Synergy between Access to Microfinance Bank Credit and the Performance of Small Scale Agribusiness Enterprises in Anambra State, Nigeria

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Abstract: How micro-finance bank funding drives the performance of small-scale agribusiness enterprises, has remained significantly unclear to development agencies. This study assessed the performance indicators of small-scale agribusinesses that were funded by microfinance bank credit and its implications for rural enterprise development in Nigeria. A multi-stage sampling procedure and Yamane's formula were applied to determine the sample size of 155. Descriptive and inferential statistical tools were applied to analyze the collected data. The result shows that 31% of small-scale agribusiness firms accessed microfinance bank services. The result showed that banks' capacity to extend loans, willingness to borrow, ability to repay and profitability of small-scale agribusiness significantly correlated with the level of access to credit by qualified loan applicants that operated small-scale agribusiness enterprises. We found sufficient evidence to conclude that micro finance banks' capacity to supply financial services to small scale agribusiness enterprises was grossly inadequate. We recommended that the lending capacity of microfinance banks should be enhanced by the Central Bank of Nigeria.

Keywords: Financial service capacity, access to credit, small-scale agribusiness, micro-finance banks

Introduction

The question of what drives performance of micro and small-scale agribusiness enterprises funded by micro-finance banks, has remained important to development economists of our time. What is already known is that agribusiness operators with access to financial capitals are more likely to adopt improved technologies, increase productivity, lending capacity of MFBs and investment (Dupas and Robinson 2009, 2011, Ashraf *et al.* 2010).

Microfinance is about providing financial services to the poor who are not traditionally served by conventional institutions (CBN, 2005). The goal of Microfinance institutions (MFIs) can be achieved when the disadvantaged groups; women, rural dwellers, and small scale agro-based industries have access to a broad range of formal financial services that meet their needs at an affordable cost. In Nigeria, about 54.4 percent of financially excluded populations were women; about 73.8 percent were less than 45 years, and 34 percent had no formal education, while 80.4 percent reside in rural areas (CBN, 2012).

Lewis' theory of capital formation and economic growth of 1954 was considered as appropriate theoretical underpinning for the study. The theory says that bank credit has the potential to create capital formation for business expansion. Bank credit enables business operators to finance the utilization of improved technology that can raise productivity in terms of quality and quantity. Through this, the small business operators can contribute essentially to national economic growth. Lewis (1954) believed that credit generated through investment of additional bank credit can grow and reproduce the amount of credit originally borrowed. This is the point of equilibrium according to Lewis (1954). At this point the firms are able to depend on self-generated revenues or profits for further growth.

There are variations in the definition of Small-Scale Business between countries (Charles and Babatunde, 2012). It is defined by some researchers in terms of capital assets and number of employees while others defined it in terms of legal status and method of production (Kofi, 2014). The criteria are an assets base between ₦ 500,000 and ₦ 5 million and staff strength between 10 and 50 employees. This is because many small businesses in Nigeria has an assets base of less than ₦ 100,000. SMEDAN (2010) define SSEs as those businesses whose total assets (excluding land and building) is above five million naira but not more than fifty million naira with a total workforce of between ten to forty-nine employees.

Alaade, Amusa and Adekunle (2013), examined the relationship and causality between microfinance bank operations and Entrepreneurship development in Ogun State, Nigeria. The result showed that there is no significant impact of microfinance bank operations on entrepreneurial development in Ogun State. This was due to low capital base of most microfinance banks in the study area. It was also found that there is no significant difference between entrepreneurs who use microfinance banks in terms of loan and advances and those who do not.

Uremadu, et al. (2015), analyzed the impact of banking credit to small and medium scale enterprises (SMEs) on economic growth in Nigeria using annual data from 1981 to 2013. The results revealed that the banking system credit to SMEs though gradually increased yearly as a result of population and hence economic activities, the credit to SMEs as a percentage of total credit to the private sector declined yearly. Banking credit to SMEs was not significant and thus did not contribute meaningfully to economic growth in Nigeria.

Agribusiness can enhance food security, health/well-being, poverty reduction, job creation, and economic growth. Despite the importance of agribusiness, its performance over the last 30 years has been disappointing. This is because small scale agribusiness operators are excluded from financial services. If they must make meaningful investment and contribute to agricultural sector, they must be substantially included in the services of financial institution. Increasing access to micro credit shows more modest

effects in promoting investment and entrepreneurship, mostly for households with existing business (Banerjee *et al.* 2010, Karlan and Zinman 2010).

This study was conceived and designed to provide robust empirical information on these critical gaps in Microfinancce Institutions MFIs and its implications on agribusiness sector in the study area.Over-indebtedness of some clients of microfinance banks implied over-supply crises in some countries. It is important to point out through this empirical research, the level of over-indebtedness in the microfinance markets in Nigeria. Highlighting the evidence of over-indebtedness may call for urgent need to address such crisis in the MFIs in Nigeria. Developing appropriate corrective measures against over-indebtedness would require a clear understanding of the extent of the problem and its effects in Nigeria.

Accessibility to MF credit is expected to improve performance of small scale agribusinesses through increase in capital, investment and lending capacity of MFBs as well as reducing poverty and unemployment. An inclusive financial system facilitates efficient allocation of productive resources and thus can potentially reduce the cost of capital. Access to credit allows poor people to smoothen their consumption and insure themselves against vulnerabilities from illness, to accidents, theft and unemployment. It especially benefits the disadvantaged groups such as women, smallholder agribusiness operators and rural communities who are financially underserved.

Asli Demirguc-Kunt and Klapper (2013) did not analyze critical gaps in terms of gender, location and firm-based access to credit in their study. In the past, microfinance bank focused mainly on growth and outreach in terms of locations, firms and gender, thus, addressing the problem of financial exclusion of small-scale agribusinesses (Achoja and Ewuzie, 2016). Available information in literature shows that a study of this nature and magnitude has not been carried out in Anambra State, Nigeria before now. There is urgent need for research to deepen our understanding in terms of the magnitude and implications of supply gap and demand gap on agribusiness development in Nigeria. This study reveals the implications of supply shortages on borrowers and agribusiness sector. It emphasizes the consequences of over-indebtedness (surplus credit demand) on the relevant stakeholders in the MFIs.

This will provide a robust and comprehensive analysis, understanding and monitoring of the progress of evidence-based policy initiatives undertaken to promote access to credit of small-scale businesses in an economy.The broad objective of the study was to analyze the synergy between access to microfinance bank credit and performance of small-scale agribusiness enterprises in Anambra State, Nigeria. The specific objectives were to:

   i) estimate the amount demanded and amount supplied to agribusiness operators by microfinance banks;

   ii) assess the supply-demand gaps in the MFBs in the study area;

   iii) ascertain the determinants of access to credit; and

iv) evaluate the effect of Microfinance Bank credit on the performance of rural agribusiness operators.

H$_o$1: The selected exogenous variables do not significantly correlate with the credit accessed by operators of rural agribusinesses.

H$_o$2: There is no synergy betweentheamount of Microfinance credit accessed and the performance of rural agribusinesses.

Materials and Methods

Description of Study Area, Sampling Procedure and Sampling Size

The study was carried out in Anambra State, Nigeria. With a population figure of 4.182 million people (NPC, 2006) and a land mass of 4415.54 square kilometers (Nkematu, 2000), the State is well known to have some advantagesin the area of small and medium scale agricultural businesses. Hence the area was chosen for the study.

The selection of the sample involved a multi-stage sampling technique. The first stage involved the selection of all the 21 local governments in the State. The second stage was the random selection of three microfinance banks (MFBs) from each L.G.A. This gave a total number of 63MFBs. Some L.G.A.s did not have up to three MFBs and some of the questionnaire were not properly filled bringing the number to 40 MFBs that were studied. The third stage was a random selection of six small scale agribusiness enterprises (SSAE) in each L.G.A; this gave a total number of 126 SSAE. Out of this 126 SSAE, 115 were properly filled and used for the study; giving a sample size of 155 for the study. Then data were collected from the 40 microfinance banks on the amount demanded and supplied to loan beneficiaries from 2011 to 2015. Data were also collected from these microfinance banks on age, gender, location and firm that had access to formal financial services within the same period. Finally, data were collected from 115 small scale agribusiness enterprises on their socio-economic characteristics, business experience, and level of investment and lending capacity of MFBs. Multi-stage technique was considered appropriate because with this method, L.G.As, microfinance banks and small scale agribusiness enterprises in the study area had equal chance of been selected.

Methods of Data Collection and Analysis

The study combined information from primary and secondary sources. Primary data were collected with the aid of a semi-structured questionnaire from 63 microfinance banks and 126 small scale agribusiness enterprises. A total of 155 (40 MFBs and 115 small scale agribusiness enterprises), properly filled questionnaire were retrieved and used for the study. Personal observations were also used alongside with the questionnaire administered. Secondary data were collected from published reports, journals, seminar papers and other relevant literature materials. Descriptive statistics (frequency distribution, percentages, standard deviation, and mean values), access to

credit index and inferential statistical tools (t-test, simple and multiple regressions) were used in analyzing the collected data.

Model Specification

A. Ascertaining the Determinants of Access to credit

The multiple regression model was used to ascertain and establish the statistical relationship between the dependent variable and the independent variables that are expected to be influencing access to credit.

B. Estimating the Degree of Access to credit by operators of Small-Scale Agribusinesses

The percentage of the amount of loan demanded by small scale agribusiness enterprises (from microfinance banks) was used to ascertain the degree of their financial exclusion. It is given as:

Percentage of the amount demanded

= Amount demanded-Amount granted/ Amount Demanded X 100/1 …   (1)

C. The relationship between the access to credit and demand-side of financial services (socio-economic variables) is given as

$$Y = B_i X_i + e \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where, Y is the dependent variable (access to credit index), B_i is the estimated coefficient of the respective parameters, X_i is the independent variables (socio-economic), and e is the error term.

The multiple regression model is given as follows:

$$Y = b_o + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + e \ldots\ldots\ldots \quad (3)$$

where: Y = dependent variable, access to credit index, bo = intercept, b_i = coefficient of the parameters, x_i are demand-side (socio-economic) variables of x_1 = age, x_2 = gender, x_3 = location, x_4 = lending capacity of MFBs, and x_5 = years of experience.

Results and Discussion

Determinants of Access to credit of small-scale Agribusinesses.

Table 1: Regression result of determinants of Credit access index of small-scale agribusinesses

Variables	Coefficients	Std. Error	T.cal	P-Sig.
Constant	-0.577	0.103	-5.616	0.00***
Lending capacity of MFBs	0.508	0.122	4.176	0.00***
Financial literacy of borrower	0.252	0.153	1.646	0.11*
Years of experience	-0.109	0.113	-0.969	0.34

a. Dependent Variable: Credit access index
b. Predictors: (Constant), financial literacy, Lending capacity of MFBs and years of experience
R^2 = 67.8%
*** = sig. at 1%
* = sig. at 10%

The degree of relationship between access to credit index andexogenous variables such as financial literacy, lending capacity of MFBs and years of experience is shown in Table 1. The estimated R square value is 0.678 (67.8%) and adjusted R square value of 0.608. This means that 68% of the variation in credit access index is predicted by the joint effect of the exogenousvariables.

Hypothesis Testing

H_o1: *The selected exogenous variables (financialliteracy, Lending capacity of MFBs and years of experience) do not significantly correlate with level of credit accessed by operators of small-scale agribusinesses in the study area.*

Financial Literacy

Table 1 shows that there is a positive and significant relationship between financial literacy and access to credit but (0.10) confidence level. This means that financial literacy level of agribusiness operators is an important determinant of their access to Microfinance bank credit. A financially literate agribusiness operator will appreciate the importance of microfinance and apply for it.

Lending capacity of MFBs

Table 1 shows that there is a positive and significant relationship between lending capacity of MFBs and access to credit. The relationship between lending capacity of MFBs and access to credit is significant at 0.01 confidence level. The research hypothesis which says that the lending capacity of MFBs has significant relationship with the credit access index of small-scale agribusiness operators, is accepted.

This means that lending capacity of MFBs is a strong and the most important determinant of access to credit by small scale agribusiness operators. High lending capacity of MFBs can lead to a high level of access to credit by small scale agribusiness operators. High reserve or surplus of finance available in MFBs for credit will translate to high amount of credit they can lend to qualified borrowers.

Years of Experience

There is a negative relationship between years of experience and access to credit (Table 1). The relationship between years of experience and access to credit index is not significant. The negative relationship implies that the more the number of years of experience the more that the financial (capital reserve) that would have been accumulated over the years. The operator may then need less of borrowed fund to float the business.

Amount Demanded and Amount Supplied to Agribusiness operators by MFBs

Table 2 shows the amount of loan demanded by agribusiness operators and the amount granted/supplied to them by the microfinance banks in the study period.

Table 2: Loan Granted to Small Scale Agribusiness as Percentage of Amounts Demanded (2011 – 2015)

Year	Amount demanded ₦,000,000	Amount granted as % of amount demanded	Annual change in amount demanded	percentage of total demanded	Annual % change in amount demanded	Amount granted ₦,000,000	percentage of total granted	Annual % change in amount granted	Annual change in amount granted
2011	1501.2	45.9		11.7		689.7	17.2		
2012	1611.0	43.7	109.8	12.5	0.8	704.2	17.6	0.4	14.5
2013	2109.4	38.6	398.4	16.4	3.9	813.9	20.3	2.7	109.7
2014	3024.1	27.1	914.7	23.5	7.1	891.0	22.3	2.0	77.1
2015	4522.9	19.5	1598.8	35.9	12.4	902.6	22.6	1.2	11.6
Total	12868.6	31.1		100		4001.4	100		

(*Source:* Microfinance banks Survey Data)

Table 2 shows the amount of loan demanded by small scale agribusiness enterprises and the amount of loan granted to them by microfinance banks from 2011 to 2015. This is used to estimate the degree of financial exclusion of small-scale agribusiness enterprises. It reveals that the amount of loan demanded by small scale agribusiness enterprise was on a yearly increase while that granted to them by microfinance banks was on a yearly decrease. This means that the total amount of loan granted (₦ 4,001,400,000) by microfinance banks to small scale agribusiness enterprises within the study period is less than the total amount of loan demanded (₦ 1,286,866,000.00). This is also seen from the descriptive statistics table; a mean amount of ₦ 800.28 million was granted from a mean of ₦ 2553.72 million that was

Table 3: Descriptive Statistics of Loan Granted to Small Scale Agribusiness as Percentage of Amounts Demanded (2011 – 2015)

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Amount demanded	5	1501.20	4522.90	12768.60	2553.7200	1254.27936
Amount granted as perctage demanded	5	19.50	45.90	174.80	34.9600	11.29283
percentage of total	5	11.70	35.90	100.00	20.0000	10.03942
Amt granted	5	689.70	902.60	4001.40	800.2800	100.42946
percentage of total granted	5	17.20	22.60	100.00	20.0000	2.53673
Valid N (listwise)	5					

(*Sources:* 2016 field data)

demanded. The implication is that this will affect the investment capital of agribusiness enterprises in the study area. The percentage of amount demanded is 68.9. This shows that small scale agribusiness enterprises could not access up to 68.9% of the financial services they needed for better performance.

Assessing the Demand and Supply Gap

Performance indicators of Small-Scale Agribusiness Enterprises that accessed Micro-finance Banks Credit

Table 4: Distribution of Performance indicators of Small-Scale Agribusinesses that accessed Micro-finance Banks Credit

Credit Access status of enterprises	Frequency	Performance Indicators of surveyed Small-Scale		
		Agribusinesses Investment/ Asset-base (₦)	Net income (₦)	Number of Employee
Accessed Credit	33	₦ 126,500	₦ 61,000	3 persons
Did not accessed Credit	82	₦ 75,500	₦ 45,500	1 person
% difference	-59.76%	40%	25..41%	66.67%

(*Source:* Field data, 2016)

Table 4 shows the distribution of the performance indicators of small-scale agribusiness enterprises. The distribution shows that out of 115 small scale agribusiness enterprises studied, 33 respondents had access to microfinance banks (mfbs) loan while 82 respondents did not have access. The result shows that the respondents that had access to mfbs loan; made more investment, earned more lending capacity of MFBs and employed more workers than their counterparts who did not have access. This implies that there is synergy or relationship between access to credit status of mfbs and the development of rural enterprises. Nevertheless, this synergy is not strong because most of the respondents do not have access and even those that had access could not access much as they demanded (Table 4).

The degree of financial exclusion of small-scale agribusiness enterprises in the study area is 68.9%. This means that SSAE could not access up to 68.9% of financial services they needed for better performance. The result on determinants of access to credit shows that credit access criteria have significant effect on the financial services accessed by small scale agribusiness operators. This shows that the utilization of financial services is dependent on access criteria.

The findings on the demand-side indicators show that employment and lending capacity of MFBs have significant effect on amount supplied. This implies that having something doing and a good lending capacity of MFBs record will enhance the chances of accessing financial services. The weak relationship between credit accessand performance indicators of small-scale

agribusiness enterprises indicates that improving on the inclusiveness of small-scale agribusiness enterprises in microfinance banks services will enhance their performance.

Synergy between credit access and performance indicators of small-scale agribusiness enterprises

Table 5: Correlation matrix of thesynergy between credit access and performance indicators of small-scale agribusiness enterprises

Variables	Statistics	Credit access (₦)	Net Income (₦)	Number of Employee	Investment/Asset-base (₦)
Credit access (₦)	Corr.	1.000			
	p-value	0.000			
Net Income (₦)	Corr.	0.780	1.000		
	p-value	0.029*	0.000		
Number of	Corr.	0.420	0.320	1.000	
Employee	p-value	0.103	0.210	0.000	
Investment/	Corr.	0.680	0.510	0.310	1.000
Asset-base (₦)	p-value	0.031*			0.000

Note:
* = sig at 5%.

Dependent variable: Performance indicators (Net Income, Number of Employee and Investment/Asset-base).

Predictors: access to credit.

The Synergy between credit access and performance indicators of small-scale agribusiness enterprises is shown in Table 5.

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Net Income

The net income from small scale agribusiness enterprises has a positive and significant relationship with access to micro finance bank credit with a correlation coefficient of 0.780 an p-value of 0.029* (Table 5). This finding implies that more access to micro finance credit will translate to higher net income of small-scale agribusinesses. Micro credit accessed has the tendency to boost production operations of small-scale agribusinesses. The expansion in the scale of operations of small-scale agribusiness enterprises will depend on the amount of credit accessed by the operators. This finding is similar to the earlier report of Achoja (2011) that credit access and utilization could result in 78% growth in agribusiness enterprises.

Investment/Asset-base

The variable of investment/asset base has acorrelation coefficient of 0.680 with a p-value of 0.031* (Table 5). This indicates thatinvestment/asset base of

agribusiness enterprise has a significant and positive relationship with access to micro finance bank credit. The implication of this finding is that increase in the amount of credit accessed will translate to growth in enterprise asset-base over time. With accessed to credit, an operator of agribusiness will be able to purchase more inputs necessary for business operations. An external credit financing ofan agribusiness can influence operators' capacity to pay for efficient operating equipment. This has a multiplier effecton enterprise productivity through increased output and revenue. This result corroborates Achoja (2011)in his investigation of the multiplier effects of micro credit investment in agribusiness.

Conclusion

The study analyzed the synergy between access to microfinance banks credit and the performance of small-scale agribusiness enterprises. The result revealed that though there is a positive relationship between credit access index and the indicators of performance of small-scale agribusiness, the access to credit by small scale agribusiness enterprises was low. This is because greater percentage of small-scale agribusiness enterprises (68.9%) do not have access to micro finance bank credit. This has an effect on the level of performance of small-scale agribusiness enterprises (in terms of lending capacity of MFBs, employment and investment) in the study area. Enterprise net income and asset-base are the most important performance indicators that responded significantly to micro finance bank credit. The study has provided empirical information on the synergy between access to Microfinance banks credit and the performance of small-scale agribusiness enterprises in Anambra State, Nigeria. The study therefore concludes that there is need to scale up the capacity of microfinance banks through external borrowing from Central Bank of Nigeria (CBN) and encourage intensive participation of small-scale operators in the financial system. This will increase the performance and contribution of small-scale agribusiness enterprises to the economic development of the country.

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