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DETERMINANTS OF MICROCREDIT DISBURSEMENT TO RURAL FARMERS FROM ABIA STATE UNIVERSITY MICROFINANCE BANK, NIGERIA

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Abstract

This study analyzed the determinants of microcredit disbursement to rural farmers from Abia State University Microfinance Bank, Nigeria. Snowballing and simple random sampling techniques were used in the selection of the beneficiaries. The data generated was analyzed using descriptive statistics and Tobit regression model. The study revealed that most (76.5%) of the beneficiaries were male with mean farm holding of 0.8 hectares. The mean age of the beneficiaries was 37 years. The mean annual farm income of the beneficiaries was ₦194,500. The beneficiaries had a mean value of 2 years' experience with microcredit utilization. Most (37.50%) of the beneficiaries had secondary school education. Most (99.4%) of the beneficiaries completed their documentation requirements. The estimated mean volume of microcredit received in the study area from ABSU microfinance bank was ₦43,000. The result also indicated that most (46.9%) of the microcredit loan applications were for the purpose of crop production only. The estimated value of the coefficient of multiple determination (R^2) was 0.693 implying that 69% of the variation in microcredit received by the beneficiaries can be explained by the combined effect of the independent (explanatory) variables included in the regression model, while the remaining 31% was as a result of excluded variables and error considerations. The study also revealed that farm income records, microcredit utilization experience, level of education and complete documentation are the key criteria recommended for microcredit loan applications.

Keywords: Microcredit disbursement, Microfinance bank, rural farmers**,** socioeconomic determinants.

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INTRODUCTION

Access to microcredit is regarded as one of the key elements in raising agricultural productivity. Microcredit is the name given to extremely small loans for low income or rural farm households. It enhances the production capacity of the poor resource farmers through financial investment in their human and physical capital (Okurut et al., 2004). Availability of adequate and timely credit will help in expanding the scope of operation and adoption of new technology as well as enhancing the purchase and use of some improved inputs which are not available on the farm (Oladeebo and Oladeebo, 2008). For a farmer to derive benefit from any institutional credit, the size of the loan, the process of granting such loan, timeliness in disbursement and repayment are important, apart from level of education, farm experience, farm size, etc., (Rooijakkers, 2010). Microcredit has significantly been adjudged as a catalyst for sustainable development, economic empowerment for low income earners and underprivileged groups (Hossain, 2003). Investments in small scale farming and modern technologies adapted to local conditions would create possibilities for sufficient local food and fodder production that would alleviate hunger. Microcredit is a key strategy of financial inclusion for low income and rural farm households and in building global financial system that meets the needs of most people in different communities.

In Nigeria, small scale farming is characterized by low-income households concentrated in rural areas with little or no access to modern management techniques. Access to micro credit stimulates rural economic activities particularly agriculture; it facilitates the scaling up of farm activities, adoption of improved technology and sustainable practices (Ogunleye, 2000; Lakwo, 2010). The formal banking system still faces constraints in reaching most rural communities due to lack of improved service infrastructure. Similarly, formal lending is highly collateralized and attracts very high interest rates. Collateral requirements help formal institutions in determining the credit worthiness of potential borrowers. Improved access to microcredit for the rural poor is central to sustainable poverty alleviation because it enables them to invest in and improve productivity in agriculture, small businesses and small-scale manufacturing, thereby empowering them to break out of poverty through sustainable measures. Guaranteeing rural people's access to microcredit for meaningful economic activities requires specific financial service schemes that mobilize savings and intermediate financial services. Microcredit schemes emerged to fill this gap in the financial service delivery system. Micro-credit schemes mediate the delivery of small, low interest and non- collateralized credits to the rural poor, relying on social collateral and joint liability (Aryeteey, 2005; Olomola, 2000). A survey on rural household's access to credit facilities in Nigeria conducted by Central Bank of Nigeria (CBN, 2006) showed that 68% of rural households had no access to microcredit due to low volume of economic activities in rural areas, cumbersome documentation and collateral requirements, low income and hence low repayment capabilities among other factors. The discrimination against agriculture in granting of microcredit and the high rate of interest coupled with other stringent conditions of accessing microcredit from commercial banks are among the factors that led the government into adopting a policy measure that ensures access to microcredit and other financial services to the agricultural sector (Abula et.al., 2013). In Nigeria, credit is recognized as an essential tool for promoting agricultural production especially among rural farmers that constitute a bulk percentage of the farming population (Bolarinwa and Fakoya, 2011). The federal government of Nigeria in the past had initiated various agricultural credit related policies and programmes in

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attempt to improve the agricultural production through provision of cheap financial resources to farmers at a concessionary interest rate. According to Nwaru (2011), micro credit ranges between ₦20, 000 to ₦100,000 and it's usually used to finance microenterprises like small scale farming, petty trading, hair dressing, sewing and low level agro-allied activities.

Objectives of the study

The specific objectives are to;

i. describe the socioeconomic characteristics of the beneficiary farmers;
ii. identify farm enterprises for the microcredit loan applications;
iii. evaluate the volume of microcredit received by the beneficiary farmers; and
iv. determine factors that influence microcredit disbursement to beneficiary farmers.

METHODOLOGY

Study Area

The study was carried out at Abia State University (ABSU) Microfinance Bank which is an investment for members of the University Community. It was purposively selected on the basis of its proximity and easy access to the required data. It was established in the year 1986 as Abia state University Community Bank, and later changed to a Micro finance bank in line with CBN reforms in January 2007. The Micro finance bank is located at a strategic location at the entrance of the University gate at Uturu. Uturu Community is located in Isuikwuato, it is characterized by a hilly, plain topography with guinea savannah vegetation. Uturu is typically an agrarian community which has both the agro climatic and soil type conditions conducive to the cultivation of arable crops such as maize, cassava, yam, tomatoes, and cowpea. Most farm households in Uturu community patronize ABSU Microfinance Bank because of its proximity.

Population and Sampling Procedure

Snowballing and simple random sampling techniques were used in the selection of the respondents. A list of smallholder farmers who have benefited from the micro credit lending of ABSU Micro finance Bank was collected from the bank, to serve as a sampling frame. This list comprised of 960 beneficiaries, using constant sampling proportion of 10%, 96 farmer credit beneficiaries were selected following simple random sampling technique.

Data Collection

A checklist and interview schedules were used as secondary data from ABSU Micro finance Bank for this study. Data on the demography of the beneficiaries, farm enterprises and documentation requirements for microcredit loan applications were obtained from the bank's database.

Analytical Techniques

Descriptive and inferential statistics were used for data analysis in this study. Objectives (i) and (ii) were analyzed using descriptive statistics (frequency distribution, percentage and means) while objective (iii) was analyzed using the Tobit regression model to establish the relationship

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between the volume of microcredit disbursed among rural farmers and the various factors influencing it. It estimates the factors affecting rural farmers' intensity or extent of use of microcredit (Wabbi et al., 2006*)*. A checklist was used to identify documentation requirements for objective (iv).

Model Specification

The Tobit model (Gujarati, 2003) expressed in its simplest form as;

$\mu^*i = \beta x_i + e_i$…… (1)

Algebraically expressed for the *ith* farmer;

$\mu i = \beta_0 + \beta_1\ \beta_1 +$ ---------- $\beta_{11} X_{11}$ ……..…… (2)

0 if $\mu^* \leq T$

$\mu i = \mu^* i$ if $0 < \mu^* < 1$ ($i = 1 \ldots 96$)…… (3)

1 if $\mu^* i > T$

Where:

μi = the observed dependent variable i.e. amount of microcredit received (₦);

β = A vector of unknown coefficients. x_i = vector of characteristics of ith individual, and is the independent variables, which are defined as follows; x_1 = gender (1=male;0=female), x_2 = age (years) x_3 = Farm income (₦),x_4 = Farm size (hectares), x_5 = Experience (years), x_6 =Level of educational (0=informal;1=primary;3=secondary;4=tertiary) and x_7 = Documentation (1 = complete; 0 = incomplete) (Documentation checklist includes; completed loan application and guarantor forms, valid means of ID, current utility bill, passports, financial records, bank details).

e_i = Error term

$\mu^* i$ = the non-observable latent variable representing the use of microcredit;

T = the critical (cut off) value which translates into μ^*

$i > T$ as intensity of use and μ^*

$i < T$ as extent of use of; and

n = the number of observations.

The model is appropriate in: 1) explaining relationships involving a continuous dependent variable and a set of independent variables (Sall et al., *2002*); and 2) studying decisions where error terms are truncated or censored. The advantage of the Tobit model over the dichotomous choice models is that it permits determining the intensity and extent of use of microcredit once accessed by the farmers.

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RESULTS AND DISCUSSION

Socioeconomic Characteristics of Beneficiaries of Microcredit from ABSU Micro Finance Bank

Table 1: Socioeconomic Characteristics of the Beneficiaries

Variables	Mean values	Percentage (%)
Gender (Male)		76.5
Age (years)	37	
Farm income (₦)	₦194,500	
Farm size (ha)	0.8	
Experience (Years)	2	
Educational status (level)	-	
(Secondary education)		37.5

Source: ABMFB Database, 2013

The result in Table1 revealed that most (76.5%) of the beneficiaries were male. This agrees with the findings of Njoku and Odii, (2001) who posited the predominance of the male gender in most agricultural activities, this may be attributable to their access to productive resources as compared with their female counterparts who engage more in agro-commodity trade and processing. The mean age of microcredit beneficiaries in the study area was 37 years, suggesting that most of the beneficiaries were in their economic and active age bracket. Credit institutions are more willing to give loan facilities to young and dynamic farmers who are more likely to adopt new innovations and scale-up their economic activities, than the older farmers (Oladeebo and Oladeebo, 2008). The beneficiaries had a mean farm holding of 0.8 hectares, indicative of the predominance of small scale farmers who would require additional financing to expand their agricultural production. The mean annual farm income of the beneficiaries is ₦194,500. This implies that the farmers in the study area earned average annual incomes which were still grossly inadequate to mitigate farm household vulnerability and poverty status. The beneficiaries had a mean value of 2 years' experience with microcredit utilization, suggesting that most of the beneficiary farmers do not have substantial years of experience in microcredit utilization. This corroborates with findings of Njoku and Odii, 2001 who also reported similar results on the demography of loan beneficiaries. Most (37.50%) of the beneficiaries had secondary school education, suggesting a predominant population of literate beneficiaries. The level of education attained by a farmer not only increases his/her farm productivity but also enhances ability to understand and evaluate new production technologies, but also access and process other related agricultural information such as loan applications, climate information, etc. (Eze and Ibekwe, 2007; Njoku and Odii, 2001). Most (99.4%) of the beneficiaries completed their documentation requirements, suggesting that complete documentation was a key criteria for accessing

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microcredit from ABSU microfinance bank. According to Asogwa et al., (2014), there is a positive and linear relationship between complete documentation and access to microcredit from microfinance banks.

Volume of Microcredit Received

Table 2: Distribution of Respondents According to Amount Received

Amount	Frequency	Percentage (%)
≤50,000	62	64.6
51,000-80,000	24	25
81,000-100,000	10	10.4
Mean	43,000	

Source: ABMFB Database, 2013

Table 2 below shows the volume of credit received by farmers from ABSU microfinance bank. The result indicates that most (64.6%) of the farmers received ≤₦50,000 as microcredit facilities for agricultural production. While 25% received between ₦51,000 – ₦80,000, 10.0% and 10.4% received between ₦81,000 – ₦100,000. The estimated mean volume of microcredit received in the study area from ABSU microfinance bank was ₦43,000.

Utilization of Microcredit among Beneficiaries

Table 3: Distribution Based on the Utilization of Microcredit from ABSU Micro Finance Bank

Enterprise	Frequency	Percentage (%)
Crop production	45	46.9
Livestock production	16	16.7
Crop and animal production	27	28.1
Aquaculture	5	5.2
Agro processing	3	3.1

Source: ABMFB Database, 2013

Table 3 revealed the distribution of beneficiary farmers based on the agricultural enterprise for microcredit loan applications. The result indicated that most (46.9%) of the microcredit loan applications was for the purpose of crop production only, 28.1% diversified the loan for the purpose of mixed farming (crop and livestock production), 16.7% was for the purpose of livestock production only, 5.2% invested in aquaculture, while 3.1% of the loan applications was for the purpose of agro processing only. This result is in consonance with the findings of Oladeebo and Oladeebo (2008) who posited similar results on microcredit utilization among smallholder farmers in Ogbomosho Agricultural Zone of Oyo State, Nigeria.

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Factors Influencing Microcredit Received by Beneficiary Farmers

Table 4: Analysis of Factors Influencing Microcredit Received By Beneficiary Farmers

Variable	Coefficier	Standard Error	T-Ratio
Constant	3.242**	1.358	2.387
Gender(X_1)	$0.625^{n.s}$	0.517	1.209
Age (X_2)	-0.341**	0.135	2.526
Farm income (X_3)	0.781**	0.306	2.552
Farm size (X_4)	-0.462**	0.180	-2.567
Experience (X_5)	0.305**	0.114	2.675
Education (X_6)	0.422**	0.157	2.687
Documentation(X_7)	0.561***	0.139	4.036
R^2	0.693		
X^2 (chi square)	25.824**		

Source: Tobit Regression Analysis Output (Computed From ABMFB Database, 2013); **= Significant At 5% (p<0.05), *** = Significant At 1%, (p<0.01) and $^{N.S}$= Not Significant

The result of the regression analysis in Table 4 revealed the factors influencing microcredit received by beneficiary farmers. The chi square (X^2) estimate of 25.824 is highly significant. As a measure of goodness of fit, it shows that the data set fit the regression line to a reasonably high level. The value of the coefficient of multiple determination (R^2) is 0.693 implying that 69% of the variability in microcredit received by the beneficiaries can be explained by the combined effect of the independent (explanatory) variables included in the regression model, while the remaining 31% was as a result of excluded variables and error considerations. The result revealed that the coefficients of farm income (0.781), experience (0.305) and education (0.422) were all positive and statistically significant at 5% (P<0.05) level. Also the coefficient of complete documentation was positive and statistically significant at 1% (P<0.01) level, suggesting that an increase in the coefficient values of variables with positive signs would increase the likelihood of famers receiving microcredit from ABSU microfinance bank and vice versa. This result is consistent with the findings of Sebopetji and Belete (2009) who posited similar findings on factors influencing microcredit disbursement by microfinance banks. The coefficient of age (-0.341) was negative but statistically significant at 5% (P<0.05) level, suggesting an inverse relationship with the volume of microcredit received. This finding also agrees with Ali et al. (2017) who posited that old people tend to be more risk averse than young people. The coefficient of farm size (-0.462) was also negative but statistically significant at 5% (P<0.05) level, suggesting an inverse relationship with the volume of microcredit received. Although the negative coefficient of farm size (-0.462) is at variance with apriori expectation, it suggests efficiency in the use of land rather than expansion of cultivated areas as a necessary requisite that could increase chances of accessing credit (Nnadozie and Uzoigwe, 2002).

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CONCLUSION AND RECOMMENDATION

This study analyzed the determinants of microcredit disbursement to rural farmers from Abia State University Microfinance Bank, Nigeria. Descriptive statistics was used to analyze the socio economic characteristics of the farmers, microcredit utilization and volume of microcredit disbursed, while Tobit regression model was used to establish the relationship between the volume of microcredit disbursed among rural farmers and the various factors influencing it. The results of the study revealed that the socioeconomic factors of the beneficiary farmers significantly affected microcredit disbursement in the study area.Most (64.6%) of the farmers received between ≤₦50,000. The results revealed that most of the microcredit received by beneficiaries was utilized for the purpose of crop production only. The variables in the regression model significantly explained the variations in microcredit disbursement among beneficiaries in the study area. Therefore the regression model is good fit for the data, suggesting a linear relationship among the variables. The study also revealed that farm income records, good credit experience, level of education and complete documentation are the key criteria recommended for microcredit loan applications.

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