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Research article

Financial inclusion and agricultural production among smallholder farmers in rural communities in Ebonyi state, Nigeria

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Abstract
This study examined the effects of financial inclusion on the agricultural production of smallholder-rural farmers in Ebonyi State, Nigeria. It ascertained the effect of accessibility of loans on the productivity of rural farmers, and the extent to which credit availability affects the output of smallholders. A survey method was adopted in the study with a sample of 400 rural farmers. A structured questionnaire was used for data collection. Simple percentages and charts were used for the descriptive analysis. The hypotheses were tested using Analysis of Variance (ANOVA). The result showed that credit accessibility, credit availability, willingness to obtain credit, and gender disparity in accessing credit have no significant ($p > 0.005$) effect on the performance of smallholder-rural farmers in Ebonyi state. The study concluded that financial inclusion had no significant effect on the performance of rural farmers in Ebonyi state. This could be informed by the resilience and coping strategies of these smallholder farmers. The study recommended that, among others that government should intensify efforts to ensure that credit is made accessible and attractive to these rural farmers. Farmers also need financial education to understand how best to apply credit to their agricultural production to enhance productivity.

Keywords: Financial inclusion, Agriculture, rural Farmers, Performance, Ebonyi state

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INTRODUCTION

Financial inclusion is a core strategy towards enhancing the chances of everyone, particularly the disadvantaged and marginalized, having access to suitable and inexpensive financial services. It attempts to provide individuals with the capacity to manage their money, engage in the official financial system, and develop economic resilience by providing them with resources, including savings accounts, credit, insurance, and digital payment choices. People's daily lives are made easier by financial inclusion, and when they have access to financial services and products like insurance, credit, and savings, they can pursue long-term goals like launching and expanding a business, paying for their children's education and medical care, and setting aside money for emergencies, all of which will enhance their general quality of life.

In the first place, financial inclusion makes financial services accessible and affordable to millions of "unbanked" people, which inspires a variety of potential entrepreneurs to launch new businesses and helps them pay off their startup costs. Second, financial inclusion enhances the chances of existing businesses to easily access capital and credit, helping them to thrive and take advantage of growth prospects. Third, the advent of digital financial services like mobile money and financial technology applications (fintech) has aided the creation of innovations in both existing companies and a new generation of inventive start-ups.

Nigerian farmers deal with numerous obstacles. The absence of finance and credit seems to be the constraint that has the greatest impact. Unavailability and inaccessibility of credit facilities is one of the main obstacles that have contributed to not only limiting production, but also inhibiting the modernization of agriculture in most rural communities in Nigeria. Access becomes challenging even when the financing is available through bank loans and other organizations. Since only one major planting season exists in Nigeria (the rainy season) for these rural farmers, getting bank loans is cumbersome and may extend beyond the end of the farming season, which then becomes useless for farmers at that point. For agriculture to grow, financial inclusion (both access and usage), sometimes known as "banking the unbanked," is necessary and a supporting tool that enables disadvantaged farmers to have more enduring means of subsistence. The crucial financing for agriculture, however, might not be supported by financial service providers. It can be difficult to provide financial services in rural areas. These difficulties in using and gaining access to financial products are greater in rural areas than in cities. This is because rural populations are poor, largely uneducated, more concentrated in the unofficial economy, and dispersed far.

Therefore, this study investigates how financial inclusion affects rural farmers' performance in Ebonyi State. The study's primary objective is to investigate the impact of financial inclusion on rural farmers' performance in Ebonyi State, Nigeria. Specifically, this study investigates the effect of accessibility of loans on the productivity of rural farmers, and the extent to which credit availability affects the output of smallholders.

This research focused on the financial inclusion proxied by credit accessibility, and credit availability, while agricultural production proxied by output, and productivity of rural farmers. The scope comprised the theoretical, geographical, and methodological aspects. This research was conducted in Ebonyi State which has 13 Local Government Areas with a population of 3,242,500 with growth rate of 2.5% as at 2022 (National Bureau of Statistics [NBS], 2023). The choice of Ebonyi was informed by that fact that they are largely agrarians. This study could help the government and other policy makers make informed decisions on how to better the lot of the

rural farmers. This survey was done between May 2023 and September 2023. The survey was done during this period to capture both planting and early harvesting seasons.

LITERATURE REVIEW

Theoretical framework

This study considered two theories to measure the effect of finance/bank credit on the performance of rural farmers. The theories are:

The pecking order theory

According to this theory, asymmetric information raises financing costs. Donaldson (1961) first put forth the theory, Myers and Majluf (1984) refined it, and academics like Matemilola, Banny, and Ariffin popularized it. Internal cash, debt, and new stock are the three sources of funding. This means that companies use the cost of borrowing to rank their financing choices (from internal finance to equity), with equity raising being the last option. As a result, internal resources are used first, then debt is issued when those resources run out, and finally equity is issued when more debt is no longer needed. This theory states that businesses choose internal funding when it is accessible and adhere to a hierarchy of financing possibilities. When looking for outside funding, debt is also preferred over stock because equity would require the business to issue shares, which would mean "bringing in outside ownership." The theory has a specific priority sequence for capital to fund businesses. Before looking for money from other legal and informal financial service companies, farmers will opt to use their savings, borrow money from friends and family, or borrow money from family members. However, in order to engage in agriculture on a more commercial basis, they would prefer to have timely and sufficient financing so that they may make the most of the cash throughout the agricultural (rainy) season.

The finance growth theory

The theoretical thinking and discussion on the relationship between finance and economic growth can be traced to the work of Bagehot in the 1870s. There might have been a few earlier theoretical considerations before this. Proponents of the finance-growth theory contend that the presence of an active financial sector boosts growth. According to Schumpeter (1911), banks help an economy expand by offering efficient marketplaces for capital. According to the finance-growth theory, a key factor causing both slower growth and ongoing economic inequality is a lack of access to credit. Given that the availability of finance affects farmers, particularly in rural areas, the idea of finance growth theory is consistent with the call for financial inclusion and financial intermediation. Rural farmers need to be financially literate, be integrated into the real sector of the economy, and they also need adequate and timely financing to enable them to increase their productivity. The government should also relax the bureaucratic bottlenecks impeding farmers from accessing the intervention funds, grants, and credits meant for them.

Empirical studies

In relation to Nigerian agricultural production, Umaru and Eshiozemh (2022) examined the uneven effects of financial inclusion as shown by the quantity of ATMs, points of sale (POS),

mobile banking pay, and checks. They used data from Nigerian Inter-Bank Settlement System (NIBSS) and the Central Bank of Nigeria (CBN) statistical bulletin 2021, which covered the period from 2010Q1 to 2021Q4. The study demonstrates that financial inclusion has a significant and positive impact on Nigeria's agricultural output using the non-linear Autoregressive Distributed Lagged (NARDL) model and Stepwise Least Squares (STEPLS), particularly when represented by the automated teller machine and point of sale.

Nkwede (2015) examined the effect of financial inclusion on the growth of the African economy using Nigeria as a case study. Extrapolated time series (1981 and 2013) financial inclusion data from Nigeria was used in the analysis. Multiple regression models based on the Ordinary Least Squares method were employed to estimate the contributions of the variables. Even after adjusting for other macroeconomic exogenous factors, the results demonstrated that financial inclusion has had a substantial detrimental effect on the growth of the Nigerian economy over time.

Nwankwo and Nwankwo (2014) examined the feasibility of financial inclusion for rural Nigerians using descriptive study and content analysis. The report claims that the practicality of financial inclusion for Nigerians residing in rural communities is critical to any country's economic prosperity. The study also found that Nigeria's rural communities cannot experience rapid economic growth if financial inclusion is not properly implemented. The study suggested that given that some Nigerian rural inhabitants would rather store cash under their mattresses at home, enough education is needed to shift their perspective on financial inclusion.

Afrin, Haider, and Islam (2017) selected thirty farmers from each village and used a systematic random sampling technique to interview 120 rice farmers. They examined the impact of financial inclusion on paddy farmers' technical efficiency in Bangladeshi. The research used both quantile and ordinary least squares regression models to show the association between financial inclusion and technical efficiency to varied degrees. It was demonstrated that financial inclusion through a variety of credit sources significantly and favorably improved technical efficiency, whereas modifications in the sources selected to obtain credit had no discernible effect on output.

Chandio, Yuansheng, and Magsi (2016a) examined government spending on agriculture in Pakistan between 1983 and 2011, taking into account the extent of the influence on the agricultural sector and economic growth. The ADF test, the Johansen co-integration test, and ordinary least squares (OLS) were the methods employed to examine the variables of agricultural government spending, agricultural output, and GDP. The test results showed that there was a long-term relationship among Pakistan's economic growth, government agricultural spending, and agricultural output. Pakistan's GDP was positively and significantly impacted by government spending and agricultural output, according to the regression analysis.

RESEARCH METHOD AND MATERIALS

The study design employed was a survey. A survey research design is a kind of research design in which a survey is used as the main mode of data collecting. One of the advantages of a survey design is that it gives researchers access to first-hand primary data. When describing the features of a huge population, survey research design is very helpful. This vast capability is unmatched by any other research methodology. It guarantees a quick, efficient, inexpensive, and

accurate means of accessing information about the population. A descriptive statistic was also used as a research method for the study.

Area of study

Ebonyi State is one of the country's 36 states and one of the five states in southeast Nigeria. Abakaliki, Afikpo North, Afikpo South, Ebonyi, Ezza North, Ezza South, Ikwo, Ishielu, Ivo, Izzi, Ohaozara, Ohaukwu, and Onicha are its thirteen local government areas. With a landmass of roughly 6,488 km2, Ebonyi is home to over 3.2 million people. The sample size for the study is four hundred (400) respondents. The entire population of rural farmers (384,855) was considered high for a study of the present scope, and timing, and so it was subjected to scaling down using Taro Yamane (1973), cited in Gergen & Gergen (2018), sample section formula: The following outcome was attained by applying Taro Yamane's formula for the selection:

$n = N/1+N (0.05)^2$

Where:

'n' is the sample size required

'N' is the number of people in the randomly selected population

'e' is an allowable error

Substituting numbers in formula one gets:

$n = 384,855/1+ 384,855(0.05)^2 = 399.58$; thus, the sample size used was 400.

A questionnaire was used to collect the data from rural farmers in Ebonyi State. The questionnaire instrument was structured into 5 sections with respect to the research objectives and to capture the demographics of respondents. The respondents were encouraged to give voluntary answers to the questionnaire variables. The work was content validated by three experts from the Department of Business Administration, University of Nigeria, Enugu campus, and two experts from the Ebonyi State Ministry of Agriculture. The instrument was modified to reflect their responses and corrections. The reliability of the instrument for this study was ascertained using the test-retest method. To ascertain the Cronbach alpha, 10 copies of the research question were shared with 10 people and were collected. The same questionnaire was reissued to the same group, and afterwards, a comparison was made between the two collected questionnaires to see the consistency of the data collected. Cronbach's Alpha was used to ascertain the reliability of the instrument, and it gave a result of 0.788, which shows that the instrument was reliable. Several statistical techniques were used to analyze the data from the respondents. Simple percentages, graphs, and frequency distributions were used for descriptive statistics, while the study hypotheses were tested using analysis of variance (ANOVA) at the 5% significance level, using the Statistical Package for the Social Sciences (SPSS) version 20.

The decision rule for this study is:

Reject Ho if p-value < 0.05

Do not reject Ho if otherwise

RESULT PRESENTATION AND DISCUSSION

The result of the analyses is discussed under the two hypotheses that were tested at the 0.05 level of significance. From the 420 questionnaires distributed, 400 copies were completed

and returned, which translated to 95% return rate, a figure the researcher considered adequate for the data analysis (Flick, Hirseland & Hans, 2019).

Hypotheses one

H_{01}: Credit accessibility does not significantly affect the productivity of rural farmers. Agricultural production was the dependent variable in this hypothesis, and credit accessibility was the independent variable. This hypothesis was tested using simple linear regression analysis test statistics. Table 1 presents the summary of the analysis.

Table 1. ANOVA on credit accessibility on rural farmers' output

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.073	1	0.073	0.204	0.652[b]
Residual	93.620	262	0.357		
Total	93.693	263			

a. Dependent Variable: agricultural output

b. Predictors: (Constant), Credit accessibility

The analysis in Table 1 examines the predictive aggregate effect of credit accessibility on rural farmers' output. The findings show that, at the 0.05 level of significance with 1 and 262 degrees of freedom, the computed f-value of 0.204 is less than the critical f-value of 3.96. This leads to the rejection of the alternative hypothesis rather than the null hypothesis. Thus, it was concluded that credit accessibility has no significant effect on the productivity of rural farmers

Hypotheses two

H_{02}: Credit availability does not significantly affect the output of rural farmers. Agricultural output was the dependent variable in this hypothesis, whereas credit availability was the independent variable. To test for these hypotheses, simple linear regression analysis test statistics was used. Table 2 shows the result of the analysis.

Table 2. ANOVA on Credit availability on rural farmers' output

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	0.120	1	120	0.345	0.557[b]
Residual	122.855	354	0.347		
Total	122.975	355			

a. Dependent Variable: How was the output of your cultivation

b. Predictors: (Constant), Did you farm this year with financial assistance

The result of the analysis presented in Table 2 illustrates the predictive composite effect of loan availability on rural farmers' output. The findings show that, with 1 and 354 degrees of freedom, the computed f-value of 0.345 is less than the critical f-value of 3.96 at the 0.05 level of significance. These findings reject the alternative hypothesis rather than the null hypothesis. As a result, it was concluded that credit availability has no significant effect on the output of rural farmers.

Objective one: determine the impact of credit accessibility on the productivity of rural farmers

The first objective seeks to assess the impact of credit accessibility on the productive output of rural farmers in Ebonyi State. The predictive composite effect of credit accessibility is demonstrated by the results of the hypotheses examined using the statistics of the simple linear regression test. The findings show that, at a 0.05 level of significance with 1 and 262 degrees of freedom, the computed f-value of 0.204 is less than the crucial f-value of 3.86. This shows that credit accessibility has no significant relationship with the productivity of rural farmers in Ebonyi State. This means that the predictor (credit accessibility) has no significant impact on the productive output of rural farmers in Ebonyi State. That is, the higher the credit accessibility, the lower the efficiency of rural farmers in Ebonyi state, and vice versa.

Objective two: Determine the impact of credit availability on the output of rural farmers

The second objective seeks to investigate the effect of credit availability on the output of rural farmers. The result of the hypothesis analyzed by a simple linear regression test statistic shows the predictive effect of credit availability of output of rural farmers. The results indicate that the calculated f-value of 0.345 is less than the critical f-value of 3.96 at the 0.05 level of significance with 1 and 354 degrees of freedom. By this result, the null hypothesis is not rejected. Thus, it was concluded that credit availability has no significant effect on the output of rural farmers. This means that the predictor (credit availability) has no significant effect on the productivity of rural farmers in Ebonyi State.

CONCLUSION

Credit accessibility does not significantly affect the productivity of rural farmers in Ebonyi State. The findings show that, at the 0.05 level of significance, the computed f-value of 0.204 is lower than the critical f-value of 3.86. That is, a higher level of credit accessibility does not lead to higher productivity of rural farmers in Ebonyi State. Credit availability does not significantly affect the output of rural farmers. The findings show that, at the 0.05 level of significance, the computed f-value of 0.345 is lower than the critical f-value of 3.96. Hence, a higher level of credit availability does not lead to higher output for rural farmers in Ebonyi State.

Based on the research findings, the study found that the performance of rural farmers in Ebonyi state was not significantly impacted by financial inclusion. That is, there is no significant effect of financial inclusion on the performance of rural farmers in terms of production. This could be informed by the resilience and coping strategies these smallholder farmers have developed during the prolonged period of financial exclusion. With reference to the findings of this study, the following recommendations are made:

i. Intervention programs should be put in place to ameliorate the various challenges confronting rural farmers, while existing leverages (collaboration among stakeholders) should be strengthened.
ii. There should be a consistent and reliable database for farmers, which would enable a continually evolving strategic program towards vibrant regular supervision of industries, which should be carried out frequently by regulators.
iii. Government agencies should collaborate with various banks of agriculture to ensure the availability of cheap and easily accessible credit to farmers.

iv. The government should ensure a complete eradication of multiple taxation on smallholder rural farmers to enable them to survive and be motivated.

REFERENCES

Afrin, S., Haider, M.Z. & Islam, M.S. (2017). Impact of financial inclusion on technical efficiency of paddy farmers in Bangladesh. *Agricultural Finance Review*.

Babajide, A. A., Adegboye, F. B., & Omankhanlen, A. E. (2015). Financial inclusion and economic growth in Nigeria. *International Journal of economics and financial issues*, *5*(3), 629-637.

Beck, T., Senbet, L., & Simbanegavi, W. (2015). Financial inclusion and innovation in Africa: An overview. *Journal of African Economies*, *24*(suppl_1), i3-i11.

Chandio, A. A., Jiang, Y., Joyo, M. A. & Rehman, A. (2016a). Impact of area under cultivation, water availability, credit disbursement, and fertilizer off-take on wheat production in Pakistan. *Journal of Applied Environmental and Biological Sciences*, 6 (10), 10-18.

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

Goldsmith, J. R., & Newton, R. C. (1969). PTX relations in the system CaCO3-MgCO3 at high temperatures and pressures. *American Journal of Science*, *267*(A), 160-190.

Levine, R. (2005). Finance and growth: theory and evidence, in Aghion, P. and Durlauf, S., Handbook, of Economic Growth, Vol. 1, North-Holland Elsevier, Amsterdam, 865-934.

Marshall, J. N. (2004). Financial institutions in disadvantaged areas: a comparative analysis of policies encouraging financial inclusion in Britain and the United States. *Environment and Planning A*, *36*(2), 241-261.

National Bureau of Statistics [NBS]. 2023. Ebonyi State in Nigeria.

Nkwede, F. (2015). Financial inclusion and economic growth in Africa: Insights from Nigeria. *European Journal of Business and Management*, *7*(35), 71-80.

Nwankwo, O., & Nwankwo, O. N. (2014). Sustainability of financial inclusion to rural dwellers in Nigeria: Problems and way forward. *Research journal of finance and accounting*, *5*(5), 24-31.

Stolbov, M. (2013). The finance-growth nexus revisited: From origins to a modern theoretical landscape. *Economics*, *7*(1), 20130002.

Umaru, A., & Eshiozemh, I. (2022). Financial Inclusion and Agricultural Output Nexus in Nigeria, an asymmetric Approach. *Applied Journal of Economics, Management and Social Sciences*, *3*(4), 1-12.