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Implications of Digital Financial Inclusion for Smallholder Farmers in Nigeria: A Review

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Abstract: **In recent times, financial inclusion has assumed a critical development policy priority in many countries, particularly in developing economies. This paper reviewed past and current research efforts in the achievement of financial inclusion in Nigeria, with the aim of estimating the implication for smallholders. The findings reveal that financial inclusion initiatives are not addressing the needs of smallholders in Nigeria due to difficulties in estimating their creditworthiness, low level of financial and digital literacy, inadequate infrastructure, amidst other factors. The observed level of smallholder exclusion from financial services necessitates the place of developing smallholder-specific financial services and products. The study recommends a systematic approach that aligns the needs of smallholders with the product and services of the financial institutions coupled with the responsiveness of financial institutions and other stakeholders in the financial inclusion process to guarantee sustainability.**

Keywords: **Smallholder farmers, financial inclusion, digitalization, Nigeria.**

1. INTRODUCTION

Background

Provision of appropriate financial services is an ancillary tool to wider development goals of enabling more sustainable livelihoods for low-income populations. However, the financial need of more than half of the world's extremely poor people (50.7%), residing in rural communities of sub-Saharan Africa remains unmet [35]. An estimated 2.5 billion people depend on the agricultural industry for their livelihoods, notably smallholder farmers, who produce 30% of the world's food supply, and are significantly financially underserved for socioeconomic and global growth.

The estimated annual demand for credit from smallholders in Low and Medium Income Countries is $238 billion, or 8 percent of agricultural contribution to GDP. Nonetheless, less than a third of this demand is being met [24]. Moreover, over 60% of the 206.1 million Nigerians, who are mostly rural smallholders, are highly unbanked because the financial services sector is failing to meet the needs of this significant group, and as such, widening the gap in smallholders' demand for long-term/short-term agricultural financing. The need therefore, arises to address the financing gap in smallholding agriculture. To estimate the situation among smallholder farmers, this study therefore, reviewed past and related research studies to determine the implications of digital financial inclusion for smallholder farmers in Nigeria.

Concept of Smallholder

Smallholder farmers are individuals who cultivate one or two cash crops and one or more subsistence crops and rear livestock on small parcels of land using virtually exclusively family labour. The subsistence nature of production is often attributed to lack of funds to buy inputs like seeds, fertilizer, insecticides, set up irrigation water system, and other things that increase farm productivity. Majority of smallholder farmers lack the resources to make the improvements needed to increase productivity and connect to markets, hence, their struggle with crop failures and debt, resulting in low level of productivity, and consequentially, impeding their capacity to expand a successful enterprise.

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Concept of Financial Inclusion

The concept of financial inclusion describes how to make inexpensive, high-quality financial products and services accessible to the unbanked, underbanked, and financially excluded members of society [11]. It has to do with the provision of essential banking services at a reasonable cost to all societal groups, especially the sizeable disadvantaged and low-income groups that are usually shut out of the formal banking system [13]. To achieve financial inclusion, it is crucial to consider institutional and human elements, such as provider sustainability, product affordability, and outreach to the most vulnerable people. As such, policymakers now see financial inclusion as a driver of economic development and progress due to its consequences in ensuring basic access to formal banking system for all citizens.

2. STUDY OUTLINES

Measures of Financial Inclusion

Financial inclusion has gained acceptance as a measure for sustainable development on a worldwide scale and as such, gotten the attention of researchers. Studies conducted across nations show links between financial inclusion and certain livelihood variables [26], [29], [25]. Numerous empirical studies focusing on the variables influencing level of financial inclusion have been conducted, however the findings lack unanimity. Characteristics particular to the level of financial inclusion across countries were investigated using a traditional OLS approach for the sample year 2004 [28], [29]. The level of financial inclusion was found to be significantly correlated with a number of potential variables, including income as measured by per capita GDP, adult literacy, rural population, income inequality; physical connectivity as measured by road network; electronic connectivity as measured by phone subscriptions; information availability as measured by internet usage; bank soundness as measured by non-performing assets and capital asset ratio, and foreign ownership in the banking sector.

Barriers to financial inclusion have also been analyzed in literature. In the analysis of the pertinent factors explaining Latin America's financial inclusion gap in comparison to comparable countries, the main barriers were socioeconomic factors (represented as income inequality) and institutional shortcomings (measured as rule of law), while macroeconomic weaknesses (represented as inflation volatility) and financial sector inefficiencies (measured as overhead costs and bank concentration) were relatively less of a problem [27].

Between 2005 and 2014, constraints to financial inclusion were investigated in 15 African countries using dynamic panel data approach [14]. The findings indicated that adult literacy rate, internet availability, money supply as a percentage of GDP, GDP per capita, and financial inclusion (which imply a "catch-up effect") have all lagged. Also, natural resources were found to be more strongly adversely correlated with both financial development and financial inclusion in sub-Saharan Africa than anywhere else in the world, although population density and GDP per capita are highly positively correlated [3].

Thus far, many efforts have been in place to ensure the financial inclusion of the underserved groups across nations, however, Nigerian adoption of financial inclusion has not reached the desired level [31]. Larger populations of Nigerians, living in rural communities, majorly smallholder farmers, are yet to be reached by the various interventions of the governments due to limiting factors, lowering the level of financial services penetration in rural areas.

Smallholder Farmers and Financial Inclusion in Nigeria

Lack of money or consistent sources of income are regularly stated in surveys as the primary reason for smallholders' financial exclusion. Agricultural enterprises are underfunded because investors think it is 45% riskier than other types of investments. Lack of access to finance is a major constraint on high productivity and profitability of farming enterprises, and this exposes smallholders to extreme poverty. Since nothing is known about the transaction history of the majority of smallholders, loan providers limit their risks by either refusing to lend to them at all or by charging them higher interest rates. Often times, smallholder farmers in Nigeria are forced to rely on their own meager savings with no inclusive finance and market networks.

On the supply side, the view that agriculture is too risky has led to reluctance of financial services provider to develop products that meet smallholders' specific needs, so also, the high costs of a bank-led financial inclusion programme [6]. While on the demand side, the price of financial services, distance to financial access sites, the bureaucracy in opening bank account, absence of necessary documentation (such as means of identification), low level of financial literacy among smallholder farmers are significant barriers that are comparatively more evident in Nigeria.

Nigeria government, in attempt to ease financial access, adopted a number of interventions, including; Agent Banking, Tiered Know-Your-Customer Requirements, Financial Literacy, Consumer Protection, Linkage Banking, MSME Development Fund, and Credit Enhancement Programmes [such as Agricultural Credit Guarantee scheme (ACGS), Commercial Agricultural Credit Scheme (CACS), Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL), Refinancing and Rediscounting Facilities for SMEs, Small and Medium Enterprise Credit Guarantee Scheme, and Entrepreneurship Development Centres]. However, these interventions have been hinder from reaching rural smallholder farmers [11].

Roles of Digitalisation in Financial Inclusion for Smallholders

The effectiveness of financial inclusion as a tool for policymaking may be impacted by the disparity of access to financial services [19], [4]. However, the rapid adoption of digital technology in the financial sector presents a significant opportunity to boost financial inclusion, or the access and utilization of financial services by a broad portion of the population. Digital financial services (DFSs), made possible by fintech (financial technology innovation), can aid in overcoming the frequently mentioned barriers to using traditional financial services, such as cost, distance, and information asymmetry.

The term "digital financial inclusion" refers to the use of cost-effective digital means to provide a range of formal financial services that are responsibly delivered at a cost that is affordable for customers and sustainable for providers to populations that are currently underserved and financially excluded. The key elements of digital financial inclusion include mobile devices, retail agents, and digital transactional platforms.

Digital financial inclusion creates new means for the poor to access services like savings, payments, credit, and insurance.

The digitisation allows farmers to access formal savings accounts and build a transactional history that financial service provides can use to assess their financial behaviour and unlock credit, as the use of mobile money generates significant transactional data for credit scoring. Digitisation of credit processes is also unlocking access to assets for smallholders, thereby providing a range of short-term financing options, and helping to close the gap in long-term financing.

The proliferation of mobile money and digital payments has created an entry point to financial inclusion for farmers, and new opportunities for FSPs to reach smallholder farmers at scale. It has been establish that agent networks penetrating the last mile, and mobile money have brought financial services closer to users in remote areas. In 2020, the number of unique agent outlets reached 5.2 million worldwide [18] – approximately one for every 60 active monthly users. The GSMA estimated that a mobile money agent has seven times the reach of ATMs and 20 times the reach of bank branches. [19].This is particularly important in rural areas where the penetration of ATMs and bank branches is extremely low

Some research have assessed the level of digital financial inclusion by examining pertinent indicators, such as mobile money accounts and financial transactions made using a mobile phone [32], [21], [10]. Also, numerous anecdotes demonstrated how fintech is expanding access to financial services, particularly for those who were previously unbanked or underserved, including country-based case studies [33] and regional studies [32], [7], [21], [22].

A considerable change in behaviour on the part of rural smallholder farmers and digital financial service providers is necessary for the adoption of digital financial services. Smallholders require compelling reasons to embrace digital financial service options. This can be accomplished by developing digital banking products based on routines and actions that smallholders already engage in. The financial sector would have to take into consideration, the following factors when developing suitable products and services for smallholder farmers:

- Subsistence nature of production
- Availability of mobile network infrastructure in rural areas.
- Lack of digitalized skills of smallholders and the need to train them and simplify operations.
- Farmers' mindset of opting not to use formal banking institutions, but rather keep money at home due to long-term habit, lack of easy access to financial services and distrust in the financial system.

Implications of Digital Financial Inclusion for Smallholder Farmers

The underserved and excluded people can better achieve poverty alleviation through widespread access to the use of formal financial services. Financial inclusion guarantees improved lifetime borrowing, repayment, and saving capacity for people with low incomes. According to randomized research [12], [2], [5], financial inclusion decreases poverty by granting access to payment, savings, credit, and insurance services.

The fact that smallholders around the world are the most underserved by financial services has resulted in little progress in reducing poverty and promoting financial inclusion among smallholder farmers, particularly at the micro level. Smallholders' financial inclusion will foster social inclusion, speed up economic diversification, produce economic benefits, and promote shared prosperity [1], [31]. The growth in the agricultural sector is therefore, seen as a successful method for fostering economic development, poverty reduction, wealth generation, and higher standards of living [23], [25].

Access to formal sector credit and savings opportunities greatly reduced rural poverty in India as a result of state-led bank branch expansions into unbanked rural areas [9]. In the same vein, providing poor smallholder cash-crop farmers in Malawi with commitment savings accounts enhanced financial access and gave them access to money for agricultural input, which had a significant positive impact on their well-being [8].

In an examination conducted on the impact of financial inclusion on lowering poverty among low-income households in 35 sub-Saharan Africa countries, giving the poor more access to net wealth and larger welfare payments through financial inclusion dramatically lowered the degree of poverty in sub-Saharan Africa, according to cross-sectional statistics from 2011 [18].

Furthermore, increasing financial inclusion will broaden the spectrum of economic activities that can be financed, improving the likelihood of higher economic growth in developing economy as Nigeria.

3. CONCLUSION AND RECOMMENDATIONS

Conclusion

The wariness of financial service providers of the high-risk, high-cost nature of agro-ventures has limited productivity among underserved population segments/vulnerable groups such as smallholder farmers, creating the need to improve access to financial services for the underserved population. As such, the study came up with the following insights for policy interventions.

- There is evidence from earlier research findings that suggests financial inclusion can enhance peoples' welfare.
- It may take a while for an upgraded or new digital product to be accepted in rural areas where tech literacy is already low.
- Smallholder farmers must drastically alter their behaviour in order to adopt and use digital banking services.
- The development of suitable financial products will encourage smallholders to diversify their farming activities.

Recommendations

This study, based on its findings, has come up with policy options to foster digital financial inclusion. It is recommended that formal financial institutions should be more responsive to the needs of rural smallholder farmers in Nigeria by strengthening capacity building in digital financial literacy, and making it more attuned to their needs. It will also be important to make operating interfaces and documentation available in major local languages to remedy comprehension issues. To strengthen resilience to economic and agro-climatic shocks, financial planning products such as savings, credit and insurance plans should be made accessible to smallholders, consequentially, leading to the attainment of Nigeria's desired level of financial inclusion, and subsequently promote growth and development.

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