

**FINANCIAL INCLUSION: A PANACEA FOR POVERTY
ALLEVIATION IN NIGERIA**

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Abstract

Financial inclusion is an open strategy for the reduction of poverty and acceleration of inclusion growth. This study aimed to determine the effect of financial inclusion on poverty alleviation in Nigeria. The study used serial annual and secondary data gotten from the Central Bank of Nigeria, statistical bulletin, and annual reports, for the period 2005-2019. To avoid spurious regression due to the problem of non-stationarity of data, the Augmented Dickey-Fuller test was used to check for the presence of a unit root in the variables, while cointegration test was used to check the long-run relationship among the variables in the model and was carried out using the Johansen technique. The model was logged in order to checkmate the presence of heteroscedasticity. The study used ordinary least square (OLS) regression analysis. The Distributed-Lag (D-L) model was incorporated into the OLS because the effect of financial inclusion may take a little time to manifest in the individual economic welfare thus creating room for lag. Financial inclusion was measured by the number of commercial bank branches (CBB), number of microfinance bank branches (MfBB), number of ATM points (ATM), and credit to rural area (CRA) and poverty was measure by per capita income (PCI). From the result, none of the measures of financial inclusion considered in this study play a significant role to reduce poverty in Nigeria within the period studied. The numbers of microfinance bank branches and credit to rural areas have a positive effect on poverty reduction in Nigeria. Though, the number of microfinance bank branches and credit to rural areas was not significant it was recommended that policy managers should create room for more credit facilities to the rural areas and more micro finance bank branches should be open in the rural areas.

Keywords: Economy, Financial Inclusion, Poverty Alleviation, and Services.

INTRODUCTION

Poverty is presumably a multi-dimensional issue and economic, social, and political forces play a role in its creation as well as in its suppression. Financial inclusion, is understood to be the provision of micro-loans to populations that have never before had access to loans, and also considered as a useful instrument to help reduce poverty. Nigeria is currently the poverty capital of the world which is aggravated by slow economic growth, unemployment, insecurity, Covid-19 pandemic, and income inequality. Financial inclusion is a policy basically to provide cheap, fair, and transparent financial service deepening which is aimed at the poor to spur economic growth, reduce (i) poverty, (ii) income inequality, and (iii) unemployment. The target of financial inclusion is focused on society that has not been fulfilled by formal financial services, i.e the poor, SMEs, and cross-group society (Zia & Prasetyo, 2018). Financial inclusion is also aimed to realize a financial system that can be accessed by all society levels to promote economic growth, poverty alleviation, income distribution, and the realization of financial system stability.

According to Mehrotra et al (in Kama & Adigun 2013), access to financial services allows the poor to save money outside the house safety, and helps in mitigating risks the poor face as a result of economic shocks. Hence, providing access to financial services is increasingly becoming an area of concern for every policymaker for the obvious reason that it has far-reaching socio-economic implications. Financial inclusion has therefore become an open strategy for the reduction of poverty and acceleration of inclusion growth. The realization of this, was the major impetus for the adoption of policies and measures aimed at growing global financial inclusion as a means of promoting world economic prosperity through the reduction in poverty and unemployment.

Financial exclusion has manifested prominently in Nigeria with the bulk of the money in the economy staying outside the banking system. The issue of financial exclusion has therefore been a major economic challenge that has received the attention of various governments over the past four decades. Before the recent efforts to promote financial inclusion, the Nigerian economy was largely a cash-based economy with a significant proportion of the narrow money stock in the form of currency outside the banking

system. Over the years, the government and monetary authorities have introduced varying policies aimed at deepening financial inclusion within the economy. The policies ranged from various institutional involvements such as the establishment of community and microfinance banks to specific policies and programs designed to facilitate access of the financially excluded to formal financial services. The private banks, on the other hand, have also been engaged in innovations and activities aimed at getting more people involved in the financial inclusion process. But to what extent has the financial inclusion policies impacted poverty alleviation in Nigeria?

Nigeria currently has a population of over 200million with about 60% of this within the employment range. However, the country only has 80million total Bank customers with only 25% of this confirmed on the Bank's verification system so far with a strong indication that a reasonable number of the yet-to-be-verified customers are duplications (CBN 2020). This is an indication that the level of financial inclusion in Nigeria is still very low. Can this be adduced to the high rate of poverty in the country? What is the effect of financial inclusion on poverty alleviation in Nigeria? Will access to financial services help reduce poverty in Nigeria? These are what this study is out to investigate.

CONCEPTUAL ISSUES

Financial Inclusion

Reserve Bank of India (RBI, 2006) defined financial inclusion as the provision of affordable financial services to those who are under-attended by formal agencies of the financial system. These financial services include savings, remittance facilities loans, payments, and insurance services. Mbutor and Ibrahim (2013) described financial inclusion as a state where a person can access financial services from the formal financial system at an affordable cost. Leyshon and Thrift (1995) stated that financial inclusion is a state where people have easy access to proper and relevant financial products and services in effectively managing their financial resources. According to Aduda and Kalunde, (2012) financial inclusion schemes could be seen as a procedure for gaining access to financial services at a lower rate by vulnerable citizens such as low-income earners at a particular period. It is a form of intrusion plan that strives to stun the arcade abrasion that encumbers the markets from functioning in favor of the vulnerable. The scheme was designed to help the low-income earners to tame-tide the

poverty and enhance the standard of living in line with the development addressed by the Millennium Development Goals MDGs (Chibba, 2009).

Poverty Alleviation

According to Aribaba, Adedokun, Oladele, Babatunde, Ahmodu, and Olassehinde (2020) poverty is a form of disposition for lacking the economic and material resources that are necessary for an optimum standard of living. It could also be described as a means of having a low-income level from employment that a basic need cannot be met. Poverty is hunger. Poverty is a lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not having access to school and not knowing how to read. Poverty is not having a job, is fear for the future, living one day at a time. Poverty has many faces, changing from place to place and across time, and has been described in many ways. Most often, poverty is a situation people want to escape. So poverty is a call to action -- for the poor and the wealthy alike -- a call to change the world so that many more may have enough to eat, adequate shelter, access to education and health, protection from violence, and a voice in what happens in their communities (Abimbola, Olokoyo, Babalola, & Farouk 2018).

Measurement of Poverty

There are various measurements of poverty, noticeable among them are, the poverty headcount which is measured by headcount, H, whose incomes fall below the absolute poverty threshold. The World Bank (2008) pitches into the absolute nature of poverty and explains severe poverty as living on less than \$1.25 a day Purchasing Power Parity (PPP), and moderate poverty as less than \$2 a day. The headcount ratio on the other hand measures the fraction of the population under the poverty line. The Human Poverty Index (HPI) compiled by the UNDP in 2006 is an additional measure of poverty. It measures poverty in three areas of deprivation. These comprise life, basic education, and economic provision. The 2006 UNDP report states that there is evidence of poverty when one dies before age forty (40). In respect of basic education, the report measures the fraction of adults who are illiterate, and finally for the economic provision, it measures the fraction of people without access to safe water and the fraction of children underweight. A further measure of poverty is the Multi-

Dimensional Poverty Index (MPI) which revolves around the three measurements of poverty just like the Human Poverty Index (HPI). The difference is that while HPI concentrates on aggregate level data, MPI concentrates on individual-level data thereby directly concentrated on poverty measurement. The three levels it concentrates on include health, education, and living standards.

Channels of Promoting Financial Inclusion in Nigeria

The number of Commercial Bank Branches (CBB): The number of commercial bank branches decreased marginally from 5,508 to 5,462 branches between 2014 and 2015. In 2016 and 2017 the number were 5570 and 5714. It dropped to 5301 and 5478 in 2018 and 2019 respectively. Relative to the adult population, there were 5.7 branches per 100,000 adults in Nigeria as of December 2015, compared with 5.9 branches per 100,000 adults as of December 2014. Comparing the achieved value with the 2020 target of 7.5 branches per 100,000 adults by 2015, the actual status is not on track. 5.5 per 100,000 people have been achieved for 2016. Furthermore, it reveals that the number of bank branches has maintained a slow growth since 2011. This slowdown is the result of less focus on branch growth due to the increased use of non-branch channels (CBN,2012).

The number of Microfinance Bank Branches(MfBB): Although the number of microfinance bank branches increased by 120 or 5.7 percent between 2014 and 2015, the number of microfinance bank branches per 100,000 adults remained at 2.3 between the period 2014 and 2015. Compared to the 2015 target of 4.5 microfinance bank branches per 100,000 adults, the achieved value was only slightly more than half of the target. However, the report shows that in the microfinance banking subsector, growth in bank branches has remained flat just as for deposit money banks. In 2020 it is 5 MFB branches per 100,000 adults (CBN, 2016). Since 2016 the number of MfBB has been constant with 987 branches (CBN, 2020).

The number of Automated Teller Machines (ATMs) The number of ATMs in Nigeria increased by 517 or 3.2 percent from 2014 to 2015, while the number of ATMs per 100,000 adults grew marginally from 17.0 to 17.1(CBN, 2018). As the achieved value was only about 40 percent of the target, the 2015 target of the ATM key performance indicator (KPI) was not met in 2015 (CBN, 2018). However, in 2020 ATM deployment is set at 203 ATMs per 100,000 adults.

The number of Point-of-Sale (PoS) Devices For the computation of the PoS devices KPI, only deployed PoS terminals were considered. Based on this narrower definition, there were 116,868 POS devices as of December 2015, compared to 82,549 deployed devices as of December 2014. In terms of PoS devices per 100,000 adults, the value increased by 37.6 percent from 88.3 to 121.5. While this was only 27.5 percent of the 2015 target of 442.6 PoS devices per 100,000 adults, the status is not fully clear as other PoS devices, such as mobile phones, were not captured. Furthermore, POS and mPOS is at 200 POS devices per 100,000 adults in 2020. The geographical distribution of the devices is expected to cover the regions with the highest exclusion rates which are the North East and North West. (CBN, 2020).

The number of Bank Agents: As of December 2015, there were 688 bank agents at three financial institutions. Additionally, the Geospatial Mapping Survey of financial access points captured 3,567 agent locations that were engaging in mobile money activities as of April 2015. While based on these numbers, the 2015 target of 31.0 agents per 100,000 adults would not have been met; a complete assessment cannot be made (CBN, 2018). This is because data on the number of mobile money agents as of December 2015 was not fully available from mobile money operators. Also, agents were not uniquely identifiable across financial institutions and mobile money operators. Recently, the strategy grew the Agent network from 10 Agents per 100,000 Adults in 2016 to 476 Agents per 100,000 Adults in 2020. This was driven by several initiatives in the financial sector aimed at bringing financial services closer to the unserved and underserved using non-physical branch platforms (CBN, 2020).

Review of Empirical Studies

The following studies were reviewed in support of the study:

Aribaba, Adedokun, Oladele, Babatunde, Ahmodu, and Olassehinde (2020) explored the effect of the financial inclusion scheme on poverty alleviation among the low-income earners in Nigerian between the periods of (2004 –2019). The study employed a causal-comparative research design. Annual data was gathered from the Apex Bank in Nigeria (CBN) through the World Bank Indicators statistical bulletin 2019 online edition. The statistical methods used were ordinary least squares (OLS) and error

correction model (ECM). The Augmented Dickey-Fuller (ADF) tests were piloted to investigate the stationary properties through a time-series test. The null hypotheses were tested at a 5% level of significance. The independent variables are; Loan to Depositor Ratio (LDR), Loan to Rural Areas (LRA) such as local farmers, Financial Deeping Indicators (FDI), and Social Investment Loan (SIL) to SMEs while dependent variables are Poverty Index (PI) and Per Capita Income (PCI) respectively. The study showed that financial inclusion schemes play a significant effect on poverty alleviation among the low-income earners in Nigerian. It also reduces poverty level and increases per capita income thereby enhance the standard of living through the new social investment scheme.

Omar and Inaba (2020) investigated the impact of financial inclusion on reducing poverty and income inequality, and the determinants and conditional effects thereof in 116 developing countries. The analysis was carried out using unbalanced annual panel data for the period of 2004 to 2016. For this purpose, researchers constructed a novel index of financial inclusion using a broad set of financial sector outreach indicators, finding that per capita income, the ratio of internet users, age dependency ratio, inflation, and income inequality significantly influence the level of financial inclusion in developing countries. Furthermore, the results provided robust evidence that financial inclusion significantly reduces poverty rates and income inequality in developing countries. The findings were in favor of further promoting access to and usage of formal financial services by marginalized segments of the population to maximize society's overall welfare.

Ogbeide and Igbinigie (2019) examined the impact of financial inclusion on poverty alleviation in Nigeria using time series data for the period 2002 to 2015. The data was sourced from the World Bank indicators, 2016. The study employed the ordinary least squares multivariate regression technique. Financial inclusion was found to exert a significant impact on per capita income, reduces poverty level, and improves the standard of living. Specifically, the result showed that commercial bank branches per 100, 000 adults exert a positive impact on per capita income, increase the standard of living, and contribute to poverty alleviation. Depositors with commercial banks per 1000 adults exerted a negative effect on poverty alleviation and are not statistically significant under the reference period. Borrowers from commercial banks per 1000

adults are found to increase per capita income and by extension poverty alleviation and are not statistically significant. The finding also revealed that the number of automated teller machines enhanced financial inclusion, income generation, and poverty alleviation and was not statistically significant.

Umaru and Imo (2018) studied the effects of financial inclusion on poverty reduction: the moderating effects of microfinance. The purpose of the study was to investigate the effects of financial inclusion on poverty reduction: the moderating effects of microfinance. The data collection technique employed was a self-administered questionnaire. The questionnaire was administered to a total of 384 of the respondents that are microfinance banks customers, from the three senatorial districts in Kebbi State Nigeria by using simple random sampling procedures. In analyzing the relationship among the variables, a Partial Least Square (PLS)-Structural Equation Modelling (SEM) technique was adopted. The findings of the study revealed that there is a significant relationship between financial inclusion and poverty reduction. The results further revealed that microfinance positively moderates the relationship between the variables under studies.

Abimbola, Olokoyo, Babalola, and Farouk (2018) examined financial inclusion as a catalyst for poverty reduction in Nigeria. The study examined the role of financial inclusion in the reduction of poverty in Nigeria. It examined the roles of government and financial institutions and the use of various mobile initiatives such as mobile banking, mobile money, agent banking, etc. as financial inclusion tools to stimulate poverty reduction. Time series analysis on data obtained from secondary sources between the periods of 1992 and 2016 was adopted and the paper- covered financial inclusion as it related to unbanked people in Nigeria. The paper found out that the majority of the *unbanked* in Nigeria are low-income people who do not have access to financial services and information on financial inclusion. While few are timid on the need to use a bank, many of them are willing to use banking services and believe the availability of these services will help improve their economic condition.

Theoretical Framework

The relationship between finance and real activity can be traced to Smith (1776) who argues that real growth in an economy is driven by activities of the financial system

because increased production and specialization is facilitated by enhanced resource (credit) acquisition offered by the system. Also, Bagehot (1873) posits that the 19th-century industrial revolution in Europe was propelled by the financial system which mobilized funds in the unusually 'big form' for the industry. Corroborating the views of Smith (1776) and Bagehot (1873), Schumpeter (1912) claimed that technological innovation (a requirement for productivity growth) is facilitated by the financial sector through efficient resource mobilization and allocation. Schumpeter maintains that a developed and functional financial sector is a condition precedent to a successful entrepreneurial engagement in technological innovation because translating innovative thinking (ingenuity) into real output has cost implications that may not be covered by entrepreneurs themselves. He argued that an efficient financial system can identify and fund entrepreneurs who have the greatest chances of successfully transforming innovative ideas into marketable products through innovative production processes. The arguments presented above imply a positive or growth-inducing impact of finance on the real economy, an indication that increased access to finance promotes productivity, enhances welfare, and alleviates poverty. As more people get integrated into the formal financial sector they become economically empowered and through active engagement in productive activities they can lift themselves out of poverty as well as grow the economy.

Methodology

Investigating financial inclusion: a panacea for poverty alleviation in Nigeria, the study used serial annual and secondary data gotten from the Central Bank of Nigeria, statistical bulletin, annual reports, and the various publications for the period 2005-2019. To avoid spurious regression due to the problem of non-stationarity of data, the Augmented Dickey-Fuller test was used to check for the presence of a unit root in the variables, while cointegration test was used to check the long-run relationship among the variables in the model and was carried out using the Johansen technique. The model was logged in order to checkmate the presence of heteroscedasticity. The study used ordinary least square (OLS) regression analysis. The Distributed Lag (D-L) model was incorporated into the OLS because the effect of financial inclusion may take a little time to manifest in the individual n society at large. This creates room for lag.

Model Specification

A major goal of financial inclusion is to reduce the poverty level in society. The poverty level in this model is measured by per capita income level at any given point in time. Per capita income (PCI) is a good indicator for measuring the economic well-being of people in any country. A high level of PCI signals a better standard of living whereas a low or declining PCI indicates a slide towards poverty level. Here financial inclusion is measured by the number of commercial bank branches (CBB), number of microfinance bank branches (MfBB), number of ATM points (ATM), and credit to rural areas (CRA) Based on the discussion, the following model was developed.

Invoking equation ii into i,

$$PA = f(CBB, MFBB, ATM, CRA) \dots \dots \dots (iii)$$

PCI is a proxy for PA hence

$$PCI = f(CBB, MFBB, ATM, CRA) \dots \dots \dots (iv)$$

Stating in econometric format

$$PCI = \beta_0 + \beta_1 CBB + \beta_2 MfBB + \beta_3 ATM + \beta_4 CTA + U_t \dots (v)$$

Inorder to checkmate the presence of heteroscedasticity, equ (v) is logged

Hence,

$$\log PCI = \beta_0 + \beta_1 \log CBB + \beta_2 \log MfBB + \beta_3 \log ATM + \beta_4 \log CTA + U_t \dots (vi)$$

also, because financial inclusion does not instantaneously reduce poverty, distributed lag is employed ,thus equ vi becomes ,

$$\log PCI = \beta_0 + \beta_1 \log CBB_{-1} + \beta_2 \log MfBB_{-1} + \beta_3 \log ATM_{-1} + \beta_4 \log CRA_{-1} + U_t \dots (vii)$$

Pre-Estimation Test

Table 1-Unit-Root Test Result by Augmented Dickey-Fuller Method under 5% and 10% critical levels

<i>Variables</i>	<i>P value</i>
ATM	0.0000
CBB	0.0087
D(CRA)	0.0501
D(MfBB)	0.0047

$D(PCI)$	0.0046
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Source: *Researcher's computation 2021*

The study tested the variables for unit root problems using Augmented Dickey-Fuller Test. The result of the stationarity test showed that ATM and CBB are stationary at origin/level, CRA, MfBB, and PCI are stationary at the first difference using five percent significant level, as shown in table-1

Table -2-Johansen Cointegration Result

Hypothesize				
d		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.992802	99.94878	47.85613	0.0000
At most 1 *	0.864524	35.80801	29.79707	0.0090
At most 2	0.498745	9.821540	15.49471	0.2947
At most 3	0.062803	0.843207	3.841466	0.3585

Source: *Researcher's computation 2021*

The result of table -2- shows that there exist at least two (2) co-integrating equations at 5% levels of significance. This is because the trace test statistic is greater than the critical value at 5%. This shows that there is a long-run relationship among the variables.

Table .3. Regression result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.620234	0.194058	28.96161	0.0000
CBB	-0.401107	0.512866	-0.782090	0.4598
D(MfBB)	0.006643	0.762550	0.008712	0.9933
ATM	-0.230669	0.399805	-0.576955	0.5820
D(CRA)	0.015275	0.021007	0.727123	0.4907
R-squared	0.903168	Mean dependent		5.617857

		var	
Adjusted R-squared	0.820169	S.D. dependent var	0.168348
S.E. of regression	0.071391	Akaike info criterion	-1.977908
Sum squared resid	0.035676	Schwarz criterion	-1.658380
Log likelihood	20.84536	Hannan-Quinn criter.	-2.007486
F-statistic	10.88168	Durbin-Watson stat	2.187923
Prob(F-statistic)	0.002991		

Source: Researcher's computation 2021

The result of table-3- showed that about 90% of the systematic variation in the dependent variable (PCI) is explained or accounted for by the changes in the independent variables (CRA, ATM, MfBB, and CBB). This was further endorsed by the R bar square of 82%. The result also showed that a linear relationship exists between the dependent variable and the independent variables with f-statistic of 10.88 and a probability of an f-statistic (0.0029) less than 0.05. The result of the DW statistic (2.18) approximately "2" indicates the absence of serial autocorrelation in the model.

The result of the commercial bank branches (CBB), showed that an increase in commercial bank branches by one unit will reduce per capita income by 40% and has an insignificant impact on poverty reduction because the *p-value* (0.4598) is greater than 0.05 within the period under survey. Microfinance bank branches (MfBB), the result shows that a one-unit increase in MfBB will positively increase PCI by 0.6% and has an insignificant impact on poverty reduction because the *p-value* (0.9933) is greater than 0.05.

For ATM (*Number of Automated Teller Machines*), the result showed that a one-unit increase in ATM will negatively affect PCI 23% and has an insignificant impact on poverty reduction in Nigeria because the *p-value* (0.5820) is greater than 0.05. Lastly, for CRA (credit to rural areas), the result showed that a one-unit increase in CRA will

positively increase PCI by 1.5% and has an insignificant impact on poverty reduction in Nigeria because the *p-value* (0.4907) is greater than 0.05.

Conclusion and Recommendation

Financial inclusion scheme had been global attention in structuring finances toward the economic development through adequate income generation in order to reducing poverty and facilitate grass root development. This study has tried to investigate financial inclusion: a panacea for poverty alleviation in Nigeria from 2005 to 2019. From the study, it was revealed that none of the measures of financial inclusion considered in this study were significant to reducing poverty in Nigeria within the period under review. The number of microfinance bank branches and credit to rural areas positively increase per capita income thereby reducing poverty they were not significant. From the study, it showed that commercial bank facility like ATM does not reduce poverty but only facilitate bank operating within the commercial bank for the customers. Economic policy managers should encourage the commercial banks to give more credits to the rural areas and allow the establishment of microfinance banks in rural areas which will provide financial services to the area.

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