the data. A study on the impact of wholesale and retail sectors on GDP, foreign investment plays a vital role in boosting the economy. The empirical findings show that the location of the CMB had significant effects on the growth rates of the sub-sectors, wholesale and retail in whose the branches were located as against the situation of account ownership. The importance of the retail and wholesale sectors relative to GDP makes it clear that CMB is a significant financial intermediary that can contribute to economic growth. We also demand that government should establish more Community Microfinance Banks (CMB) across the country so that people who are not literate enough to have a bank account

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can have access to authentic financial transaction. It can be recommended in order to facilitate the promotion of entrepreneurship, success and contribution to GDP in the informal financial sector that there is an urgent need for all players in the formal financial system to raise the stakes in the fight to increase financial literacy for this significant population of the unbanked.

Adesina & Sanyaolu (2018) investigated the impact of financial inclusion on Nigeria's GDP growth albeit the data covered the period 1981-2014 Enueshike and Okpebru (2020) also examined the influence of financial inclusion on the GDP growth of Nigeria using data covering 2000–2018. Estimates of the variables were obtained from the Statistical Bulletin of the Central Bank of Nigeria. To measure financial inclusion –the GDP ratio of financial institutions— we used LSME loans, RBD deposits by rural bank clients and INF as a dummy variable in a regression model. Tests for unit root and cointegration were conducted based on the ex-poster factor analysis of the paper. The findings indicate that the factors showed Granger-causality and persistent cointegration. The Nigerian central bank should encourage more deposits into rural bank accounts (RBD) if the findings are to be relied upon.

Correlation between GDP growth and financial inclusion in Nigeria The link between GDP growth and financial inclusion in Nigeria was investigated from 1992-2018, Okonkwo and Nwanna (2021). Access to formal financial services is predicated on several factors. They are the currency in circulation, deposits at microfinance institutions, the number of commercial bank branches, the amount of money lent to companies by commercial banks, and deposits and loans by rural bank branches. It was instead real GDP but nominal GDP that was selected as the measure of expansion. The research was of an ex post facto design. For analyzing effects, we used the Granger Causality test; we used the regression to study the relationship of variables. It was found that there was a positive relationship between the volume of money in circulation in Nigeria and the economic well-being of the country. This is indicative of a causal relationship because the positive and significant effect of lending money in rural branches of commercial banks in Nigeria is viewed to be affecting economic growth. There is a low positive relationship between deposits from rural branches of commercial banks and GDP in Nigeria.

Eze and Alugbuo (2021) studied the influence of financial inclusion on poverty reduction in Nigeria. Apart from the 2017 World Bank Global Findex survey data on Nigeria, an instrumental variable model and logit model were used. The income quintiles of subjects were set to 1 for the "poor" dummy variable, indicating that they belonged to the poorest 40% of the economy, and to 0 otherwise. The explanation for the situation varies across author characteristics like: financial inclusion index, age, education, working status, gender, income, government transfers, savings, pension, self-employment, and other.

A study carried out by Nma and Callistus (2022) empirically investigated the impact of financial inclusion on GDP growth in Nigeria. The main objective of this study was the effect of financial inclusion on Nigeria GDP growth. Our aim is also to determine of the effect of deposit and loan activities of rural commercial bank branches on aggregate GDP of Nigeria as well as to determine the effect of commercial bank loans extended to small businesses on the total GDP. In the current study, ex post facto research design was employed. Loans from commercial banks to small businesses, and deposits and loans from commercial banks in rural area, were found by the study to have a significant positive effect on the gross domestic product of the country. Small business lending from commercial banks was a slight drag on GDP, the study found. Commercial bank branch deposits and loans in rural areas, on the other hand, were very large and positive. The directives suggest lending and deposit mobilisation to rural branches by banks. The gov't must also put strict measures regulate the banks from not using the financial edge it has given to Nigerian in the good faith and a signle digit grant to enable small and scale businesses in nigeria.

Okon, Umoh and Samuel (2023) also consider the relationship between financial inclusion and fintech and the impact on GDP growth in Nigeria ApiService An Application Programming Interface (API) is a set of protocols and tools that allow specific applications to interact with each other. Building on the definition of FinTech also with more specific instruments such as point-of-sale systems, online payment systems, mobile banking and automated teller machines, this work adds to extant literature. In Nigeria, we measured the approach by creating two separate indices to account for the impacts due to financial inclusion criterions. Economic growth, FinTech, and financial inclusion were consistently co-integrated on use of the autoregressive distributed lag (ARDL) bounds test cointegration approach, which was underpinned on equation approximations. FinTech has been linked directly to both financial inclusion and GDP growth. High maintenance costs and insecurity have forced ATM galleries to be discontinued in banks. These galleries used to be in both interior and exterior branches. The nexus of ATMs, financial inclusion, and economic development is negatively disturbed. Waiting times for ATMs and the volume of customers have shown that the 22,500 network of ATMs in Nigeria is not enough to go round. However, some financial inclusion indicators have a positive effect on economic growth and the use factor of financial inclusion just has a weak positive impact. Bank branches had an effect on financial development but were no significant effect on loans to private sector enterprises.

D. Gap in Literature

Research on financial inclusion as the potential factor that drives or leads to economic growth in Nigeria are minimal and there is little empirical evidence on the subject. It is evident that the previous studies leaned in most cases only on financial inclusion with the dependent variable an economic growth using the contribution to GDP, while this study going to look at the critical variables and introduce a

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new variable to further decomposed the financial inclusion which is the external reserve. This constitutes the impetus for this study, although not only aims at adding to the minimal research on this topic, but also suplements prior studies.

E. Conceptual Framework

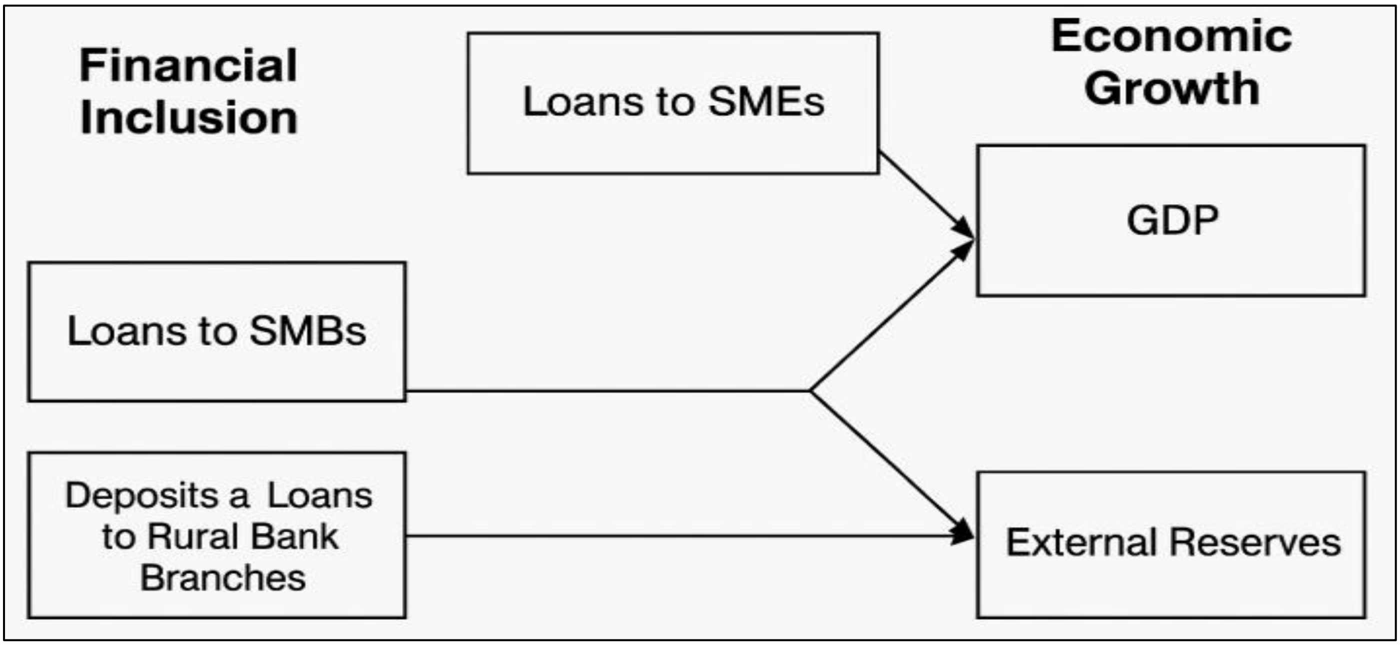

Fig 1 Conceptual Framework Linking Financial Inclusion to Economic Growth in Nigeria (2010–2023)

➢ *Explanation of Conceptual Framework.*

It is informed by the finance-growth hypothesis which supports that finance advances economic growth supplementing savings mobilization, efficient allocation of capital, and investment facilitation. In the Nigerian context, this model casts financial inclusion as the predictor construct, and is measured by two major dimensions: Loans to Small and Medium Enterprises (SMEs) by deposit money banks (DMBs); andDeposits and Loans Detached by Rural Banks Branches of DMBs.It is theorized that these inclusion channels may have impact on economic growth, which is measured by two dependent variables:Gross National Product (GNP): as the domestic product measure has not accounted for the foreign earnings versus the same with foreign production, so this can be seen as having been provided for in the latter.External Reserves: indicative of macroeconomic stability and financial soundness.

It argues that the expansion of financial access externalities such as SME credit and rural banking infrastructure will lead to higher business productivity, more savings mobilization, and stronger enrollment in the formal economy. These effects in turn stimulate from the home market and the output (GDP growth) and Nigeria's capacity to build up foreign exchange reserves through gains in trade, lesser independence on imports, and the effectiveness of the monetary policy transmission.

Thus, this model becomes a theoretical and empirical reference for assessing the extent to which the implementation of focused financial inclusion strategies could translate into measurable macroeconomic advantages in Nigeria, especially in the form of under-served rural areas and micro-enterprises.

III. METHODOLOGY

Ex post facto research design was adopted for the study, while the ex-post facto research technique was used to guarantee the data integrity. Predominant of secondary data that has been used for analysis in this research is from statistical bulletin of the Central Bank of Nigeria.

Objective of the Studyiar **-** The major objective of this study is to examine the relationship between DMBs deposits and loans to SMEs extended to the private sector in the rural areas and the economic growth of the country with GDP, ER as dependent variables. The annual time series data utilized for the study from 2010-2023 were obtained mainly from Central Bank of N igeria statistical bulletin. The data obtained by this study were analysed on the basis of the

The descriptive statistics and the hypotheses were analysed using Simple linear Regression Model for hypothesis one and Pearson correlation coefficient for hypothesis two and with the help of the Statistical Package (SPSS) version 20.0. Inferential statistics by form of regression analysis is what determines the significance of the relationship between two variables. We will apply a significance level of 5% (0.05). If the (P value or Sig.) <0.05, then the median dichotomy was considered statistically significant. is greater than or equal to 5%, we accept the Ho, otherwise reject it.

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➢ *Model Specification*

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

This study adopts and remodified Onaolapo (201 5) model on the link between financial inclusion and economic growth in Nigeria. The functional relation of the model is given as:

ECOG = F (BD, BL)……………………………………(1)

Hence, the econometrical form of the equation is specified as GDP and External Reserve

β 0 β 1 BD t β 2 BL t μ 0 ………………………………. (2)

Where:

GDP = Gross domestic product
ER = External Reserve
BD = Bank Deposit to the private sector
BL = Bank Loan to SMEs in rural branches
β1 β 3= beta coefficient
β0 = constant
μ0 = error term

➢ *Data Presentation*

The table below shows the GDP, ER, BD and BL, it covered the period of 2010 to 2023 to evaluate the effect of financial inclusion on Nigeria's economic growth.

Table 1 Statistical data on GDP, ER, BD and BL in Nigeria from 2010 to 2023

YEAR	GDP	External Reserve	Bank Deposit	Bank Loan
2010	55,469.35	12.55	0.02	16.56
2011	63,713.36	15.61	0.02	19.98
2012	72,599.63	13.86	0.02	22.58
2013	81,009.96	15.35	0.02	739.92
2014	90,136.98	16.07	0.48	988.59
2015	95,177.74	12.95	90.37	29.17
2016	102,575.42	10.75	43.78	43.78
2017	114,899.25	10.75	87.93	530.99
2018	129,086.91	44.82	185.34	340.56
2019	145,639.14	123.93	202.59	248.73
2020	154,252.32	52.51	308.85	200.07
2021	440,840,434.54	55.45	354.86	202.59
2022	472,623,900.65	45.23	351.50	107.52
2023	362,812,980.76	52.65	427.45	119.85

Source: CBN Bulletin and NBS Report (2025)

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➢ *Result for Hypotheses One*

Table 2 Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.629[a]	0.352	0.121	31.71318	0.052	0.718	1	13	0.412	1.771

a. Predictors: (Constant), Bank Loan to SME
b. Dependent Variable: Gross Domestic Product

The result of the SPSS data analysis in table 2 above shows R which is the correlation of coefficient measuring the strength of the linear relationship, which shows that R has 0.629, the linearity is said to be strong. R square which shows the coefficient of determination, more usually expressed as percentage has 0.352 (35.2%). Also, the standard error of estimate representing the typical residual which is 31.71 in the table shows that it is though positive below expectation. More so, The Durbin-Watson value of 1.771 which confirms that the estimate is positively significant.

Table 3 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70187.267	1	70187.267	.718	.412[b]
	Residual	1271263.954	13	97789.535		
	Total	1341451.221	14			

a. Dependent Variable: Gross Domestic Product
b. Predictors: (Constant), Bank Loan to SMEs

Table three above shows the ANOVA table indicating the significance value of 0.412 which means the significant value is perfectly significant. More so, the F-statistics also shows a positive value of 1.279, is close to zero and highly existent.

Table 4 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	376.688	111.487		3.379	.005
	Bank Loan to SMEs	.244	.288	.229	.847	.412

a. Dependent Variable: Gross Domestic Product

The above table 4 Shows the student t-test also affirm the auto-linearity between bank loan to SMEs and gross domestic product (GDP). The significant level of 0.005 also depicts a positive relationship. Also, the t-test value of 3.379 shows the degree of freedom is statistically significant. With the positive result ascertained thus far, we accept the alternative hypothesis Bank Loans to small and medium scale enterprises has significant relationship on gross domestic product, we reject the null hypothesis.

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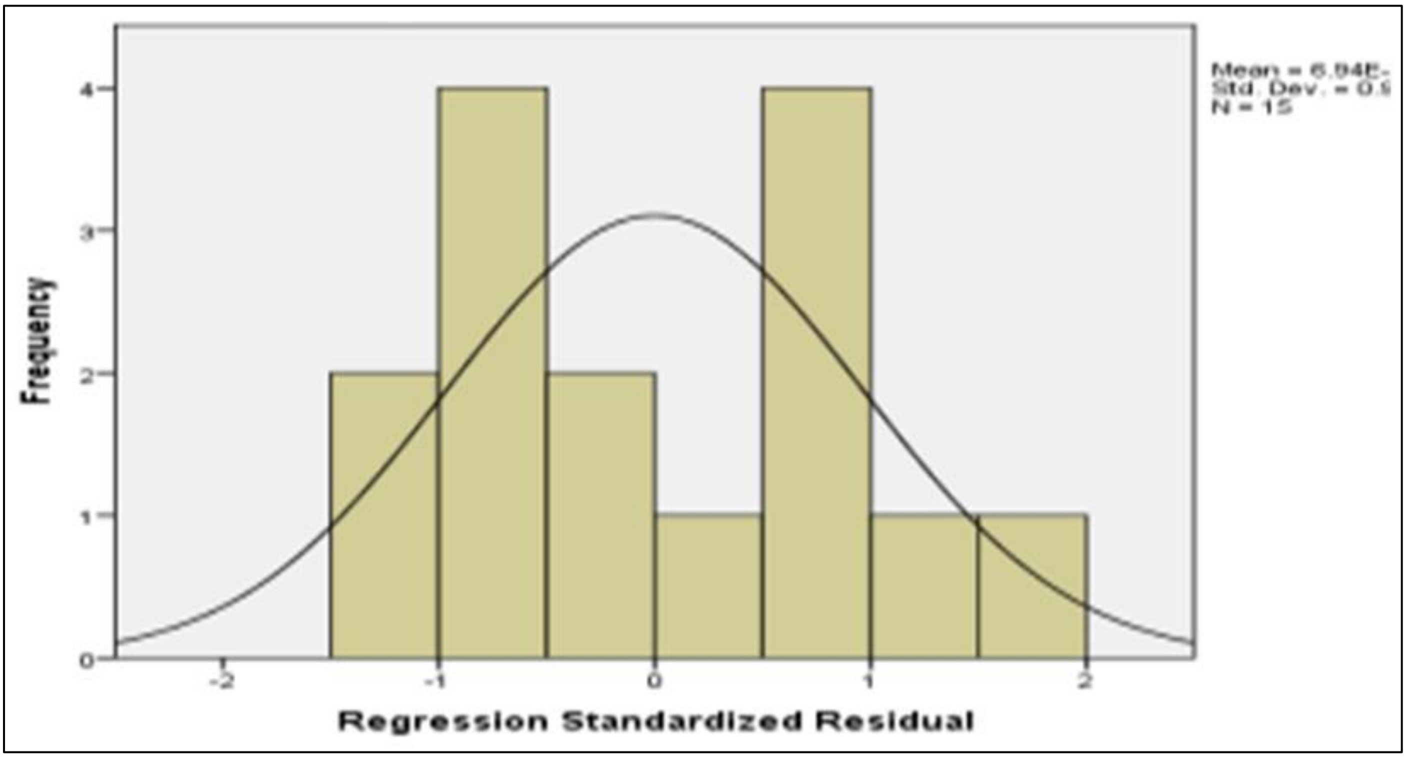

Fig 2 The histogram shows an upward movement between GDP and bank loan to SMEs

Table 5 Descriptive Statistics

	Mean	Std. Deviation	N
External Reserve	34.4629	31.47109	14
Bank Deposit to rural branches of DMBs	146.6593	6.81037	14

From table 5 shows descriptive statistics which indicate mean value of 31.47 and standard deviation of 6.810

Table 6 Correlations

		External Reserve	Bank Deposit to rural branches of DMBs
External Reserve	Pearson Correlation	1	.619*
	Sig. (2-tailed)		.024
	N	14	13
Bank Deposit to rural branches of DMBs	Pearson Correlation	.619*	1
	Sig. (2-tailed)	.024	
	N	13	14

Correlation is Significant at the 0.05 level (2-tailed).

In this section, the intensity of the relationship of the use of external reserve and saving outputs relaxation to BE-RB as a proportion to deposit banking activities in rural bank branches of DMBs was assessed by the study. The correlation coefficients of all the variables used in this study are shown in Table 6. But the output of 0.619 with p-value of 0.024 indicates that there is a positive relationship between the variables of interest; thus we accept the alternate hypothesis that Deposit and Loans to rural branch of deposit money banks has significant influence on external reserves in Nigeria.

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IV. SUMMARY OF FINDINGS

The study discovered that credit from deposit money banks on small businesses had remarkably influenced GDP growth rate in Nigeria. Enueshike and Okpebru (2020) were able to arrive at similar findings in the investigation of financial inclusion on economic growth of Nigeria in 2000 and 2018. The estimates of the variables were obtained from data contained in the Statistical Bulletin of the Central Bank of Nigeria and the National Bureau of Statistics. We also run a multiple regression model (dependent variable Financial Inclusion) with the independent variable Bank Loan to SMEs and the percentage share of GDP given by financial institutions. Dataset and measures We followed an ex-post facto research design, and simple linear regression was employed to show a positive relationship between the variables and a pseudo-longitudinal time frame.

Secondly, the null hypothesis two also found that the size of commercial banks rural branches' deposit and loan reported impacted significantly the development of Nigeria external reserve. A study conducted by Okonkwo and Nwanna (2021) on the effect of financial inclusion on GDP growth in Nigeria for the period of 1992–2018 is consistent with ours. Statistical attributes such as unbanked funds, circulating money, microfinance deposit penetration rates and deposit money bank branches, micro business loan penetration rates and deposit, and loan penetration rates in rural bank branch, affect financial inclusion.

V. CONCLUSIONANDRECOMMENDATIONS

- *Conclusion*

This study focuses on examining the effect of financial inclusion on the growth of economy in Nigeria. Deposit money bank loans to small-scale firms The study revealed that deposit money bank loans to small- scale firms had a significant effect on Nigerian economic growth as shown in the statement of summary. Deposits and Loans of Rural Branches of Deposit Money Banks as Determinants of Economic Growth in Nigeria It was found that deposits and loans of rural branches of deposit money banks in Nigeria had significant impact on Nigerian economic growth.

- *Recommendations*

According to the result of the study, it was suggested that:

Inasmuch as bank loan to small and medium scale enterprises has a strong correlation with GDP in the rural area, the demand for banking services in the rural community is very high, and banks need to step up on giving them loans and help in raising funds.

Equally, as the result also indicates the impact of deposit and loans to rural branches of deposit money banks on external reserves in Nigeria. Thus, to attract additional investment in bankable projects and to stimulate the economy in general, the Nigerian central bank should place an emphasis on providing rural investors with non-collateral loans.

VI. SUGGESTIONS FOR FURTHER STUDY

One such limitation is that very little has been written about variables used and the empirical analysis here is limited by the available data, highlighted possible future research avenues. One of the most obvious next steps is to investigate how credit inclusion leads to economic growth using other indicators of financial inclusion as well as economic growth measures apart from those studied in this paper.

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