FINANCIAL INCLUSION AND MONETARY POLICY IMPERATIVES: EVIDENCE FROM NIGERIA

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Abstract

Barter was a clumsy medium of exchange, cumbersome and dependent on a double coincidence of wants. The exit of the barter economy was quick as money emerged as a measure of value and the new medium of exchange. In a pool, control and management of flows become achievable. The goal of Financial Inclusion (FI) is to gather these monies in such an organized pool whereby monetary policy can target and influence its expansion (or contraction) with a view to achieving the nominated goals of economic growth, price level stability, and stable employment level. Previous efforts targeted at FI by the authorities in Nigeria include the rural banking scheme 1979, the Peoples Bank, 1989, Community Banks, 1990s and Microfinance Banks, 2005 with Family Economic Advancement Programme (FEAP), ACGSF and NERFUND (National Economic Reconstruction Fund) in between. The non-interest banking (Islamic Banking), the Cashless Policy, the Electronic Payment System and E-banking emergence are the recent introductions. This study examines the nexus between a decade of FI efforts and the attainment of monetary policy targets. The OLS estimation method was used for multiple regression analysis. Broad access and usage measures for FI such as the number of banks branches, the number of ATM outlets, POS utilization, MFB savings, and MFB loans were used as the FI measures. Monetary policy targets employed are Gross Domestic Product (GDP) to proxy economic growth; Consumer Price Index (CPI) or inflation for price level stability and the Unemployment rate to proxy the employment level stability. Each monetary policy target proxy was regressed on the listed FI measures to ascertain possible relationships. The data was sourced from CBN statistical bulletins of various issues and NBS. The period covered is 2007-2016. The study finds that a significant relationship exists between FI variables of MFB savings, MFB loans, Number of Branches and POS utilization and monetary policy target of price level stability (Inflation). Study finds no relationship between these FI measures and the other monetary policy targets of economic growth (GDP) and unemployment. The study concludes that efforts on FI are still shallow in outreach and recommends an intensification of campaigns on financial literacy, consumer education and protection to curb apathy and improve the culture of savings.

Keywords: Financial inclusion, Duality, Accessibility, Usage.

Introduction

Under the most primitive condition of human existence, the household provides its basic needs and engages in the production of goods and services for her consumption without outside help. But as economies grew, the division of labour evolved and self-sufficiency vanished with specialization. The need for continuous exchange of goods and services became paramount. The barter system evolved but with a clumsy and ineffective exchange mechanism as it depended on the double coincidence of wants. Another drawback of the barter economy was the determination of the common value of the goods to be exchanged. How many tubers of yam can be exchanged for a life goat? This was a challenge and it did not take long for the barter economy to be overthrown by the paper money whose origin was traced to the Tang dynasty in China in 650B. C. (Okereke et al., 2009). The Goldsmiths' receipts followed later and with better confidence began to enjoy mass acceptance and money evolved and became a medium of exchange.

The astute qualities of modern money are that money is both a legal tender and a measure of value.

The target of financial inclusion is to gather this money in the economy into a 'reservoir' where inflows and outflows can be monitored and controlled to some extent. Money plays both dynamic and static roles in the economy as it facilitates capital formation and constitutes a vital index for the measurement of economic activity. All government transactions are conducted in money – taxes, budgets, salary payments, investments etc. Money is an essential economic tool and governments see financial inclusion as a critical development policy priority target in both developed and developing countries. An inclusive financial strategy is now widely recognized as a policy priority. Giving access to the hundreds of millions of men and women (all over the world) who are presently excluded from financial services would provide the possibilities for the creation of a large depository of savings, investable funds, investments, and global wealth generation. In other words, access to financial services, that are well suited for low-income earners, promotes enormous capital accumulation, credit creation, and investment boom. Usually, the low-income earners constitute the largest proportion of the population and so control the enormous chunk of idle funds of the economy. These funds are held in small amounts in the hands of each of the several million members of this group. Harnessing and accumulating these resources provide a huge source of cheap long-term investable capital.

Mehrotra et al., (2009) emphasized that access to financial services allows the poor to save money outside the house safely and helps in mitigating the risks that poor people 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 economic and social implications. Financial inclusion is seen as an explicit strategy for accelerated economic growth and critical for achieving inclusive growth in a country. This realization, in the recent past, 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. The global consensus notwithstanding, achieving pervasive financial inclusion has remained a global challenge with as much as 54.0 percent of adults worldwide being financially excluded (without access to financial services). The situation is even worse in the developing economies where some countries have as much as 70.0 percent financial exclusion levels (Consultative Group to Assist the Poor (CGAP) survey, 2010).

In Nigeria, the financial inclusion strategy document by the Central Bank of Nigeria (CBN) has been in place since 2012. Studies on the effects of financial inclusion on economic growth are rare. The previous efforts by the government such as the rural banking scheme of commercial banks, the Peoples bank initiative, Community banks, ACGSF, etc. all ended in a debacle. The remedial steps taken in 2005 through the introduction of Microfinance Banking Policy (2005) is yet to make an impression as only a paltry 8% of adults in Nigeria make use of the MFBs (EFinA, 2013). It has been noted by various researchers that a good financial system enhances economic development through efficient intermediation, fund mobilization, and allocation. Schumpeter (1911) acknowledged the roles played by banks in the enhancement of technological innovation due mainly to the intermediation process. Gibson and Tsakolotus (1994) posit that the gains from a robust and deepened financial system mostly accrue from the allocation of mobilized savings and efficient intermediation.

A corollary to financial inclusion is financial exclusion which is defined as the inability of the poor individuals and households to access financial services and banking facilities due to unavailability of service providers and the reluctance of conventional banking institutions to extend services to these categories of clients due to small volume transactions and balance sheet considerations.

The Exigency and Gap theses are apt. The gap thesis argues that accelerated growth of microfinance institution arose from the funding gap created by negligence on the part of conventional commercial banks for microcredit ventures whereas the Exigency thesis on the emanated from the urgent need perceived by various national governments to jumpstart and also accelerate their economic growth. The CBN in its financial inclusion policy document in 2012 averts to the urgent need to pursue and enhance monetary policy through inclusive finance. Financial exclusion has led to the blossoming of the informal financial sector. The traditional, primitive but exploitative contributory savings and loans schemes such as *Esusu, Adashi, Itutu*, etc. have comfortably challenged any meaningful process or programmer of financial inclusion. Rutherford (2009) opines that the mobilization of savings by the active poor enables

them to resist financial shocks through the accumulation of funds that will help them attend to a myriad of life cycle problems. Khandker (2003) believes that unrestricted access to loans /credits, and other financial services equally help the poor, vulnerable and financially excluded people to build confidence, accumulate business assets and cater for family needs on nutrition where personal savings prove inadequate.

Consequently, financial inclusion will not only provide the active poor with the desired leverage for economic empowerment but will undoubtedly translate into greater access to education, reduction in maternal health, reduction in infant mortality, improvement in the standard of living and improvement in nutritional facilities. In essence, financial inclusion is complementary to economic growth as the two contribute toward poverty alleviation. Demiurge-Kent, Beck, and Honoham (2008), Hannig and Jansen (2010) all noted that financial sector development is a driver of economic growth which indirectly reduces poverty and inequality. Access to appropriate financial services for the poor can improve both welfare and their economic wellbeing. As noted earlier many pro-poor initiatives put in place previously in Nigeria did not stop the alarming rate of growth and patronage of the informal financial sector. The *Esusu, Ajo, Adashi* etc. contributory schemes have enjoyed tremendous patronage and the near collapse of the banking sector in 2010 which swept away many MFBs served to strengthen the resolve of those who patronize them thereby enhancing the growth of the clientele of informal finance sector. It is worrisome that as at date MFBs attract the patronage of only 8% of banking adults in Nigeria in over a decade of its existence (its absorption of the remnants of community banks notwithstanding).

The problem is the agenda to pursue to minimize (or eliminate) the influence of the informal financial sector to ensure the realization of FI policy objectives and enhance economic development. It is unfortunate that there is no formal recognition of the negative impact of the informal financial sector in the policy document of CBN. Despite the fact that formal FI policy took off barely 6years ago in Nigeria, previous efforts to partly address the issue of inclusiveness and poverty did not yield the expected result. The introduction and implementation of the FI policy could have made an impact. The main objective of the study is to ascertain the relationship between the current status of financial inclusion in Nigeria and monetary policy objectives. The introduction section has been covered and the remainder of the work is arranged as follows: section 2 addresses the review of literature while section 3 and 4 dwell on methodology and data analysis. Section 5 concludes the work with recommendations.

Literature Review

The concept and definition of Financial Inclusion (FI)

The definitions of FI are various but the most versatile definitions come from Plymouth City Council (PCC) and the Centre for Financial Inclusion (CFI). The PCC sees financial inclusion as a process or situation which allows for ease of access to, or availability of and usage of formal financial systems by members of the economy. It describes a process where all members of the economy do not have difficulty in THE opening bank account; can afford to access credit; and can conveniently, easily and consistently use financial system products and facilities without difficulty. It is the process which ensures that a person's in-coming money is maximized, out-going is controlled and can exercise informed choices through access to basic financial services" (PCC Financial Inclusion Strategy, 2009).

The Centre for Financial Inclusion (CFI) provides a somewhat all-encompassing definition. The Centre defines financial inclusion to portray a scenario in which all who can use them have access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. It is a state where financial services are delivered by a range of providers, to most of the private sector, and reach everyone who can use them; including the poor, disabled, rural, and other excluded populations (Centre for Financial Inclusion, 2010).

To Mohan (2006), financial exclusion signifies lack of access by certain segments of the society to appropriate low cost, fair and safe financial products and services from mainstream providers. Though there may not have been a universal agreement over an exclusive list, it is widely agreed that financial inclusion is multidimensional, encompassing access to, use of and capability in relation to a range of financial services.

Stephen Sinclair et al. (2009) defined as a state in which all people have access to banking and insurance services as well as financial literacy and capabilities. Chima (2011) defined FI as the state of the financial

system where every member of society has access to appropriate financial products and services for effective and efficient management of their resources; get needed resources to finance their businesses, and financial leverage to take up opportunities that will lead to increase in their incomes.

Several definitions of financial inclusion adorn the new literature and each tries in no small way to reflect the peculiarities of the jurisdictions. Mahendra (2006) defined financial inclusion as the availability of banking services at an affordable rate to the large segment of the vulnerable and low-income groups while to Mbutor and Uba (2013) who pioneered a study on the impact of FI on monetary policy in Nigeria (1980-2012), financial inclusion simply implies enabling access to financial resources and services for economic agents, especially, those on the lower rung of the income ladder at an affordable cost. The results of their study support the notion that growing financial inclusion would improve the effectiveness of monetary policy. Financial inclusion strategies aim at increasing the number of people with accounts in banks and other formal financial institutions- savings, current, and credit. It also pursues the promotion of the use of formal payment media, including cheese, ATM cards, internet payments, mobile payments and others by the populace. Ashraf et al. (2006) believe that people who are financially included tend to be more productive, consume more and invest more. Even though there is limited literature on financial inclusion, most studies focused on its effect on economic growth and income inequality. Many works have given undue cognizance to financial depth rather than coverage and inclusiveness. It is important to note that deep systems are not necessarily inclusive ones especially as CGAP (2012) did acknowledge in instances when "financial access is heavily skewed towards the wealthy". Financial inclusion is generally defined as ensuring access to formal financial services at an affordable cost in a fair and transparent manner (FATF, 2011a, p. 12 in De koker & Jentzsch, 2013).

Hariharan and Marktanner (2012) defined financial inclusion as access to formal financial services such as credit, savings, and insurance opportunities. They stated that a lack of financial inclusion is a multifaceted socio-economic phenomenon that results from various factors such as geography, culture, history, religion, socio-economic inequality, the structure of the economy and economic policy. They agreed with the views of Ogunleye (2009) that links financial inclusion to stability and economic growth. They concluded that financial inclusion has the potential to increase the financial sector savings portfolio, the efficiency of financial intermediation, and allows for the tapping of new business opportunities. Chain et al (2009) and CGAP (2009) observe that the number of adults in developing countries who do not have even a basic bank account range from 2.1billion to 2.7billion and this represents about 72% of the adult population. Having a bank account may not be a fantastic indicator of financial inclusion as sure sander (2003) argued but rather posited that the ideal definition should focus on people who want to access financial services but are often denied the same due to one incapacitation or another. This view was upheld by Chakraborty (2011) when he maintained that access to appropriate financial product and services needed by the vulnerable groups can be achieved without a banker-customer relationship.

Previous researches on financial exclusion define it among others as those processes that serve to prevent certain social groups and individuals from gaining access to the formal financial system (Leyshon & Thrift, 1995). Cabol et al. (2003) saw it as the inability of some societal groups within an economy to have access to the financial system. Conroy (2005) identified the process that prevents the poor and the disadvantaged social groups from gaining access to formal financial systems of their countries as a form of financial exclusion, while Mohan (2006) opined that lack of access by certain segments of the society to appropriate, low-cost, fair and safe financial products and services from mainstream providers are measures of financial exclusion. On the other hand, a Government Committee on Financial Inclusion in India defines financial inclusion as the process of ensuring access to financial services as well as timely and adequate credit where needed by groups at an affordable cost (Rangarajan Committee, 2008) and Nirupam et al. (2009) in Onaolapo (2015).

Financial Inclusion is achieved when adults have easy access to a broad range of financial products designed according to their needs and provided at affordable costs. These products include payments, savings, credit, insurance, and pensions. The consequence of financial exclusion is to minimize the scale of economic activities that can be financed and hence, limiting the potentials for higher economic growth. Financial inclusion requires that attention is given to human and institutional issues, such as quality of access,

affordability of products, provider sustainability, and outreach to the most excluded populations. Financial inclusion guarantees improved ability of poor people to save, borrow and make payments throughout their lifetime. Apart from the regular form of financial intermediation, financial inclusion takes care of:

- Basic no-frills banking account for making and receiving payments;
- Savings products suited to the pattern of cash flows of a poor household;
- Money transfer facilities; and
- Insurance (life and non-life).

Financial inclusion is now seen as a miniature or quasi-public good to be enjoyed as a right by every citizen with the attendant attributes of non-excludability and non-rivalry. Mehrotra (2009) was quick to admit that the degree of *'publicness'* in financial inclusion may differ from that a typical public good like defense.

Models

Notwithstanding, FI models have been developed and these models advance suggestions on how to bridge the gap between the rural poor and financial inclusion. Some of these suggestions put in the form of models attempted to identify the problems of financial exclusion and the strategies to apply to elevate the excluded to become included, have further furnished FI is a relatively new field and global efforts to identify and tackle it have just spanned over a decade. One such model is the Sustainable Financial Model. Three basic propositions hold sway as a remedy for sustainable long term inclusion in an economy. These are:

- Customers' needs proposition
- Business' need proposition and
- compliant ecosystem

Another model, known as the social development FI model is a hierarchical formulation with a pyramid structure. The base of the pyramid represents the financially excluded and the larger portion of the society (unbanked bankable); they are ready to move into the next level, the 'under-banked but bankable'. This movement can be made possible through government intervention in the form of government grants, employment schemes social benefits etc. To progress yet again into the 'financial included' arena, the under-banked –bankable needs access to financial services- savings, credits, remittances, advisory services etc.

The third model is of interest and is christened the 'Financial Ecosystem model'. The focus is on how economic growth can be achieved through financial integration. It is this model developed by Congo (2009) that recommends an articulated approach to customers' needs and hence innovative products and strategies to bring them to embrace financial inclusion. Such products as no-frills accounts, crop loans, micro insurance, micro credits etc. encourage and create opportunities for economic growth.

Frost and Sullivan (2009) developed the Financial Inclusion Lifestyle Model and the model is built on the premise that opening a bank account for a poor individual is a necessary but not a sufficient step towards becoming financially included. The other ingredients vital to complete the cycle of financial inclusiveness are: improving financial literacy, the opening of bank account, usage of the account, linkage with other financial services and access to all financial instruments.

A Global challenge and global initiatives on FI

Financial exclusion was not limited to developing countries alone. Advanced ones did recognize the consequences of FE to economic growth and monetary policy challenges. Consequently, policies were initiated by either the monetary authorities or the financial regulators and sometimes, by lawmakers in many countries.

In the United States, the Community Reinvestment Act (1997) was put in place to ensure that banks offer credit throughout their area of operation, to all deserving clients and not selectively. It further ensures that the bank's targets are not only rich neighborhoods. The UK government published its strategy, "Promoting Financial Inclusion" jointly with the pre-budget report of 2004. The government set up the financial inclusion fund of £120m to help bring about the expansion of access to financial services. In 2005, the Financial Inclusion Task Force (FITF) was put in place charged with the responsibility to control and monitor the developments in financial inclusion. France, in 1998, through the legislation on exclusion, reiterated the right of an individual to have a bank account. Sweden and Belgium towed similar lines through legislation preventing banks from refusing to open an account for prospective clients (CGAP, 2010, World Bank, 2010). Mohan (2006) had enumerated that in France, the "Law on Exclusion" of July 1998 reiterated the right to an account and that this was first set out in the 1984

law and has since then simplified the process of exercising the right, while in Belgium, the Banking Bill 2003, which had been implemented since October 2003, set out the minimum standards for basic bank accounts and specifies the minimum number of free face-to-face transactions. Srinivasan (2009) added that the laws in Belgium and France not only commit banks to open the minimum number of branches in rural areas but also stipulates the basic transaction types to be on offer as well as put ceilings on charges that can be applied.

The German Bankers Association introduced a voluntary code in 1996. It made provision for “everyman” banking transactions (Srinivasan, 2009). The target was to make access to banking services easy and less cumbersome to the benefit of every member of the community.

In 2003, Canada enacted the “Access to Banking Services Regulation” which required all banks and financial institutions to make provisions for the opening of personal accounts without minimum opening balances irrespective of employment or credit history and with minimum requirements. In India, with only 35.0 percent of the population of India informal banking and 40.0 percent of the banked rarely using the account less than once in a month, the gross inadequacy of financial services available, especially for the poor and rural dwellers became very evident attracting the attention of the government. To pursue a paradigm shift, the authorities set out to tackle the identified causes of financial exclusion, including inefficient regional and uneven distribution of bank services and branches, overcoming banker's aversion to financial inclusion, poverty levels, among others. Facilities such as "no frill" accounts and "General Credit Cards" for low deposits and credits were introduced by the Reserve Bank of India as part of the several measures initiated to achieve greater financial inclusion (Srinivasan, 2009). A post-implementation review helped India to develop a comprehensive multi-step road map (improved telecommunication and information technology, financial counseling, change and digitalization of account opening documentation, education - curriculum update, capacity building) to deal with initial bottlenecks and challenges on the way to increase financial inclusion level (Vighneswara and Vijayalakshmi, 2009). The road map fostered availability and affordability of appropriate financial services to the financially excluded majority of the economy, allowing the Indian economy to assume the enormous benefits therein. (Kama and Adigun, 2013).

The 2010 financial survey by the Consultative Group to Assist the Poor (CGAP/World Bank), show that the figures in almost all economies in Sub- Saharan Africa were below this world average, while high-income countries were above it. Sub-Saharan Africa and South Asia are the regions with the lowest share of banked households. The report also indicated that the percentage of households having deposit accounts in a formal financial institution varies greatly across countries, ranging from below 1.0 percent in the Democratic Republic of Congo and Afghanistan to about 100 percent in Japan. This worrisome level of access to finance, especially in the developing countries poses a serious challenge not only to the different local economies, but also to the global economic growth at large and thus, necessitating the pragmatic efforts by policymakers to remove barriers like education, gender, age and irregular income so as to enhance access.

The establishment of a framework for mobile services in 2009 further marked a watershed in the pursuit of FI in Nigeria. Subsequent policies such as the revised Microfinance Banking policies and guidelines on the non-interest window in 2011 culminated in the National Financial Inclusion Strategy, Literacy Framework and Cashless policy in 2012. Very recently too, a new regime for Tiered Know Your Customer, bank charges and Regulation of Agent banking relation are part of the policies designed to enhance the supply side of financial services delivery and enhance patronage.

It is obvious from the above analyses that different countries have put in place varying models and initiatives to tackle financial exclusion and promote financial inclusiveness. It will not be a one-model-fit-all strategy due to peculiarities in economies and characteristics of the local population. Some countries have pursued with unalloyed determination, the promotion of alternative financial institutions such as microfinance institutions (MFIs) and self-help groups (SHGs) among others to tackle financial exclusion while others embarked on thorough product/service differentiation to accommodate the excluded and reduce difficulties in access. South Africa, Kenya, Tanzania present good cases in point. Self Help Groups and Banking Institutions in South Africa launched the Mzansi Initiative for financially excluded people. It was a low-cost bank account.

In a cross-country policy research working paper on access to financial services and inclusion around the world in 2011, Ardic et al, (2011) noted that there is yet much to be done in the financial inclusion arena. The findings revealed that 56.0 percent of adults in the world do not have access to formal financial services and that the situation is even worse in the developing world with 64.0 percent of adults unbanked. A study conducted by Beck et al (2007) revealed that on a regional breakdown of predictions, Sub-Saharan Africa (SSA) and South Asia (SA) were the two regions with the lowest percentage of banked individuals, with medians of 12.0 and 22.0 percent, respectively. Latin America and the Caribbean (LAC), East Asia and Pacific (EAP), and the Middle East and North Africa (MENA) followed with medians of 40.0, 42.0 and 42.0 percent, respectively. In the developing world, Europe and Central Asia (ECA) were the regions with the highest percentage of banked households on average, with a median of 50.0 percent.

Empirical Literature

FI Strategy in Selected Jurisdictions: African Experiences

Andrianaivo and Kpodar (2011) found evidence that, in Africa, a large share of the population are financially excluded and therefore resort to the use of informal financial services. They also found a relatively high propensity to save, but financial expansion and deepening were constrained by lack of access to financial services and the absence of depth of financial instruments. The problem is apparently accentuated by insufficient financial infrastructures; coupled with the fact that the number of ATMs and bank branches are low in this region. Evidence from the study not only revealed that the interaction between mobile phone penetration and financial inclusion is positive and significant in the growth regression, but also that people in Africa consider investment in mobile technology as a necessity as it constitutes a large portion of their earnings (Andrianaivo and Kpodar 2011). It, therefore, means that mobile financial service platform could be the tonic required to bridge the gap in financial infrastructure.

The M-PESA (M for “mobile” and PESA, Swahili word for “cash money”) otherwise “mobile cash money” mobile money service in Kenya stands out as a model (for other African nations) of how consumer access to financial services can be revolutionized through technology. The service provides the average Kenyan without a bank account the opportunity among others to transfer cash; purchase airtime credit; pay bills, and purchase goods and services without the use of cash by simply transferring value from one individual to another through float balance on the phone. With over 14.0 percent of the Kenyan population depending on money transfer from the employed, and between only 16 and 21 percent of rural Kenyans banked prior to 2007, the introduction of M-PESA provided a cheaper, safer, more efficient means of transferring money to their dependents in the remote villages (Ngugi & Pelowski 2010). Even the business population with traditional banking accounts adopted the channel to pay wages, bills, salaries and services provided in the remote part of the country. The populace was able to overcome the challenges of illiteracy, documentation bureaucracy, minimum balance requirement, and limited traditional banking distribution channels all of which limited the ability of the majority to open the conventional banking account amidst widespread distrust in Kenyan banks. The presence of these challenges across Africa presupposes the presence of the condition for the successful deployment of mobile money service to improve financial inclusion conditions across the region.

However, aside from the general conditions, certain factors which are peculiar to Kenya stand out as critical to the success of M-PESA. As noted by (Ngugi & Pelowski 2010), apart from capitalizing on the wide usage of mobile phones in Kenya which provided a social ubiquity in the usage of phones and ready potential market for mobile money service, the creation of the right government regulatory environment promoted the success of the service. The liberalization of the telecom sector in 1998, and prompt granting of M-PESA money transfer service license show clearly that while too much regulation stifles innovation, the absence of or too little regulation could also endanger the nation's financial system. In other words, the government of Kenya walked a tight rope in creating the right environment for innovation while at the same time ensuring the stability of the financial system (Mwangi & Njuguna, 2009). Also critical to the success of the programmer is the community ownership of the technology itself and programmer as the use of community-based agents engender trust albeit lost with the banks.

The "Mzansi"- a low-cost bank account was launched in South Africa for the financially excluded people in 2004 by the South African Banking Association. Concentrating on shops located around mines and

other underprivileged areas, TERA Bank in South Africa uses wireless connections at grocery shops and provided debit cards for members to access banking service (Mehrotra 2009). As noted above the Mzansi Account is a low-income transactional banking account that was developed in line with the commitments of South Africa's Financial Sector Charter in line with the Financial Sector Charter requirement for banks to make banking more accessible to the nation and, specifically, to increase banking reach to all communities. Since the "Mzansi" Account was the result of the major South African banks working collectively, the collaboration allowed "Mzansi" account holders to make use of any of the participating banks' ATMs at no additional cost-effectively creating a network of over ten thousand ATMs across the country and extending the banking platform to the greater community.

Financial Inclusion in Nigeria

The need to address holistically the problem of financial inclusion informed the formulation of a financial inclusion strategy by the Central Bank of Nigeria in 2012. The policy trust includes:

Establishing a clear understanding of the current state of Financial Inclusion in Nigeria, including the status of ongoing initiatives, quantifying the gap and identifying barriers to Financial Inclusion, developing targets for Financial Inclusion in 2020, proposing business and operating models for achieving Financial Inclusion targets, Identifying stakeholders and defining their roles in implementing the strategy, establishing CBN as the project manager for the Financial Inclusion strategy, outlining an implementation plan with clear milestones and timelines" (CBN, 2012). The above strategy identified four distinct segments in the financial inclusion and these are:

- The 'formally banked' referring to adults who have access to or use financial services supplied by deposit money banks
- The 'formal others' is reserved for adults who have access to or use formal financial institutions and financial products not supplied by deposit money banks
- The 'informal only' category is made up of adults who do not have access to or use any bank or other formal financial services and products but have access to the use of informal services and products such as cooperatives
- The 'completely excluded' comprises adults without formal or informal financial products. The percentage of "completely excluded" fell from 53% to 46% and "informal only" fell from 24% to 17% between 2008 and 2010. At the same time, "formal other" doubled from 3% to 6% and "formally banked" rose from 21% to 30%7. Given an enabling environment, this trend can be further encouraged.

The EFinA Access to Financial Services in Nigeria, 2010 survey identifies five major barriers to Financial Inclusion: income, physical access, financial literacy, affordability and eligibility (EFinA Access to Financial Services in Nigeria, 2008, 2010). The major flaw in this categorization is the deliberate oversight of the major constraints to financial inclusion presently – the activities of mobile bankers or so-called peripatetic bankers. The enthusiasm of CBN to pursue the FI initiatives is informed by the belief that such a strategy if successfully implemented will enhance some of the objectives as stated below:

Objectives of CBN	Financial inclusion Result inputs
Ensure monetary and price stability	CBN will be able to influence savings, investment and consumption behavior through interest and exchange rate changes, a direct result of increased participation of Nigerians in the formal financial sector
Issue legal tender currency in Nigeria	Increased penetration of e-payments usage and cash-less efforts will reduce the cost of cash management and the cost of issuing legal tender

	currency
Maintain external reserves to safeguard the international value of the naira	Increased access to finance for MSMEs as a result of financial inclusion (Credit made on the back of mobilized savings) will lead to greater productivity, increased non-oil exports and stable subsequent demand for naira
Promote a sound financial system in Nigeria	Financial inclusion will lead to the development of a stable financial system funded by non-volatile savings which are robust and provide a cushion against external Shocks
Provide economic and financial advice to the federal govt.	CBN will be able to advise the govt. as increased participation in formal finance will lead to greater visibility of the performance of the economy

CBN core mandates; Source: CBN (2012)

EFinA carried out surveys on financial inclusion in Nigeria in 2012, 2013, 2014. The findings reveal that 91.2% of adults maintain an account with deposit Money banks with a paltry 8% for Microfinance Banks (MFBs) hence any evaluation of FI in Nigeria must acknowledge the dominance of commercial banks in the process.

A few decades ago, people walk into banks to transact business without necessarily being a customer. The regime of telex transfers, remittances, and mail transfers readily come to mind. The difference then was that non-clients of the bank were charged more for the services. The situation has not changed. many are still scared of the banks, their services, and their charges. The present stage requires sustained efforts on financial inclusion. It behaves on financial service providers to convince the 'visitor' on the need to operate a bank account. Such conviction must be anchored on innovative products/services tailored to the needs of prospective clients and efficient service delivery package that surpasses their expectation.

According to Khan (2011), financial inclusion, especially when viewed in the context of overall economic inclusion has the ability to improve the financial status and standards of living of the poor and the vulnerable class of the society. He added that access to basic financial services would lead to increased economic activities and employment opportunities for rural households. He noted that this has a multiplier effect on the economy, as it would lead to higher disposable income for the rural households which will, in turn, lead to more savings and a robust deposit base for banks and other financial institutions.

Subbarao (2009) saw financial inclusion is a necessary condition for sustainable and equitable growth. He posited that transition from an agrarian system to a post-industrial modern society can only be possible through the instrumentality of a broad-based financial inclusion strategy. He noted that past experience has shown that economic opportunity is strongly entwined with access to financial services and that such access is especially influential on the poor as it enables them to grow savings, make investments and benefit from the credit. He added that financial inclusion will make it possible for governments to make a payment such as social security transfers, credit guarantee funds, subsidies and wages directly to the bank accounts of beneficiaries through electronic transfer channels. This will minimize transaction costs, pilferage, and

leakages. He concluded that financial inclusion provides an avenue for bringing the savings of the poor into the formal financial intermediation system and channel same to investment, adding that a large number of low-cost deposits will offer banks an opportunity to reduce their dependence on bulk deposits and help them manage both liquidity risks and asset-liability imbalances more efficiently.

Sarma and Pais (2010) contend that the qualities of an inclusive financial system include the enhancement of efficient allocation of that leads to a reduction in the cost of capital. An inclusive finance model helps to checkmate the exploitative activities of informal financial service providers.

In June 2011, the Financial Action Task Force (FATF), the body that sets standard internationally for Anti-Money Laundering and Combating Financing of Terrorism (AML/CFT) emphasized the need for a broad-based financial inclusion and posited that financial exclusion constitutes not only a risk but an obstacle to financial integrity in the fight against financial terrorism. The support was predicated on the premise that as all segments of the society enjoy access to broad-based financial services, law enforcement will improve as more transactions will come under the scrutiny and surveillance of AML/CFT controls. It is very obvious from the above that financial inclusion is associated with economic growth and enhancement for both the nation and empowerment of the populace. The duo of financial inclusion and financial integrity become complimentary policy objectives whereby synchronized efforts lead to synergistic results. The support received a boost in 2012 when FATF adopted strategies which were revised and expanded to cover tax crimes (De koker, 2013).

Khan (2011) rightly observed that a large informal sector impacts negatively on the transmission of monetary policy as a result of non-inclusion of the financial decisions of significant but financially excluded segments (households and small businesses). The current posture of financial inclusion in Nigeria is aptly captured by the CBN strategy document. It shows clearly that Nigeria is lagging behind in all the measurable facets of financial inclusion even in the sub-Sahara. Some of the targets for financial inclusion are as stated below:

	Target	2010	2015	2020
% of total adult population	**Payments**	**21.6%**	**53%**	**70%**
	Savings	**24%**	**42%**	**60%**
	Credit	**2%**	**26%**	**40%**
	Insurance	**1%**	**21%**	**40%**
	Pension	**5%**	**22%**	**40%**
Units per 100,000 adults	**Branches**	**6.8**	**7.5**	**7.6**
	MBA branches	**2.9**	**4.5**	**5.0**
	ATMs	**11.8**	**42.8**	**59.6**
	POS	**13.3**	**442.6**	**850.0**
	Mobile Agents	**0%**	**31.62%**	**62%**
% of population	**KYC ID**	**18%**	**59%**	**100%**

Source: Financial Inclusion Strategy Document, CBN, 2012.

Greater financial inclusion can promote economic development through the establishment of mechanisms that allow more access to products and services of financial institutions (Babajide et al, 2015). Mbutor and Uba (2013) who examined the connation between financial inclusion and monetary policy in Nigeria within the period 1980 and 2012 found a positive relationship in that financial inclusion enhances monetary policy. The argument of economic growth is very straightforward and unambiguous. Financial inclusion enhances people's ability to access credits (funds) for private and business purposes, save money (to resist shocks and for investments) and even take out insurance policies as a hedge on both individual and business risks.

Too many Policies! Too little Results!

We recall that many attempts have been made to stem the tide of financial exclusion in Nigeria- the Rural banking scheme, 1977, the Peoples Bank initiative, 1989, the NERFUND and FEAP, 1988, the Community Bank model 1992, the Microfinance policy, 2005 etc. The FSS 2020 (Financial System Strategy) represents a framework for developing the financial sector in Nigeria for economic growth. The entire policy strategy envisions Nigeria as one of the 20 biggest economies in 2020. Six stakeholders were identified as suppliers in the value chain and are expected to drive this transformation. They include the banking institutions, non-bank financial institutions, technology service providers, insurance companies, pension funds, and capital market players. Of the six initiatives adopted to strengthen the domestic financial market, four directly address financial inclusion. These initiatives include:

- Development of varied financial products;
- Enhancement of payment processes;
- Development of a credit system; and
- Encouragement of a savings culture

Many models were put in place for the achievement of financial inclusion; these policies were born after the Microfinance Policy of 2005. They include:

- The non-interest banking scheme in June 2011for which two preliminary licenses were granted in December 2011. It was hoped that Islamic banking products would help to attract people with Islamic leaning to patronize banking services; this may not have materialized as expected.
- The e-banking products saw the emergence of branchless banking anchored on ATMs, POS etc. the success story is tremendous and sustainable with bright prospects of improvement; the CBN spearheads and encourages the development.
- Promotion of the mobile money mode of payment as the CBN licensed 14 mobile payment platform providers. Over 80m Nigerians carry mobile phones and when compared to 25/30m banked Nigerians, the patronage growth potential is very conspicuous. The conclusion from the 'Unbanked Africa Summit' held in Lagos, Nigeria, 2011 was that mobile banking through the use of cell phones remains a feasible tool to provide basic financial services to millions of the unbanked in urban and rural communities in Africa.
- The cashless policy, meant to accelerate the use of modern electronic payment channels was implemented to tackle three major objectives: development of a modern payment system, reduction in the costs of banking services provided so as to drive financial inclusion and enhancement of monetary policy effectiveness.

The CBN also embarked on some confidence-building measures in an attempt to improve efficiency and trust in the nation's financial payment system. The introduction of the Nigerian Uniform Bank Account Number(NUBAN), the automated cheese payment system, the implementation of the law on the issuance of dud cheese, promotion of financial literacy campaign, streamlining of banking transaction charges and the introduction of the national switch platform to capture all electronic payments within the economy are to mention but a few. These efforts have not yielded the expected outcomes. It is not contestable that the formal sector has not been expanding rapidly enough to meet up with the volume, location, and offerings that take care of the masses. The FSS 2020 document has it that the unbanked belongs to the low and middle-income groups earning between USD500 and USD5,000 and that from the year 2000 to 2009, the share of households in this group increased from 68.2 percent to 80.7 percent. This portion of the society, according to experts, is a group that cannot be ignored as an enormous amount of resources can be mobilized from the group and channeled to productive activities in the economy. EFinA (2017) maintains that Nigeria's economic growth could be stifled as vast unutilized resources in the form of money in the hands of people who are not in the formal sector could limit a country's economic potential.

Challenges

It is reasonable to affirm that the inability of the financial system to provide FI enhancing measures has contributed heavily to FE and that 46% of the world's adults have access to financial services. Muoghalu (2011) took cognizance of this development and aptly posited that financial inclusion has, become a global challenge. According to him, "the dearth of access to financial services by billions of adults all over the world poses serious challenges to global economic growth and development".FI is not without its challenges in both the developed and developing countries of the world. In Nigeria, these challenges can be traced to the followings:

 increasing poverty levels – there seems to be poverty all around and it stares at the faces of people. The GDP measure of economic growth is deceitful as it does not capture the welfare of people. Between 2009 and 2011, the economy was reported to have grown by 7% but the majority of the people still live in abject poverty and penury with a rising level of unemployment. What a contradiction!

- Low and uncompetitive wage levels – the public sector service is adorned with low cadre levels of staff; most of them earn below N20, 000.00 monthly. These groups of people are technically financial excluded. They own bank accounts because it is mandatory for salary payments. They visit banks monthly to withdraw their salaries and nothing is left for savings.
- Low level of financial literacy – the majority of the estimated 40m Nigerians who are financially excluded lack knowledge of the benefits accruable from financial services. Even the staff of service providers is not adequately equipped to impart this knowledge.
- Inflation – people are unable to save due to the prevalence of double-digit inflation. The value of savings is eroded and savers lose money on daily basis. Real interest rates for savings have actually become negative due to higher inflation rates.
- Stringent and restrictive documentation – the KYC (know your customers) procedures are burdensome and if not relaxed can impede efforts on FI. The identification requirements constitute an impediment unless the national identity management scheme is strengthened. However, the tiered approach by the branch on KYC procedures may offer some relief.
- Low information, telecommunication technology – knowledge and coverage remains daunting. The service providers are yet to resolve some technical hitches that inhibit the provision of effective and efficient service.

There are increasing reasons why every nation should strive hard to deepen financial inclusion. The business perspective remains very compelling, particularly in the Nigeria environment. The mass retail market, which consists of Nigerians with a monthly income of between N6, 000.00 to N40, 000.00 have a combined monthly income of N590 billion, compared with N570 billion monthly income for all other income groups. The former segment is not captured in the financial system and it is obvious that being able to do so, offers an enormous amount of cheap investible funds. This will go a long way to being a game - changer in the robustness of the nation's financial system and will increase the availability of credit at a lower cost. Despite these challenges, progress has been recorded and the essence of this paper is to review the progress in line with monetary policy imperatives.

Methodological Issues and Model Specification
Choice of variables

In the course of the literature survey, studies that have empirically investigated the impact of financial inclusion on monetary policy are virtually nonexistent. So there are several initial challenges that need to be overcome to set the stage for the analysis and one of these relates to the choice of financial inclusion indicators to be used in the model. The International Monetary Fund (IMF) Financial Access Survey started in 2004 adopts the following indicators of financial access and usage:

Access Indicators:

- Number of commercial bank branches per 1000 km^2
- Number of commercial bank branches per 100, 000 adults
- Number of ATMs per 1,000 km^2
- Number of ATMs per 100,000 adults

Usage Indicators

- Number of borrowers from commercial banks per 1000 adults
- Outstanding loans from commercial banks (% of GDP)

- Number of depositors with commercial banks per 1000 adults
- Outstanding deposits with commercial banks (% of GDP)

  There are other indicators used by other organizations interested in financial inclusion. The AFI core set of financial inclusion indicators measures access with indicators such as:
- Number of access points per 10,000 adults at a national level and segmented by type and by relevant administrative units
- Percentage of administrative units with at least one access point
- Percentage of total population living in administrative units with at least one access point. It measures usage with indicators like
- Percentage of adults with at least one type of regulated deposit account (in countries where these data are not available, use as a proxy the number of deposit accounts per 10,000 adults)
- Percentage of adults with at least one type of regulated credit accounts (in countries where this data is not available, use as a proxy the number of loan accounts per 10,000 adults

The Global Findex Core Indicators and Fin Scope Indicators adopt other variants of measures to indicate the extent of financial inclusion. However, the definition of financial inclusion is the same for all stakeholders so that the different indicators by different stakeholders essentially point to achieving the same objective - the extent to which financial services reach the populace at affordable costs. In fact, the major issue about the various compilations of indicators is to enable cross country comparisons. Therefore, since the aim of this paper is not to compare financial inclusion across countries, emphasis is centered on the local measures that indicate growing or waning extent of financial inclusion in Nigeria. Country-specific information and data constraints are taken into account. The number of bank branches in Nigeria, deposits, and loans of rural bank branches in Nigeria can help define access and usage.

The second challenge relates to figuring out how financial inclusion impacts on monetary policy and the transmission channels. The dearth of literature in this area made Mbutor and Uba (2011) who pioneered the work in this field to resort to the use of oral tradition to explore the possible channels and they posited that with growing financial inclusion, the sheer higher number of people who are brought under the formal umbrella will make aggregate demand and investment more sensitive to the monetary policy rate through the increased elasticity due to the lending rate. The argument can also be made that increased financial inclusion will provide a cheaper and stable pool of deposits, especially, savings which not only will ensure greater resilience of banks with respect to financial shocks but also reduce dependence on foreign lines of credit for making loans and other investments. This should have the effect of contributing to reducing pressure on the foreign exchange market and thereby stabilizing the naira.

The third challenge is to determine what target of monetary policy that financial inclusion should impact. This is the easiest challenge as the 2007 CBN Act explicitly desires to ensure monetary and price stability. Monetary stability relates to ensuring that the growth in money supply remains within a programmed path through periodic (now daily) open market operations, and this is more of an internal goal for the bank. Enduring price stability stands out as an overriding objective of monetary policy hence inflation is chosen as the measure of monetary policy success. The percentage change in the headline Consumer Price Index (CPI) is used to represent the inflation rate (Mbutor and Uba, 2013).

Study Hypotheses and Model Specification

Mbutor and Uba (2013) used price stability(inflation rate) to depict monetary policy objective while the Financial Inclusion variables used are number of banks branches (NBR), total number of loans and advances of commercial banks as a percentage of GDP (LAC) and aggregate of rural bank branches of loans and deposits (RDL). Their model equally included commercial banks' lending rate (CALR) and the foreign exchange rate of the Naira (XR). The pioneer work of Mbutor and Uba (2011) is greatly admired and acknowledged even though they lamented on the non-inclusion of microfinance bank operations due to the absence of data on same.

Price level stability is not the only goal of monetary policy and this work sets out to test the relationship between FI indicators and monetary policy objectives namely: economic growth, price level stability (low inflation), full employment and balance of payment equilibrium. The proxies for these are GDP, Unemployment rate and Consumer price index (inflation rate). Financial inclusion which has been adequately defined to mean full participation in

financial activities, especially for low-income people, the poor and rural dwellers, is captured by such proxies as the number of banks branches, number of ATMs and POS utilization, loans granted and savings mobilized by microfinance banks. Our study covers the period 2007 to 2016. Data is sourced from the various issues of CBN statistical bulletins. The relationship of Financial Inclusion proxies on monetary policy can be ascertained through a multiple regression process and examination of the level of interactions. Price stability remains the overriding goal of monetary policy and Inflation is chosen as a proxy of price stability. The percentage change in the consumer price index (CPI) is used to represent inflation. Having established the variables for the study, the hypotheses are stated below in their null forms.

$H1_0$: There is no significant relationship between financial inclusion variables and the monetary policy objective of economic growth peroxide by Gross Domestic Product (GDP) in Nigeria.

$H2_0$: There is no significant relationship between financial inclusion variables and monetary policy objective of stable employment level peroxide by the unemployment rate in Nigeria.

$H3_0$: There is no significant relationship between financial inclusion variables and monetary policy target of stable price levels peroxide by the inflation rate in Nigeria.

The econometric formulations are as stated below:

$GDP = \alpha_0 + \alpha 1TNBB + \alpha_2 ATMR + \alpha_3 POS + \alpha_4 MFLN + \alpha_5 MFSC + u$ ………………… 1

$UNEMP = \eta + \eta 1TNBB + \eta_2 ATMR + \eta_3 POS + \eta_4 MFLN + \eta_5 MFSC + \acute{\epsilon}$ …………….. 2

$CPI\ (INF) = \beta_0 + \beta 1TNBB + \beta_2 ATMR + \beta_3 POS + \beta_4 MFLN + \beta_5 MFSC + \pi$ …………… 3

Where GDP = Gross domestic product, proxy for economic performance/growth

CPI = Consumer price index, proxy for price level stability (inflation)

UNEMP = Unemployment rate, proxy for stability in employment level

TNBBR = Number of banks branches

ATM = number of ATMS (Automated teller machines)

POS = Point of Sales utilization

MFLN = Microfinance bank loans extended

MFSV = Microfinance bank deposits (savings) mobilized

α_0 , β_0,, η_0, = intercepts

α_1..., $\beta_{1......}$ $\eta_{1......}$, = Parameters.

The a priori expectations are that: $\alpha_{1 ....} \alpha_{.5} > 0$; $\beta_1 .... \beta_5 < 0$; and $\eta_1 .... \eta_5 < 0$.

Data presentation and analysis.

Table 1 below presents the data used for the analysis. A transformation was done to reflect the ratios in order to accommodate the rates inherent in the figures and checkmate multicollinearity.

Table 1: Dependent and independent variables used in the regression analysis

Year	GDP N'B	GDPGR	INF %	UNEMP %	ATM N'B	ATM %	POS N'B	POS %	MFLN N'B	MFLN0 %	MFSV N'B	MFSC %	TNBBR	TRTBR %
2007	32,995.4	15.12	6.56	14.6	210.17	0.006	8.04	1.225	22.9	0.0693	41.2	0.1249	4200	5.45
2008	39,157.9	18.68	15.06	15.9	294.23	0.008	9.12	0.606	42.8	0.1092	61.6	0.1572	4952	17.90
2009	44,285.6	13.09	13.93	19.7	548.60	0.012	11.03	0.792	58.2	0.1315	76.7	0.1731	5436	9.77
2010	54,612.3	23.32	11.80	21.1	399.71	0.007	12.72	1.078	52.9	0.0968	75.7	0.1387	5809	6.86
2011	62,980.4	15.32	10.28	23.9	1561.74	0.025	31.02	3.017	50.9	0.0809	59.4	0.0943	5454	-6.11
2012	71,713.9	13.87	11.98	24.9	1984.66	0.028	48.01	4.007	90.4	0.1261	98.8	0.1378	5564	2.02
2013	80,092.6	11.68	7.96	29.5	2828.94	0.035	161.02	20.236	94.1	0.1174	121.8	0.1521	5639	1.35
2014	89,043.6	11.18	7.98	31.4	3679.88	0.041	312.07	39.115	112.1	0.1259	110.7	0.1243	5526	-2.00
2015	94,145.0	5.73	9.55	34.02	3367.23	0.036	436.84	45.742	187.2	0.1989		0.1694	5470	-1.01

											159.5			
2016	101,489.5	7.80	18.55	36.19	2217.35	0.022	473.32	25.516	196.2	0.1933	149.8	0.1476	5570	1.83

Source CBN statistical Bulletin of various issues.

Descriptive analysis

The descriptive analysis in Table 2 below contains the measures of central tendency which include the mean, median and measures of variation and other statistical characteristics of the variables. The mean is the average value of the series and from our table, GDP, INF, UNEMP, ATM, POS, MFLN, MFSV and TNBR have mean values of 67051.62, 11.365%, 25.12%, 1709.251, 150.3190, 90.77, 95.52 and 5362.0 respectively. Median is the middle value of the series when the values are arranged in ascending order. Our table shows the median values of our variables are 67, 347.15, 11.04%, 25.12%, 1773.200, 39.515, 3.512, 74.30, 87.75 and 5498.0 respectively.

The maximum and minimum values depicting the range for the variables in the sample are: 101489.5 and 32995.40 for GDP; 18.55% & 6.56% for INF; 36.19% & 14.6% for UNEMP; 3679.88 & 210.17 for ATM; 473.32 & 8.04 for POS; 196.2 & 22.9 for MFLN; 159.5 & 41.2 for MFSV and 5809 and 4200 for TNBR.

Standard deviation is a measure of spread or dispersion in the series. The table reports 24090.01, 3.697, 1314.59, 187.35, 59.51, 59.62 and 463.26 for GDP, INF, UNEMP, ATM, POS, MFLN, MFSV and TNBR respectively.

Skewness is a measure of the asymmetry of the distribution of the series around its mean. For a normal distribution, it is zero. Positive skewness implies a long tail to the right while negative skewness implies a long tail to the left. The GDP and TRTBR have their medians greater than the mean and hence negatively skewed.

Kurtosis (K) is a measure of the peachiness or flatness of the distribution of the series. If K > 3, the distribution is peaked or leptokurtic but if K < 3, the distribution is flat or platykurtic. Table 2 shows that only, TNBR exceeds 3 and is therefore leptokurtic. All other variables are platykurtic as their Ks are below 3.

The Jacque-Bera is a test statistic to test the normal distribution of a series. It is a measure of the difference between the skewness and kurtosis of the series with a normal distribution. The BJ figures for the series variables under study are 0.77, 0.65, 0.91, 1.60, 1.32, 0.70 and 7.06 for GDP, INF, UNEMP, ATM, POS, MFLN, MFSV and TNBR respectively.

Table 2: the Descriptive statistics

	GDP	GDPGR	INF	UNEMP	ATM	ATMR	POS	POSR	MFLN	MFLN01	MFSV	MFSCR	TNBB	TNBBR
Mean	67051.62	13.57900	11.36500	25.12100	1709.251	0.022000	150.3190	14.13340	90.77000	0.124930	95.52000	0.141940	5362.000	3.606000
Median	67347.15	13.48000	11.04000	24.40000	1773.200	0.023500	39.51500	3.512000	74.30000	0.121650	87.75000	0.143150	5498.000	1.925000
Maximum	101489.5	23.32000	18.55000	36.19000	3679.880	0.041000	473.3200	45.74200	196.2000	0.198900	159.5000	0.173100	5809.000	17.90000
Minimum	32995.40	5.730000	6.560000	14.60000	210.1700	0.006000	8.040000	0.606000	22.90000	0.069300	41.20000	0.094300	4200.000	-6.110000
Std. Dev.	24090.01	5.066249	3.697381	7.476854	1314.589	0.013115	187.3549	17.36587	59.50951	0.042584	39.61551	0.023551	463.2554	6.783941
Skewness	-0.010961	0.332051	0.560983	0.060999	0.193411	0.042991	0.849168	0.832708	0.835326	0.668145	0.344033	-0.564145	-1.770937	0.743765

Kurtosis	1.632035	2.745851	2.448140	1.730851	1.574857	1.515884	2.020271	2.108994	2.386668	2.471043	1.903713	2.772907	5.097777	3.130626
Jarque-Bera	0.779920	0.210676	0.651398	0.677343	0.908611	0.920830	1.601757	1.486461	1.319689	0.860610	0.698033	0.551921	7.060642	0.929086
Probability	0.677084	0.900020	0.722022	0.712717	0.634889	0.631022	0.448934	0.475575	0.516932	0.650311	0.705382	0.758843	0.029296	0.628422
Sum	670516.2	135.7900	113.6500	251.2100	17092.51	0.220000	1503.190	141.3340	907.7000	1.249300	955.2000	1.419400	53620.00	36.06000
Sum Sq. Dev.	5.22E+09	231.0019	123.0357	503.1301	15553287	0.001548	315916.6	2714.161	31872.44	0.016320	14124.50	0.004992	1931450.	414.1966
Observations	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Test of stationary

The stationary tests for the series were carried out using the ADF test and the test results are reported in table 3 below. From the table, all the variables are stationary at first difference. It is a good condition for Counteraction analysis to determine long-run association and equilibrium.

Table 3: Tests of Stationary

Variable	ADF t-statistics	Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
D(GDP)	-4.673388	-4.582648	-3.320969	-2.801384	I(1)	0.0011
D(INF)	-4.965364	-4.582648	-3.320969	-2.801384	I(1)	0.0009
D(UNEMP)	-7.019325	-4.582648	-3.320969	-2.801384	I(1)	0.0007
D(ATM)	-6.098346	-4.582648	-3.320969	-2.801384	I(1)	0.0000
D(POS)	-5.028357	-4.582648	-3.320969	-2.801384	I(1)	0.0000
D(MFLN)	-6.832532	-4.582648	-3.320969	-2.801384	I(1)	0.0000
D(MFSC)	-4.950568	-4.582648	-3.320969	-2.801384	I(1)	0.0043
D(TRTB)	-4.598216	-4.582648	-3.320969	-2.801384	I(1)	0.0087

Source: Authors compilation, E-views 8.0

OLS Regression

However, due to the small size of the data, only ten observations, co-integration analysis cannot be validly carried out. The Autoregressive Distributed Lag (ARDL) model could not be of much use either due to the very minute sample size. In this wise, the OLS estimation technique became the obvious choice. The assumptions of the linear modeling are deemed to have been met as the distributions pass the normality test of Jacque-Bera. Three models were estimated using the OLS regression technique and the results are as presented below.

Table 4A: Model 1 OLS estimation results

Dependent Variable: GDPGR

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	27.01638	10.78056	2.506029	0.0663
ATMR	-44.00990	203.9655	-0.215771	0.8397
POSR	-0.045209	0.155991	-0.289820	0.7864
MFLN01	-48.31526	60.80079	-0.794649	0.4713
MFSCR	-48.14320	114.9076	-0.418973	0.6968
TRTBR	0.288206	0.421517	0.683735	0.5317

R-squared	0.761461	Mean dependent var	13.57900
Adjusted R-squared	0.463287	S.D. dependent var	5.066249
F-statistic	2.553748	Durbin-Watson stat	2.068139
Prob(F-statistic)	0.192307		

Source: E-views, 10

The result above shows that all measures of FI used in the model have no significant relationship with monetary policy target of economic growth. Only the number of banks' branches, TRTBR shows a positive but insignificant relationship with economic growth. All other variables showed both negative and insignificant relationship with the economic growth target of monetary policy. However, the repressors jointly explain about 76% of the variations in economic growth and there were no traces of serial correlation as the Durbin Watson statistic of 2.06 is within the acceptable range. The regression result in table 1 shows that FI variables depicted in our model do not promote economic growth target of monetary policy. The null hypothesis of no significant relationships of monetary policy goal of economic growth with financial inclusion variables used in the study is not rejected.

Table 4B: Model 2: OLS estimation results

Dependent Variable: UNEMP

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	15.79506	8.809840	1.792888	0.1475
ATMR	156.7011	166.6800	0.940131	0.4004
POSR	0.035949	0.127476	0.282006	0.7919
MFLN01	121.6490	49.68624	2.448343	0.0706
MFSCR	-64.19159	93.90221	-0.683600	0.5318

TRTBR	-0.198507	0.344463	-0.576279	0.5953
R-squared	0.926861	Mean dependent var		25.12100
Adjusted R-squared	0.835437	S.D. dependent var		7.476854
F-statistic	10.13809	Durbin-Watson stat		2.470353
Prob(F-statistic)	0.021715			

Source: E-views 10.

Table 4B above examines the results of model 2 in our analysis which seeks to ascertain the relationship between .monetary policy target of stable employment level (peroxide by unemployment rate) and the various proxies/indicators of financial inclusion (repressors). The model is neatly fitted as the probability value of the F-statistics of 0.02 is very significant. The Durbin Watson statistics of 2.4 is still within the acceptable range. MFSCR (savings) and TRTBR (number of branches) though not significant have the right signs. With time, savings accumulation will spur investment and job creation; the same goes for the number of branches. Branch expansion means the exploration of new business opportunities and new jobs! ATM and POS variables have positive signs and very insignificant relationships with the regress and. The microfinance bank loans (MFLNO) variable is not significant at 5%, it is at 10% but has a positive sign contrary to a priori expectation. It is not very difficult to imagine how MFB loans could enhance unemployment. The demise of many MFBs in 2008 and the continuing distress in the subsector has been adequately blamed on delinquent loans that led to closures and job losses. Loan diversion is the culprit.

Table 4C: OLS estimation result for Model 3

Dependent Variable: INF
Included observations: 10

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.00400	4.815103	2.700669	0.0541
ATMR	48.31849	91.10059	0.530386	0.6239
POSR	-0.205724	0.069673	-2.952704	0.0419
MFLN01	151.0968	27.15649	5.563930	0.0051
MFSCR	-142.7209	51.32316	-2.780829	0.0498
TRTBR	0.440060	0.188269	2.337396	0.0796
R-squared	0.910654	Mean dependent var		11.36500
Adjusted R-squared	0.798973	S.D. dependent var		3.697381
S.E. of regression	1.657761	Akaike info criterion		4.132522
Sum squared resid	10.99269	Schwarz criterion		4.314073

Log likelihood	-14.66261	Hannan-Quinn criter.	3.933361
F-statistic	8.153999	Durbin-Watson stat	2.161243
Prob(F-statistic)	0.031857		

Source: E-Views 10.

Table 4C shows the results of the relationship between inflation rate,(INF) derived from changes in consumer price index(CPI) and financial inclusion proxy variables. These repressors put together were able to explain 91% of the variation in inflation related monetary policy target. The model is a good fit judging from the probability value of the F-statistics which is significant at 5%. Again the Durbin Watson (DW) statistics of 2.16 suggest the absence of serial correlation and or autocorrelation. POSR, MFLN, and MFSCR are significant at the level of 5% while TRTBR (no. of banks branches) was significant at 10%. In other words, Microfinance bank loans generally support inflation tendencies whereas Microfinance savings, MFSCR (properly signed) brings down inflation through the provision of loanable funds which in turn leads to a reduction in interest rate and costs of funds for businesses. As many goods and services are produced, prices tend to fall and stabilize over time. A unit change in the ratio of MFBL to GDP (1%) attracts a high degree of responsiveness to the tune of 1.43% (Elasticity). POS variable was both significant and negatively signed in line with a priori expectation. It means that POS utilization brings down an inflationary tendency and enhances monetary policy. When people can electronically make payment, the need for cash transactions is reduced and money supply expansion in the economy which is inflationary is curtailed.

Finally, the MFB loans variable was highly significant with a p-value of less than 1%. The parameter was negatively signed and this supports the notion that loans were not properly utilized but expended frivolously and the effect is an inflationary tendency. The ATMR and TRTBR parameters which capture the ATM transactions and the total number of banks branches (access indicators) were not significant showing that these indicators bear little relevance to monetary policy.

Discussion of Findings

One argument that is germane is that with growth in financial inclusion, fund mobilization by banks is accomplished at cheaper costs. This can have the potential to bring down the cost of lending. Low lending rate is a tonic for investment and the accompanying productivity will facilitate economic growth. This is a very modest expectation; it makes common sense and it is anchored on economics threshold. The same argument can be extended further, that as a stable pool of deposit as a consequence of the gains of FI reside with the banks, reliance on foreign lines of credit for loanable funds and investment is curtailed. The pressure on foreign exchange is reduced and the local currency becomes stabilized. The objective of monetary policy as envisaged by the guidelines by CBN will be achievable. The impact of FI on economic growth appears to be direct. Onalopo (2015) finds a significant relationship between FI and poverty but the study did not find access indicators as the number of banks branches etc., very useful in promoting economic growth. Onalopo (2015) further found a significant relationship between financial inclusion and financial intermediation.

The TNTBR variable in our study which measures the number of branches of banks has a positive but insignificant effect on inflation. The explanation might be found in the notion that the number of branches does not necessarily imply increment or growth in financial inclusion. A better assessment can be obtained using the number of customers served by a branch. The results from Mbutor and Uba (2013) are in tandem with this work confirming the positive effect of financial inclusion on the monetary policy target of inflation. There are other areas of divergence. The use of rural branch deposits and loans has its own drawback through the researches stressed their inability to obtain access to microfinance bank operations data. This study utilized the access indicators which are new in the service industry. These include POS, ATM, etc. and their origin dates back to the recent past, 2007. This is the major reason why this work covers only the period, 2007 – 2018. The small number of observations constitutes a challenge which was termed micro-tuberosity in statistical analysis (Goldberger, 1991).

Summary, Conclusion and Recommendations

The study started with the overview of the genesis of financial inclusion, the concept and roles were explored in line with the nominated objectives of the provision of financial services to the active poor and rural dwellers that are desirous of such services at affordable costs.

There is definitely more to financial inclusiveness than owning or operating a mere banking account contrary to the views of Mahindra (2006). There were global initiatives in developed countries like USA, Britain, France, and Germany to resolve the challenges posed by financial exclusion. Developing countries such as Brazil, Kenya, South Africa, India, and Nigeria copied these strategies with slight modifications. Srinivasan (2009) reported extensively on the efforts of India, Germany, and Canada etc. through legislation and government fiat to enhance financial inclusiveness. Different models have been paraded by various countries and there is not a 'one model fit all'. Rather the hope of a positive impact on economic growth seems to be the motive (Kama and Adigun, 2013).

The FI measures used in this study include access and usage variables. The indicators are POS utilization (POS), Number of ATMs (ATM), Microfinance Bank loans (MFBL), Microfinance Bank savings (MFS) and the Total number of banks branches (TNTB).

Studies are rare on the relationship between FI and economic growth (Onaolapo, 2015). Mbutor and Uba pioneered the study on FI and monetary policy in Nigeria. There has not been any recorded study in that respect thereafter. They found a negative and significant relationship between financial inclusion and the monetary policy target of inflation. In other words, FI brings about price stability (curbs inflation).

This study towed the line of Mbutor and Uba (2013) and it is the second of such study. The monetary policy targets of economic growth (peroxide by GDP), price level stability (peroxide by CPI-inflation) and stable employment (peroxide by unemployment rate) were separately regressed on FI indicators listed above to determine relationships. The exogenous variables of POS, MFS and MFL posted significant relationship with monetary policy target of inflation. The study finds that POS and MFSV reduces inflationary tendency as they exhibited negative coefficients. MFL tends to support inflation and the reason could be attributed to a misapplication of the micro-credits by rural beneficiaries.

The study has revealed that savings mobilization which is a fundamental target of FI positively subdues inflation in an economy and enhances monetary policy. F I indicators have no significant relationships on other monetary policy objectives of economic growth and stable employment.

The onus lies on government and other stakeholders in the FI arena to propagate the culture of savings through a sustained financial literacy campaign.

Access indicators such as the number of banks branches appear small relative to national population figures. The dispersion is not even and the skewness tends to favor urban and rich neighborhoods. It behaves on government and financial authorities to ensure the even spread of banks and their branches at the licensing and business registration stages.

FI has emerged as one of the major approaches by governments to strengthen the financial sector and improve its ability to ward off and reduce the effects of any subsequent financial shocks and meltdown comparable to the global experience of 2007/20088. The FI strategies which focus more on a systematic approach, alignment of roles and strategies will guarantee sustainability and continuity. There are assigned roles to be implemented by the stakeholders. These roles form the core of our recommendations.

For the regulators, consumer education and protection are very critical; steps should be taken to ensure that they are not abused and extorted. The regulator should play the lead role in championing financial literacy campaign which CGAP (2010) identified as a major hindrance to

financial inclusiveness. Information dissemination to improve transparency and regular interaction with all the stakeholders especially microfinance institutions are vital to FI success.

The banks are critical agents in the drive chain and their disposition as financial service providers can make or mar efforts on FI. Banks are expected to provide coverage and access through a massive branch network to the nooks and crannies of the country. They are also expected to build capacity through training and equipping of staff. This capacity can be boosted through grants and special funding of research efforts on innovation. They should equally invest in appropriate technology that enhances service delivery at affordable costs to the clients.

Finally, the government should create an enabling environment. The legal framework must be such that promotes banking and general business transactions. The specific areas that needed to be addressed include:

- Land and property registries and the laws relating thereto
- Consumerism dealing with consumer rights and protection
- The speedy dispensation of justice and the justice system; the delays in court processes breed frustration and loss of confidence. The creation of commercial courts to handle banking-related cases will be of great relief and
- The promotion of investment in communication, technology, power, education, and sustenance of agricultural subsidy

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