ISSN:1533-9211

SEYBOLD REPORT
Journal
www.seybold-report.com

FINANCIAL INCLUSION, MICROFINANCE BANK AND ECONOMIC GROWTH IN NIGERIA

ISSN:1533-9211

SEYBOLD REPORT
Journal
www.seybold-report.com

ISSN: 1533 - 9211

Alalade, Yimka S. A, Aladelusi, K. B, Okezie, F. O, Ogboi, C. & Amusa, B. O.

Department of Finance, School of Management Sciences
Babcock University, Ilishan-Remo, Ogun State, Nigeria

Abstract

This study investigated the interconnection between financial inclusion, microfinance banks and economic growth in Nigeria considering the period of 32years (1990-2021). Financial inclusion proxies were commercial bank loans, commercial bank deposits and number of commercial bank branches). The data such as Gross Domestic Product (GDP) was the proxy of economic growth, while microfinance bank indices (microfinance bank loans and advances, microfinance deposits, and number of microfinance banks) and interest rate were considered for the study. The data were gathered from Central Bank of Nigeria (CBN) statistical bulletin of 2019 and 2021. The techniques such as descriptive statistics, correlation analysis, ADF unit root test, co-integration test, Autoregressive Distributed Lag (ARDL) and diagnostic tests were employed to analyze the data collected. The results of ARDL show the existence of short run relationship between financial inclusion, microfinance banks and economic growth in Nigeria. Similarly, long run interactions exist between the variables of study. Hence, the Error Correction Model was conducted and negatively signed at -0.04. That is, short run disequilibrium will be corrected in the long run at 4%. The study concludes that microfinance bank and financial inclusion are the engines of growth and catalysts for economic sustainability. It was therefore suggested that government should regulate interest rate in such a way that microfinance banks will be encouraged to pay favourable interest on customer's deposits. In doing so, the rural dwellers will be willing to divert their attention from informal sector to banking sector.

INTRODUCTION

The significance of being financially included in the financial and banking system has been widely acknowledged by different scholars, economists and governments across the globe. This is because financial inclusion has been proven to be a lubricant to unemployment problem and poverty threshold in developing countries (Honohan, 2004). It enhances wealth, economic growth and improves standard of living. Financial inclusion started with account opening or having deposits with a bank or other financial institutions (Demirguc-Kent, Klapper & Singer, 2017) and the services are delivered by many providers of finance in a competitive and stable market.

In Nigeria, financial inclusion involves the process of having access to variety of financial services by the Nigerians at affordable cost. These services include loans, savings, and insurance products among others. Thus, having access to these services enable people to invest on education, enhances production and engaging other forms of investments (Flannery, 2018). Umar (2013) argued that no economy can expand if a sizable portion of its population is denied access to money and other banking and non-banking financial services. This postulation was confirmed by the previous literatures as the inclusion in finance was found relevant in the aspect of savings, credit creation, payment system and risk management (Demirguc-Kunt & Klapper, 2013). Financial inclusion also helps in boosting capital accumulation and loan formation, thereby increasing investment and economic growth (Okoye, Adetiloye & Erin, 2017).

Over the years, many attempts have been made to deliver credit to borrowers at affordable cost. For instance, Islamic prohibits of interest on loans purposely to discourage *usury* or *riba*. According to Rammal and Zurbruegg (2007), Islamic banks have adopted various principles for private institutions within Muslim communities to activate financial inclusion in the 20th century. In Nigeria, the techniques to improve the people's inclusion in finance started as savings schemes, such as Ajo, Esusu, Adashi, Itutu and Bambam among small traders. Thus, the difficulty confronting people from getting loans from formal sector has led the poor to shift their focus to direct borrowings from family and friends, credit and savings associations as well as self-help groups (Akpan, 2009; Okpara, 2010). However, previous studies have suggested that such moneylender loan is very costly. Similarly, the interest rates of moneylender increase from 4% per month to 5% per day (Chakrabarti & Sanyal, 2015; Robinson, 2001; Banerjee, 2004). No wonder, the microfinance programmers designed the microfinance banks' activities in the best way of reaching the poor as they have no access to financial services. The bank seeks to render services to the excluded people from the conventional banks. Hence, the potential abilities to boost social status of the citizens.

Recently, there are increasing agreements in the literatures that microfinance banks play crucial role in the aspect of financial inclusion and stimulation of growth. This is so because microfinance institutions administer services to the low-income earners who lack access to the financial services offered by the conventional banks due to high risk of credit extension, high transaction/operational cost, and no tangible properties/assets as collateral for bank loans. Dabla-Norris, et al (2015); Serrao, Sequeira and Hans (2012) corroborate that microfinance and financial inclusion determine the consumption pattern of the people and also enhance economic output. As stated by Aduda and Kalunda (2012), inclusion in finance is a catalyst for economic growth in developing countries.

Financial inclusion embraces stable finance, and also entail trade-offs. Dabla-Norris et al (2015) postulate that access to credit can improve productive output, thus leading to industrialization. However, achieving permeated financial inclusion has become the greatest

challenge as nothing less than 54percent of the adults are recorded being financially excluded globally (CBN, 2013). In developing countries, the situation is even worse, to the extent that 70% of the adults are virtually excluded from formal financial products and services.

As a result, the Nigerian government increases her efforts to eliminate some barriers to access to microfinance activities and financial inclusion through various policies and programs, including: Non-Interest Financial Institutions (NIFIs) in 2011; National Financial Inclusion Strategy (NFISin 2012; and Financial System Strategy (FSS) in 2020. Regrettably, some of these policies yielded little results as Nigeria's financial inclusion is considered low compare to other lower middle income countries in Africa. Eze and Alugbuo (2021) reported that about 44.2% and 40% of the Nigerian adults held financial institution accounts in 2014 and 2017 respectively. This falls below 58% of global average proposed for lower middle-income countries like Nigeria.

Despite enthusiasm of the monetary authorities to include people in financial activities, dearth of awareness, proximity, and high rate of poverty are the main barriers to successive access to finances of formal sectors such as conventional banks, microfinance banks, and non-interest banks among others. Hence, the question of whether microfinance bank activities and the inclusion in finance are the catalyst for economic growth in Nigeria remain unclear in the previous literatures (Erlando, Riyanto & Masakazu, 2020; Ogbeide & Igbinigie, 2019). The study carried by Omojolaibi (2017) on financial inclusion, governance and economic growth using Generalized Least Square (GMM) revealed that governance and inclusion in finance are more relevant in infrastructural investment in Nigeria.

Cole and Akintola (2021) and Hyeladzira (2020) also used regression analysis to establish positive influence of microfinance banks on Nigeria economic growth. Apere (2016) also corroborates that microfinance banks play a crucial role in the growth of an economy. However, some of the significant impacts of financial inclusion and microfinance banks reported in the existing studies have not been felt in Nigeria. Nwachukwu (2012) also asserted that microenterprise has not made a significant impact on Nigerian economy. Hence, there is need to re-assess the nexus between financial inclusion, microfinance banks and economic growth in Nigeria to contribute to the existing literature across the globe.

REVIEW OF RELATED LITERATURE

Financial Inclusion, Microfinance Banks and Economic Growth

Financial inclusion is the state of easy access to appropriate and formal financial products and services by the people to enhance financial and standard of living of the citizens. El Said, Emara and Pearlman (2020) see financial inclusion as household access to financial services and usage of financial products. In promoting access to finance, financial literacy and capabilities are very important. While the financial capability entails the knowledge of funds management and understanding of financial products, financial literacy enhances knowledge transfers.

Kama and Adigun (2013) elucidate that some people are not included in financial system due to unavailable of formal financial services, which can either be on voluntary or compulsory ground. It is voluntary exclusion when some people or firms choose to ignore financial services because of its cultural or religious belief (World Bank, 2015). However, compulsory (involuntary) exclusion emanates from low income, market failures and imperfection as well as high level of discriminations (Omojolaibi, 2017). As a result, attention has been shifted to the compulsory exclusion as it can be tackled by effective government policies and programs to reduce inequality in income and eradicate market failures.

The National Risk Adjustment (NRA) forum of 2016 highlights the various drivers of inclusion in finance in the banking sector. These include requirements of Know Your Customer (KYC), agent banking; financial literacy; MSME development fund; and mobile money operation. These tools enable banks to provide services to the minimum of 20 million customers via a wide network of 10,000 ATMs and over 6,000 branches. Microfinance banks serve about 3.2million customers whereas 65% employed savings products, 14% adopted credit products and about 4% used debit cards (NRA forum, 2016).

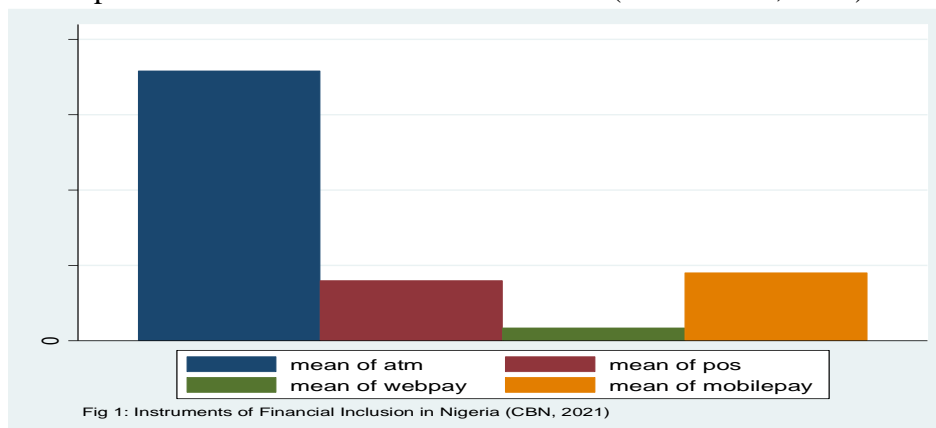Fig 1: Instruments of Financial Inclusion in Nigeria (CBN, 2021)

Figure 1 illustrates the value of Automated Teller Machines (ATM) in Nigeria to support the assertion that the use of ATM increases the volume of financial inclusion. In fact, the instrument possesses the highest patronage in Nigeria when compared with other instruments of financial inclusion such as Point of Sales (POS), Webpay and Mobilepay.

As stated by CBN (2021), the inclusion in finance includes banks and other formal sector such as Insurance and Pensions. Omojolaibi (2017) also classified financial inclusion in Nigeria into *banking institutions* which entails Deposit money banks, Islamic banks and Microfinance banks; and *non-banking financial institutions* – Financial NGOs, Cooperative Societies, Trade Associations, Self-help Groups, Credit Unions, Insurance and Pensions.

Literally, microfinance bank entails financial system that serves the demand of the poor in an effective and efficient manner. It is an integral component of financial development strategy of developing countries. Microfinance bank was primarily introduced to cater for the poor by increasing the avenue to an essential factor such as capital (Cole & Akintola, 2021). Microfinance banks provide services such as payment, savings, loans as well as insurance and money transfers (Ejefobihi, Imoagwu & Ezeanyeji, 2019; Roadman, 2012). The banks provide services to the poor whose the services of deposit money banks cannot reach. This is why the bank is mostly used in developing countries to provide funds for the petty traders and Small Scale Enterprises (SSE) in order to boost the productivity, which in turn enhance economic growth.

As part of the efforts to accelerate inclusion in finance in the country, the CBN elucidate that most transactions carried out by insurance industry, pension fund and other sub sectors should be accomplished through banks (NRA forum, 2016). This is done to improve the inclusiveness in finance within the country.

Fig 2: Deposits and Loans of Rural Branches of Commercial Banks in Nigeria from 1982 to 2021
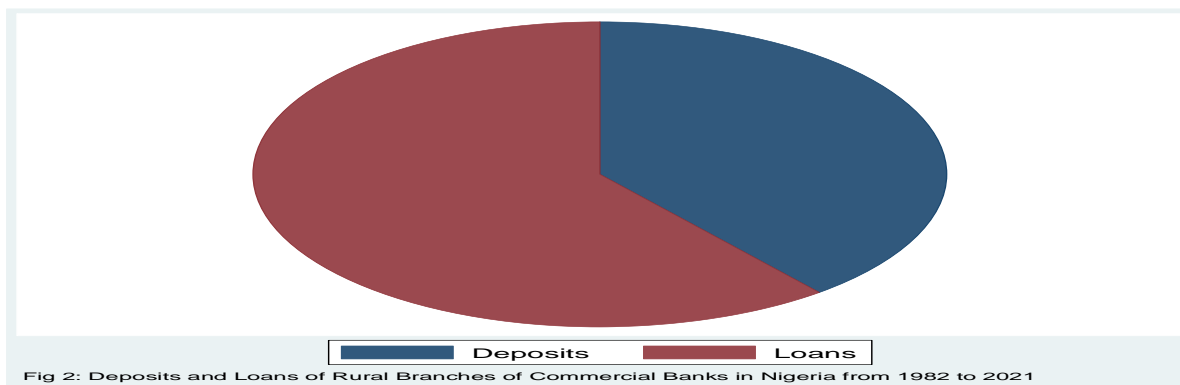
As a result, the commercial banks extended their financial services to the local areas to increase the number of the populace enjoying banking services in Nigeria. As illustrated in figure 2, the volume of loans granted to the rural dwellers exceeds the deposits mobilized from the rural areas. The implication is that minimal funds are mobilized from the local dwellers which could arise from led banking habits. This may therefore reduce the speed of economic growth in the country.

Fig 3: Deposits and Loans of MicroFinance Banks in Nigeria
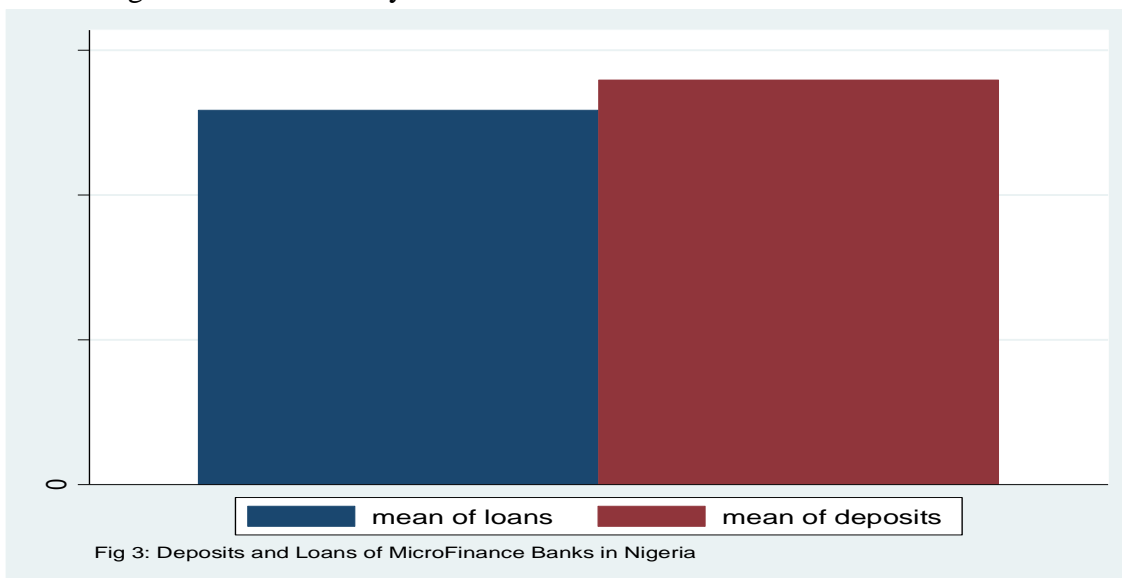
The situation of microfinance banks services to the people is different from that of commercial banks services to rural areas as shown in figure 3. The mean of deposits mobilized by the microfinance banks are greater than loans and advances granted to their customers. Despite the inclusiveness in finance of the people, the benefits in form of loans granted to the customers have been reduced in the recent times. This could be attributed to the priority of banks to maintain liquidity at all times.

Increase in inclusion may results to efficiency and equity benefits. As reported by Ananwude, Anyanwu and Andrew (2018), women empowerment has a significant influence on various microfinance banks' products. The study conducted in Nigeria by Usifoh and Ezeanyeji (2017) and Olaniyi (2017) established that financial inclusion positively interacts with microfinance bank. Ene and Inemesit (2015) also found that access to microfinance deposits significantly influence the opening of savings account by rural dwellers. However, the interest rate charged by the microfinance bank negatively affects the volume of loans and advances acquiring by the local communities.

Furthermore, access to finance lead to improved economic activities and create employment opportunities for the people in the rural areas. When people partake in economic activities, there is tendency of increase in income, which in turn results to higher individual savings capacity and enhance bank's deposit base. This will directly or indirectly lead to inclusive growth (Migap et al, 2015; Hariharan & Marktanner, 2012). Subbarao (2009) explains that government makes payments such as subsidies and wages, directly to the beneficiary accounts via the tool of financial inclusion like electronic transfer. Mbutor and Uba (2013) also pointed out that including people in financial activity can effectively improve the monetary policy of the government. Thus, access to finance exhibits a positive impact of growth of a nation (Aduda & Kalunda, 2012).

Muthoni (2016) also explain the role of microfinance services in improving economic condition of a country. He stated microcredit is vital tool to economic growth of developing countries. Microcredit, one of the products of microfinance bank allows people to become self-employed and self-reliant. This is why microfinance institutions are tagged as a bridge builder for small businesses, channel of increasing standard of living and solution to business and economic challenges (Okwoli, Abubakar & Abubakar, 2013). Ademola and Arogundade (2014) reiterate that microfinance programme was designed to strictly focus on sustain economic growth. Akpan and Nneji (2015) re-emphasized that microfinance institutions possess attribute of improving performance of small businesses via micro financing and non-financial services, which in turn enhance economic growth in Nigeria.

Theoretical Review

This study rests on the tenet of information asymmetry theory. It elucidates what small firms and borrowers encountered in term of the financial constraints and exclusion. Hanning and Jansen (2010) state efficient allocation of resources depend on whether the intermediaries (such as banks) can solve the problems of information asymmetry. Thus, it is clear that information gaps occur between borrowers and lenders which affect efficient utilization and allocation of financial resources (Brealey, Leland & Pyle, 1977; Sharpe, 1990). This difficulty arises due to the goal of the borrower to have more information about the contract than the lenders. Borrowers learn about the investment they wish to undertake, behavioural risks and the business risk involved. Thus, all these may not be revealed when entering into a contract and eventually lead to information imbalance (Brealey, et al., 1977). This theory is considered suitable to the study because of it emphasizes on the information gap which often occurs between the lenders and borrowers. In fact, dearth of information may likely leads to low inclusiveness in finance due to the ignorance and the belief of rural dwellers on high demand of banks when seeking for loans and advances for their business purpose.

Empirical Review of Related Studies

Several studies have been carried out on either the interaction between financial inclusion and economic growth or the nexus between microfinance banks and economic growth in Nigeria. However, there are minimal literatures on the influence of financial inclusion and microfinance banks on Nigerian economy. Among some of the previous studies include; Olusegun, Evbuomwan and Belonwu (2021) used quarterly data to examine the interaction between inclusion in finance and financial stability in Nigeria via panel analysis. It was discovered that that financial inclusion positively influenced financial stability. Dimensionally, only availability and penetration of inclusion have positive influence on financial stability while the usage proves otherwise. The study therefore suggested a proactive policy to be geared towards credit risk management to enhance inclusion in finance and stability of financial sector.

Adegboyegun, Ademola and Kazeem (2020) used Autoregressive Distributed Lag (ARDL) to analyze the financial inclusion-economic growth nexus in Nigeria between 1986 and 2018. The data such as loans to rural areas, number of bank branches, interest rate, and gross domestic product were considered in the study. The findings show a significant influence of financial inclusion on the growth of Nigerian economy. Similarly, a unidirectional association was found between economic growth and financial inclusion via loans to rural areas. It was therefore suggested that loans granted to rural dwellers should be affordable rates with less bureaucratic demands.

Otiwu, Okere, Uzowuru and Ozuzu (2018) covered the period of 1992 to 2013 to investigate the nexus between financial inclusion and economic growth using Nigeria as a case study. They emphasize on microfinance activities and employed co-integration test to analyze data such as gross domestic product, total loans, investments, total deposits, and number of microfinance banks. The finding revealed the significant influence of total loans and advances on economic growth while total deposit adversely affects economic growth. Similarly, long run relationship exists among the series. It was therefore suggested that microfinance bank should focus on little cost of deposits which are in accordance with operations of conventional banks.

Apere (2016) also used co-integration test and error correction model to establish the impact of microfinance banks on economic growth in Nigeria between 1992 and 2013. It was found that microfinance loan and investments positively influence growth. Similarly, long run connection arises between the series (such as microfinance credits, investments and growth). Thus, the study recommends an ethical and professional conducts for microfinance banks by provide soft loans to credible entrepreneurs.

METHODOLOGY

Analytical Techniques and Model Specification

The study employs secondary and time series data. This was in accordance of research carried out by Usifoh and Ezeanyeji (2017) and Olaniyi (2017). The data were gathered from Central Bank of Nigeria (CBN) covering the period of 32years (1990-2021). The variables such as economic growth (measured by gross domestic product), financial inclusion proxies (commercial bank deposits mobilized from rural areas, commercial bank loans to rural areas, and number of commercial bank branches), microfinance bank indices (microfinance bank deposits, microfinance bank loans and number of microfinance banks) and interest rate were considered for the study. The study employs Autoregressive Distributed Lag (ARDL) to evaluate the influence of financial inclusion and microfinance banks on economic growth in Nigeria. Hence, the model is specified as follows:

$$Y = f(X_1, X_2, X_3 \ldots \ldots X_n) \tag{1}$$

Functionally,

$$GDP = f(CBD, CBL, MFD, MFL, INT\ NDPB, NMFB) \tag{2}$$

$$GDP = \beta_0 + \beta_1 CBD + \beta_2 CBL + \beta_3 MFD + \beta_4 MFL + \beta_5 INT + \beta_6 NDPB + \beta_7 NMFB + \mu$$

The model is written in ARDL form:

$$\Delta GDP = \alpha_0 + \sum_{t=1}^{p1} \alpha_1 \Delta GDP_{t-1} + \sum_{t=1}^{p2} \alpha_2 \Delta CBD_{t-1} + \sum_{t=1}^{p3} \alpha_3 \Delta CBL_{t-1} + \sum_{t=1}^{p4} \alpha_4 \Delta MFD_{t-1}$$
$$+ \sum_{t=1}^{p5} \alpha_5 \Delta MFL_{t-1} + \sum_{t=1}^{p6} \alpha_6 \Delta INT_{t-1} + \sum_{t=1}^{p7} \alpha_7 \Delta NDPB_{t-1} + \sum_{t=1}^{p8} \alpha_8 \Delta NMFB_{t-1} +$$
$$\beta_1 GDP_{t-1} + \beta_2 CBD_{t-1} + \beta_3 CBL_{t-1} + \beta_4 MFD_{t-1} + \beta_5 MFL_{t-1} + \beta_6 INT_{t-1} +$$
$$\beta_7 NDPB_{t-1} + \beta_8 NMFB_{t-1} + \mu$$

$$\tag{3}$$

Where;
GDP = Gross domestic product at constant price
CBL = Commercial bank loans
MFL = Microfinance bank loans and advances
NDPB = Number of commercial bank branches
α_0 = Constant term
β_1- β_{10} = long-run coefficient

CBD = Commercial bank deposits
MFD = Microfinance bank deposits
INT = Interest Rate
NMFB= Number of microfinance banks
α_1-α_{10} = short-run coefficient
μ = error term

RESULTS AND DISCUSSION OF FINDINGS

This section presents the data analysis in tabular form, results and discussion of findings. The study intends to relate the nexus between financial inclusion, microfinance banks and economic growth. The following are empirical data analyzed.

Table 1: Descriptive statistics of variables

Variable	Mean	Median	Std dev.	Skew	J-B Stats	J-B Prob.	N(Obs)
GDP	48050	26748	52571	0.96	4.99	0.08	32
CBD	65.88	15.36	120.05	2.01	30.36	0.00	32
CBL	103.06	16.33	226.05	2.88	117.11	0.00	32
MFD	73728	44370	80549	0.91	4.44	0.11	30
MFL	70390	25677	86935	0.99	5.31	0.07	30
INT	13.66	13.50	3.83	0.81	9.93	0.01	32
NDPB	3930	3492	1579	0.14	3.45	0.18	32
NMFB	749	755	144	-0.77	3.49	0.17	30

Source: Author's computation from E-views

Table 2: Correlation Analysis

	GDP	CBD	CBL	MFD	MFL	INT	NDPB	NMFB
GDP	1.00							
CBD	0.83	1.00						
CBL	0.43	0.13	1.00					
MFD	0.98	0.84	0.41	1.00				
MFL	0.97	0.84	0.38	0.99	1.00			
INT	-0.33	-0.06	-0.07	-0.31	-0.25	1.00		
NDPB	0.87	0.51	0.44	0.84	0.79	-0.56	1.00	
NMFB	0.29	-0.001	0.11	0.23	0.24	-0.41	0.43	1.00

Source: Author's computation from E-views

Table 3: ADF Unit Root Test

Variable	Order of Difference	t-statistics	P-value	Sig Level
GDP	@ 1st diff	-4.6914	*0.0039*	*1%*
CBD	@ 1st diff	-3.7002	*0.0093*	1%

CBL	@ 1ˢᵗ diff	-4.2699	*0.0028*	1%
MFD	@ 1ˢᵗ diff	-7.6089	*0.0000*	1%
MFL	@ 1ˢᵗ diff	-5.493597	0.0007	1%
INT	@ level	-3.1234	*0.0351*	5%
NDPB	@ 1ˢᵗ diff	-3.5335	*0.0139*	5%
NMFB	@ level	-4.3665	*0.0019*	1%

Source: Author's computation from E-views

Table 4: Co-integration: Trace Test

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.996948	432.3435	159.5297	0.0000
At most 1 *	0.956534	270.1688	125.6154	0.0000
At most 2 *	0.919881	182.3673	95.75366	0.0000
At most 3 *	0.735494	111.6884	69.81889	0.0000
At most 4 *	0.674423	74.45141	47.85613	0.0000
At most 5 *	0.588223	43.03105	29.79707	0.0009
At most 6 *	0.439448	18.18743	15.49471	0.0192
At most 7	0.068275	1.980089	3.841466	0.1594

Trace test indicates 7 co-integrating eqn(s) at the 0.05 level

Source: Author's Computation from E-views

Table 5: VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1732.288	NA	1.34e+44	124.3063	124.6869	124.4227
1	-1540.708	260.0022	1.78e+40	115.1934	118.6191	116.2407
2	-1382.900	123.9917*	8.59e+37*	108.4928*	114.9636*	110.4710*

Source: Author's Computation from E-views

Table 6: Short Run, Long Run and Bound Test

Dep Var/GDP	Coeff.	Std error	Prob.
C	-5478.69	6508.52	0.41
GDP (-1)	0.69	0.22	0.01
GDP (-2)	0.36	0.27	0.19
CBD	14.19	16.21	0.39
CBL	-0.34	3.27	0.92
MFD	0.10	0.07	0.18
MFL	-0.09	0.059	0.12

INT	222.75	228.06	0.34
NDPB	2.23	1.22	0.08
NMFB	-3.19	4.93	0.53
R^2	0.99	*AIC*	18.55
Adj. R^2	0.99	*SIC*	19.02
F-stat	1654	*H-Q C*	18.69
Prob.(F-stat)	0.00	*DW*	2.19
Bound Test: F-stat	50.73	**Sig. level**	0.05
Upper Bound	2.32	**Lower Bound**	3.50
ECM	-0.04	*0.07*	0.50

Source: Author's Computation from E-views

Table 7: Diagnostic Tests

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.380956	Prob. F(2,3)	0.7121
Obs*R-squared	5.670927	Prob. Chi-Square(2)	0.0587

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.349404	Prob. F(22,5)	0.9612
Obs*R-squared	16.96499	Prob. Chi-Square(22)	0.7653
Scaled explained SS	0.753740	Prob. Chi-Square(22)	1.0000

Source: Author's Computation from E-views

Interpretation of Data (Results)

Table 1 presents the characteristics of variables of study. The mean and median are based on individual series, which show high level of consistency as reflected by the mean values. From the results, the mean of microfinance bank deposits shows the highest value of 73728, followed by microfinance bank loans at 70390. This is an indication that microfinance banks play an important role in the aspect of financial inclusion and economic growth in Nigeria. The standard deviation which measures the degree of fluctuation recorded a high value for microfinance bank loans at 86935.This implies that microfinance loans and advances is the most fluctuating variable. Expectedly, the interest rate has the least mean, median and standard deviation values, followed by commercial bank deposits from rural areas. Similarly, all the variables are moderately skewed except commercial bank deposits and loans to rural dwellers. This implies that the values of the variables tend towards zero except that of commercial bank deposits and loans to rural dwellers. Furthermore, the probability of JB statistic of gross domestic product, microfinance bank deposits, microfinance bank loans, number of commercial bank branches, number of microfinance banks exceed 0.05 while the values of commercial bank deposits and loans as well as interest rate are less than 0.05. Hence, the study concludes that all the series are normally distributed except commercial bank deposits and loans as well as interest rate.

Table 2 shows the results of correlation of the variables. This test was conducted to determine the existence of collinearity among the variables or not. Among the explanatory variables, only interest rate shows a negative interaction with gross domestic product.

However, commercial bank deposits, microfinance bank deposits and loans, and number of commercial banks indicate high correlation with gross domestic product. Similarly, microfinance bank deposits and loans are highly correlated with commercial bank deposits. Expectedly, there is also high interaction between microfinance bank deposits and microfinance bank loans. While microfinance bank loans reflect high interaction with number of commercial bank branches, other variables show low connection with each other.

For effective ratification of the analytical technique, all the variables were subjected to unit root test using ADF technique. As indicated in the **table 3**, Gross Domestic Product (GDP), commercial bank deposits and loans, microfinance bank deposits and loans are stationary at first difference 1(1) at 1% level of significance while that of the number of commercial bank branches has no unit root at first difference I(1) considering 5%. Interest rate and number of microfinance bank branches are stationary at level I(0) at 5% and 1% respectively. Thus, the variables are suitable for ARDL approach and also freed of spurious analysis.

Table 4 presents the results of Johansen co-integration technique. From the results, it was discovered that long run relationship exists among the variables of interest as proven by Trace test. Thus, there is need to reconfirm these results using Autoregressive Distributed Lag (ARDL) technique.

In **table 5**, the lag selection criteria test was conducted to determine the suitable lag for the both explanatory and dependent variables. Using AIC lag selection criteria, it was discovered that lag 2 is more appropriate for the ARDL analysis.

Table 6 shows the coefficient of Gross Domestic Product (GDP) which proxy economic growth and the explanatory variables. The coefficient of commercial bank deposits mobilized from rural dwellers, microfinance bank deposits, interest rate, and number of commercial bank branches have positive relationship with gross domestic product. This implies that a unit increase in each of the aforementioned variable will enhance gross domestic product in Nigeria.

Discussion of Findings

The findings corroborate with the outcome of Ene and Inemesit (2015) as well as Ananwude, Anyanwu and Andrew (2018). The reason is not farfetched as the recent increase in the deposits mobilized from the people enhances the available funds for investment purpose, thereby contributing to economic growth in Nigeria. However, commercial bank loans to rural dwellers, microfinance bank loans and number of microfinance bank branches reflect negative interaction with gross domestic product. It is not surprising because most of the funds raised in rural areas are in most cases used to develop the urban city, which retarded the growth of local community, reduces local productivity and affect economic output in Nigeria. Regrettably, none of these variables has a significant impact on gross domestic product except number of commercial bank branches which is statistically significant at 10%. This connotes that the efforts of the government on financial inclusion and activities of microfinance bank have been sufficient enough for individual variable to drive economic growth in Nigeria. However, the combination of these variables can play a significant role in economic growth as confirmed by the f-statistics results. Hence, it can be easily inferred that short run relationship exist among the variables of study.

In the long run, the results of Bound f-statistic test show 50.73 which exceed upper and lower bound limits at 5% level of significance. This result confirmed the existence of long run

connection between the variables in the model. In view of this, the ECM was conducted and the result is negatively signed at -0.04, although not significant. This implies that the short run disequilibrium will be corrected in the long run at 4%. As seen in table 7, the LM test explains nonexistence of autocorrelation among the variables since the probability value exceed 0.05. Similarly, the results of Heteroskedasticity test established that the series are freed of Heteroskedasticity constraints.

CONCLUSION AND RECOMMENDATIONS

Based on the findings, the study concludes that there exist a short and long run interaction between financial inclusion, microfinance bank and economic growth in Nigeria. In fact, microfinance bank aids financial inclusion in Nigeria. Hence, microfinance bank and financial inclusion are the engines of growth and catalyst for quick economic recovery during economic recession. Consequently, the study suggests that:

{i. First, government should regulate interest rate in such a way that microfinance banks will be encouraged to pay favourable interest on customer's deposits. In doing so, the rural dwellers will be willing to divert their attention from informal sector to banking sector.

{ii. Second, monetary authority should enforce commercial banks to give larger proportion of funds mobilized from rural areas to rural dwellers as loans and advances. This will bring a sense of belonging, improve their productivity and enhance economic output.

{iii. Third, without compromising standard, government should formulate and implement policies that will encourage and motivate people to embark on microfinance bank businesses.

{iv. Fourth, apart from regulation of interest rates, the policy maker should implement another policy in addition to the existing one to prevent fraudulent activities, insider dealings, and unwanted interference from the board members of banks.

{v. Finally, while microfinance banks should explore the options of consistence granting of loans to rural dwellers, the monetary authorities should also provide low cost funds to microfinance bank for lending purposes.

COMPETING INTERESTS

The authors have no competing interests to declare.

Authors Affiliation

Alalade, Yimka S. A*.; Aladelusi, K. B.; Okezie, F. O.; Ogboi, C. & Amusa, B. O.

Department of Finance, School of Management Sciences. Babcock University, Ilishan-Remo, Ogun State, Nigeria

*Corresponding author: *alalades@babcock.edu.ng*
*ORCID ID: *https://orcid.org/0000-0002-8918-2407*

HOW TO CITE THIS ARTICLE:

Alalade, Yimka S. A, Aladelusi, K. B, Okezie, F. O Ogboi, C, & Amusa, B. O (2023). Financial Inclusion, Microfinance Bank and Economic Growth In Nigeria. *Seybold Report Journal*, *18*(03), 92-107. https://seybold-report.com

REFERENCES

Adegboyegun, A. E., Ademola, A. O., & Kazeem, B. L. (2020). Financial inclusion and economic growth in Nigeria. *The Social and Management Scientist,* 12(1), 91-106.

Ademola, E. A. & Arogundade, K. (2014). The impact of microfinance on economic growth in Nigeria. *Journal of Emerging Trends in Economics and Management Sciences,* 5(5), 397- 405.

Aduda, J., & Kalunda, E. (2012). Financial inclusion and financial sector stability with reference to Kenya: A review of literature. *Journal of Applied Finance and Banking*, 2(6), 95-120.

Akpan, I. (2009). *Fundamentals of finance* (3rd ed.). Uyo, Nigeira: Abaam Publishing Co.

Akpan, E. S. & NnejI, I. D. (2015). Contribution of microfinance banks to the development of small and medium scale enterprises in Nigeria. *Research Journal of Finance and Accounting,* 6(8), 19-28.

Ananwude, A. C., Anyanwu, F. A., & Andrew, I. N. (2018). Financial Inclusion: Nigeria's microfinance model effect assessment on women empowerment. *European Journal of Human Resource Management Studies*, 1(2), 55-77.

Apere, T. O. (2016). The impact of microfinance banks on economic growth in Nigeria. *International Journal of Academic Research in Economics and Management Sciences 5(4),* 53-61.

Banerjee, A. V. (2004). Contracting constraints, credit constraints and economic development. *Advances in Economics and Econometrics: Theory and Applications.* Eighth World Congress of the Econometric Society.

Brealey, R., Leland, H. E., & Pyle, D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. *The Journal of Finance,* 32(2), 371-387.

Chakrabarti, R. & Sanyal, K. (2015). *Microfinance and financial inclusion in India*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2619537

CBN (2013). Financial inclusion in Nigeria: Issues and Challenges. *Central Bank of Nigeria* (CBN). Occasional Paper No. 45.

CBN (2021). Financial inclusion in Nigeria. Understanding Monetary Policy Series No 15.

Cole, A. A. & Akintola, A. F. (2021). Microfinance banks and economic growth of Nigeria. *International Journal of Scientific and Research Publications,* 11(3), 311 - 316

Dabla-Norris, M. E., Ji, Y., Townsend, R., & Unsal, D. F., (2015). Identifying constraints to financial inclusion and their impact on GDP and inequality: A structural framework for policy. *International Monetary Fund*, 15-22.

Demi˙rgüç-kunt, A. & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. Brookings Papers on Economic Activity, Spring 2013.

Demirguc-Kunt, A., Klapper, L. & Singer, D. (2017). Financial inclusion and inclusive growth: A review of recent empirical evidence. Policy Research Working Paper Series 8040. The World Bank.

Ejefobihi, U. F., Imoagwu, C. P., & Ezeanyeji, C. I. (2019). Microfinance – One of the key drivers of financial inclusion in Nigeria. *International Journal of Academic Accounting, Finance and Management Research*, 3(5), 1-15.

El Said, A., Emara, N., & Pearlman, J. (2020). On the impact of financial inclusion on financial stability and inequality: The role of macroprudential policies (20/06). London, UK: Department of Economics, City, University of London.

Ene, E. E. & Inemesit, U.A. (2015). Impact of microfinance in promoting financial inclusion in Nigeria. *Journal of Business Theory and Practice*, 3(2), 139-158.

Erlando, A., Riyanto, F. D., Masakazu, S. (2020). Financial inclusion, economic growth and poverty alleviation: Evidence from Eastern Indonesia. *Heliyon, 6(1), 1-14*

Eze, E. & Alugbuo, J. C. (2021). Financial inclusion and poverty reduction in Nigeria. A survey-based analysis. *GSC Advanced Research and Reviews,* 7(3), 75-84

Flannery, E. R. (2018). Eradicating poverty in the globe through effective financial inclusion policy. *Journal of Financial Studies*, 3(4), 1-17.

Hannig, A. & Jansen, S. (2010). Financial inclusion and financial stability: Current Policy Issues. *ADBI Working paper* 259, Tokyo: Asian Development Bank Institute.

Hariharan, G. & Marktanner, M. (2012). *The growth potential from financial inclusion*. ICA and Kennesaw State University.

Honohan, P. (2004). Financial development, growth, and poverty: How close are the links? London Palgrave.

Hyeladzira, M. O. (2020). Microfinance institutions and economic development in Nigeria. *NDIC Quarterly Article,* 35(1&2), 62-101.

Kama, U. & Adigun, M. (2013). *Financial inclusion in Nigeria: issues and challenges*. Occasional Paper 4, 1-12.

Mbutor, M. O. & Uba, I, A. (2013). The impact of financial inclusion on monetary policy in Nigeria. *Journal of Economics and International Finance*, *5*(8), 318-326.

Migap, J. P., Okwanya, I., & Ojeka, G. (2015). Financial inclusion for inclusive growth: The Nigerian perspective. *International Journal of Information Technology and Business Management,* 37(1), 1-8.

Muthoni, M. P. (2016). Assessing institutional characteristics on microcredit default in Kenya: A comparative analysis of microfinance institutions and financial intermediaries. *Journal of Education and Practice*, *7*(18), 178-198.

NRA Forum (2016). *Financial inclusion product and risk assessment*. Nigeria National Money Laundering and Terrorist Financing Risk Assessment, 1-42.

Ogbeide, S. O. & Igbinigie, O. O. (2019). Financial inclusion and poverty alleviation in Nigeria. *Accounting and Taxation Review,* 3(1), 42-54.

Okoye. L. U., Adetiloye K. A., & Erin, O. (2017). Financial inclusion as a strategy for enhanced economic growth and development. *Journal of Internet Banking and Commerce*, Special Issue on Mobile Banking; 22(8).

Okpara, G. C. (2010). Microfinance banks and poverty alleviation in Nigeria. *Journal of Sustainable Development in Africa*, 12(6), 177 – 191.

Okwoli, D. M., Abubakar, Y. I., & Abubakar, I. J. (2013). Microfinance banks and rural development in Nigeria. *International Journal of Capacity Building in Education and Management*, 2(1), 55-67.

Olaniyi, E. (2017). Back to the land: The impact of financial inclusion on agriculture in Nigeria. *Iran. Econ. Rev,* 21(4), 885-903.

Olusegun, T. S., Evbuomwan, O., & Belonwu, M. C. (2021). Does financial inclusion promote financial stability in Nigeria? *Central Bank of Nigeria Economic and Financial Review, 59(1), 77-99.*

Omojolaibi, J. A. (2017). Financial inclusion, governance and economic progress in Nigeria: What happens to the welfare of the poor? *Arabian Journal of Business and Management Review,* 6(7), 72-85.

Otiwu, K. C., Okere, P. A., Uzowuru, L., & Ozuzu, P. N. (2018). Financial inclusion and economic growth of Nigeria: The microfinance option. *International Journal for Innovation Education and Research*, 6(2), 61-74.

Rammal, H. G. & Zurbruegg, R. (2007). Awareness of Islamic banking products among Muslims: The case of Australia. *Journal of Financial Services Marketing*, 12(1), 65–74.

Roadwan, I. (2012). The potentials of public-private partnerships in microfinance delivery. A paper presented at International Microfinance Conference Abuja.

Robinson, M. S. (2001). The microfinance revolution: Sustainable finance for the poor. Washington, DC: World Bank.

Serrao, M., Sequeira, A. H., & Hans, B. V. (2012). Designing a methodology to investigate accessibility and impact of financial inclusion. Retrieved from http://ssrn.com/abstract=2025521 or http://dx.doi.org/10.2139/ssrn.2025521

Sharpe, S. A. (1990). Asymmetric information, bank lending, and implicit contracts: A stylized   model of customer relationships. *The Journal of Finance,* 45(4), 1069-1087.

Subbarao, D. (2009). Financial Inclusion: Challenges and opportunities. *Presentation by Dr.   Duvvuri Subharro, Governor, Reserve bank of India at Bankers Club, Kolkata on December 9.*

Umar, V. B. (2013). Female empowerment: Impact of a commitment savings product in the Philippines.   *World Development,* 38(3), 333–344.

Usifoh, K. S. & Ezeanyeji, C. I. (2017). Impact of microfinance banks on poverty alleviation and   economic growth in Nigeria. *Journal of Social Development*, 6(5), 22-34.

World   Bank   (2015).   How   to   measure   financial   inclusion.   Retrieved   from   file: http://wwwindicators%20of%20findex/how%20to%20measure%20financial%20inclusio n%201.htm