



DETERMINANTS OF CREDITS DEMANDED FROM MICROFINANCE INSTITUTIONS BY FARMERS IN SOUTHERN AGRICULTURAL ZONE OF NASARAWA STATE, NIGERIA



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Abstract: This study focused on analyzing the determinants of farmers' access to credit from microfinance banks by farmers in Southern Agricultural Zone, Nasarawa State. The specific objectives were to determine the factors responsible for farmers' access to microfinance credits and identify the constraints militating against access to microfinance credit by the farmers. A multi-stage random sampling technique was used to select 60 rural farmers from three Local Governments Areas in Nasarawa State. The study adopted the descriptive statistics and Logit Regression to achieve the research objectives. The result of the study revealed that gender, marital status, membership of cooperative, farm size, farm ownership and years of education were factors that determine farmers' access to credits in the study area. High interest rate, delay in disbursement of loans and difficulty in documentation were the major constraints militating against effective accessibility of microfinance credit by farmers. The study recommended that farmers should participate in cooperative organizations as it plays a key role in determining their access to credit as well as owning larger farms to serve as their collateral when accessing loan.

Keywords: Access, agricultural zone, credit, determinants, microfinance, farmers

Introduction

Microfinance also termed microcredit refers primarily to small, development-oriented loans made to low-income borrowers with the aim of helping them to develop commercial and viable enterprises or start business (Vijiya, 2012). Muhammad *et al.* (2006) also defined microfinance as the process of offering poor people access to basic financial services, such as loans, savings, money transfer services and micro insurance. Microfinance Institutions (MFI) and microcredit are relatively new terms in the field of development, first coming to prominence in the 1970s, according to Robinson (2001) and Otere (2009). Prior to then in the 1950s through to the 1970s, the provision of financial services by donors or governments was mainly in the form of subsidized rural credit programmes. This often resulted in high loan defaults, high loss and an inability to reach poor rural households (Robinson, 2001).

Robinson states that the 1980s represented a turning point in the history of microfinance in that MFIs such as grameen bank began to show that they could provide small loans and saving services profitably on a large scale. The funds available with MFIs were not sufficient to fully fund and sustain, and could not attain wide outreach to clients (Robinson, 2001). It was also at this time that the term "microcredit" came to prominence in development (Robinson, 2005). The difference between microcredit and the subsidized rural credit programmes in the 1950s and 1960s was that microcredit insisted on a payment, on charging interest rates that covered the cost of credit delivery and by focusing on clients who depended on the informal sector for credit. It was then clear for the first time that microcredit could provide large scale outreach profitably.

The 1990s saw accelerated growth in the number of microfinance institutions created and increased emphasis on reaching scale (Robinson, 2001). Dichter (2009) refers to the 1990s as "the microfinance decade". Along with the growth in microcredit institutions, attention changed from just the provision of credit to the poor farmers to the provision of other financial services such as savings and pensions (microfinance) when it became clear that the poor had a demand for these other services (Mix, 2005).

Central Bank of Nigeria (CBN, 2005) refer to microfinance as small savings, credit and insurance services extended to socially and economically disadvantaged segments of the society. Micro finance is claimed to be powerful tool which can be used effectively to address power, empower the socially marginalized poor, and strengthen the social fabric. In addition, microfinance institutions are engaged in the provision of financial services to the poor. Microfinance is acting as potent tool in reducing the vulnerability situation of farmers. The bank added that microfinance is the provision of financial services to low income clients or solidarity lending groups including consumers and the self-employed, who traditionally lack access to banking and related services. More broadly, it is a movement whose objective is to have a world in which as many poor and near poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance and funds transfers. Those who promote microfinance generally believe that such access will help poor people out of poverty. In December, 2005, the bank introduced a microfinance policy framework to enhance the access of micro-entrepreneurs and low income households to financial services required to expand and modernize their operations in order to contribute to rapid economic growth. The rationale was that no inclusive growth can be achieved without access to this segment of the economic strata to factors of production, especially financial services. The basis of this bold initiative in 2005 is still valid. With the benefit of operating the microfinance policy, CBN believes that a review of the policy to reflect lessons from experience, global economic trends and the envisioned future for small business development in Nigeria has become auspicious. Microfinance services refer to loans, deposits, insurance, funds transfers and other ancillary non-financial products targeted at low income clients. Meanwhile, according to CBN (2011), features that distinguished microfinance from other formal finance products include Smallness of loans, savings and other financial services, absence or reduced emphasis on collateral and simplicity of operations.

Before the emergence of Microfinance Banks (MFBs) under the Microfinance policy, the people that were un-served and undeserved by formal financial institutions usually found

succor in Non-Organizational Microfinance Institution (NGOMFIs), money lenders, friends, relatives and credit unions (CBN, 2011). These informal sources of funds have helped to partially fill a critical void, in spite of the fact that their activities were neither regulated nor supervised by the Central Bank of Nigeria. This revised policy frame work continues to take cognizance of this category of institutions, which have now become key players in the Nigerian Microfinance Landscape. However, more emphasis will be placed on Microfinance Institutions (MFIs) because they are under the regulatory and supervisory preview of the Central Bank of Nigeria (CBN). Nigeria with a total population of over 160 million people has approximately 70 percent (98 million) living below the poverty level estimated at US \$1.25 per day as indicated by the United Nations poverty line definition (CBN, 2012). The growing potential of Microfinance and enhanced financial inclusiveness in poverty reduction, economic growth and development has increased category of active players in the Microfinance space in Nigeria in the past decade, National Microfinance Development Strategy (NMFDS, 2012). Current literatures have underscored the growing importance of microfinance as an essential poverty alleviation mechanism (Navasjas *et al.*, 2000; Ahmad, 2001, 2000; CGAP, 2003; Brau *et al.*, 2004; Chowdhury *et al.*, 2005). This has been creation of opportunities for entrepreneurship, enabling the poor to eliminate unemployment and poverty by fulfilling their creative potential (Yunus, 2001).

This study was on determinants of credits demanded from microfinance institutions by farmers in southern agricultural zone of Nasarawa State, Nigeria with specific objectives of analysing the socioeconomic determinants of credits demanded from microfinance institutions by farmers' and identify the constraints against access to microfinance credit in the study area.

Review of studies on access to credit by farmers

In the study of agricultural credit access by Grain Growers in Uasin-Gishu County, Kenya, Kosgey (2013) also found that agricultural credit access is influenced by farmers' age, education level, family size, household size, repayment period.

Mpuga (2008) found that age of an individual positively related to the decision to apply for credit and the amount of credit applied for. The author further stated that the young might tend to save and/or borrow more for various activities while the old are less. Also, Zeller (2006) has found age to positively affect the decision to demand for credit. This means that the young and the energetic individuals, with an ambition to earn higher incomes and expand investment or engaged in different activities are expected to be more active in terms of saving so as to accumulate enough capital, this is because older farmers have more social network or social capital and thus, have more access to credit market.

Factors that influence demand for credit can be categorized into two: the household/individual characteristics and the attributes of the financial institution (Omboi, 2011). He identified individual/household characteristics to includes the level of income, sex, age, education and the attributes of the financial institution that may affect an individual's/household's decision to demand for credit from that source includes interest rate, terms of the credit and distance from the provider (Omboi, 2011)

Okurut *et al.* (2005) employed a Logit model to investigate factors that influence both credit demand and supply in Uganda by using observed household and individual characteristics. The household characteristics that influenced demand included age, education, and household expenditure per adult equivalent. They further argued that, household composition, migration status and credit demand is higher for

males than females and for households with a higher dependency ratio.

Using a stepwise linear regression analysis to determine the relationship between socio-economic characteristics of farmers and their rate of accessibility to agricultural credit, Etonihu *et al.* (2013) concluded that education, distance to source of credit and types of credit source were significant factors affecting farmers' accessibility to agricultural credit in Nigeria. In their finding it was possible to show that one additional year of education would increase the probability of borrowing by another 2.5 percent and doubling land endowment would increase the probability by 5.6percent. On the other hand, the impact of these factors was not the same rather it varied considerably by kind of financial institutions (formal or informal). For example, while education increases households' probability to borrow from formal credit markets, it decreases or does not affect the informal credit demand at all. But this is not always true (Chen and Chiivakul, 2008). Moreover the level of income is an important factor that would determine the demand for credit. Individuals may desire a higher debt while they are in a higher current income level and this may be the individual's rational decision as these individuals have higher future income expectations (Chen and Chiivakul, 2008). This means that at low levels of income, the household has limited resources to save and less demand for credit than at higher level of income. However, another explanation shows that, when individual's income is very low, the marginal utility of consumption is very high, leading to high demand of credit. Also, Magri (2002) argued that net wealth, as an indicator of household's current and future endowment is major determinant of credit demand. Whenever households' endowment grows, households can automatically finance a greater share of their desired consumption and their demand for credit may reduce. At the intermediate level of individual's wealth, an increase in endowment can increase the consumption need and therefore the demand for credit increases. According to the study, it was found that, the values of assets have significant and positive effect on the desired debt. But at maximum level, the relation between demand for credit and the value of asset and desired debt was found negative (Chen and Chiivakul, 2008).

Materials and Methods

Description of the study area

This study covers rural-based microfinance Banks in the Southern Agricultural Zone of Nasarawa state, Nigeria. The state came into existence on the 1st of October 2006. It is centrally located in the North Central region of Nigeria. The state lies between latitude 7^o and 10^o north of the equator and longitude 7^o and 11^o East of the Greenwich Meridian. It shares boundary with Kaduna state in the North, Plateau state in the East, Taraba and Benue states in the South, while Kogi and Abuja in the West (Binbol and Marcus, 2005). Nasarawa state has altitude of 181.5 m above sea level and comprises of thirteen Local Government Areas; Akwanga, Doma, Karu, Keana, Keffi, Kokona, Lafia, Nasarawa, Nasarawa Eggon, Obi, Toto and Wamba (National Population Census, 2006). The Southern Agricultural Zone comprises of five (5) Local Government Areas which are Awe, Doma, Keana, Lafia and Obi.

The topography of the zone is mainly undulating plains with occasional elevation of between 40-80 meters with geological formation of sandy, loamy and clay soil. The zone is blessed with abundant agricultural resources and about seventy percent of the total population derives their livelihood from agriculture (Nigeria Metrological Agency (NIMET) 2005). The zone is characterized by long periods of rainy season (March-October) and dry season (November-February). The average annual rainfall is approximately 107.3 mm and annual

temperature ranging from 22.7°C - 36.8°C (Luka and Yahaya, 2012). The major ethnic groups in the area include; Alago, Eggon, Kanuri, Migilli and Gwandara. Others are Tiv, Bassa, Idoma, Mada, Hausa, Fulani, Igbo, Yoruba and Ngas.

The socio-economic activities of the people are farming and trading. The major crops cultivated are groundnut, cassava, beans, rice, maize, yam, guinea corn, melon and lots of fruits such as cashew, orange, mango, pawpaw and guava. Farmers in the study area also keep birds (poultry) and some livestock such as goats, sheep and cattle.

Sample and sampling techniques

A multi-stage sampling procedure was adopted for the study. Firstly, three local government areas in the zone were randomly selected out of the five Local Government Areas. Secondly, two farming communities (villages) were then randomly selected from each of the three (3) selected LGAs to give a total of six villages. In the third stage, ten farmers were randomly selected from each of the six villages to give a total of sixty respondents for the study.

Data collection

Primary data were used for this study. The data was collected through structured questionnaire and personal interview. The questionnaire were designed to capture variables such as socio-economic characteristics of respondents, accessibility of microfinance credit, volume of loan sought, volume of loan received and factors that affect rural peoples' participation in the credit market through microfinance banks among the respondents in the study area.

Data analysis

Logistic regression was used to achieve objective 1 and descriptive statistics (frequency, percentage and mean) was used to achieve objective 2

Logistic regression

Logistic regression was used to estimate the relationship between access to micro-finance credit (dependent variables) and the socio-economic characteristics of the respondents (independent variables) using Statistical Packages for Social Science (SPSS). The logistic regression is specified as follows:-

$$\text{Logit (p)} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_{12}X_{12} + e_i$$

Where: p = Farmers' access to microfinance Credit (1 = farmer received credit, 0 =farmer did not receive credit); b₀ = constant; X₁ = Age of the respondents (Years); X₂ = Sex of the respondents (1= Male, and 0=Female); X₃ = Marital status of the respondents (1 = Married and 0 = Not Married); X₄ = Educational qualification of the respondents (No Formal Education=0, Primary Education=1, Secondary Education=2, Tertiary Education=3); X₅ = Major occupation (Farming=1, Others = 0); X₆ = House hold size (Number of Household Members); X₇ = Membership of Association (1=Yes, 0=No); X₈ = Farming experience (Years); X₉ = Farm size (Hectares); X₁₀ = Farm ownership (1=Yes, 0=No); X₁₁ = Formal Schooling (Years); X₁₂ = Annual income (Naira); b₁ - b₁₂ = Regression Coefficients; e_i = error term

Results and Discussion

Determinants of farmers access to microfinance credit

Table 1 presents the results of the logistic regression analysis of the factors influencing farmers' access to microcredit in Southern Agricultural Zone of Nasarawa state. Based on econometric, statistical and economic criteria, the logistic regression model was selected.

Gender was negative (-3.451) and had a significance of 10% relationship with access to microfinance credit indicating that women were more likely to receive loan as compared to their men counterparts. This result agrees with the findings of Khalid (2003), Oladele and Olagunji (2013) and Anang *et al.* (2015) who reported a negative relationship between gender

and access to credit. Marital status was negative (-3.451) and had a significant (5%) relationship with access to microfinance credits suggesting that married persons were likely to avoid borrowing because they may likely spend it on their dependents instead of utilizing it on the primary purpose. A positive 5.152 and significant (5%) relationship was observed between farmers' membership of cooperative having access to credits. This revealed that farmers who belong to cooperative organizations are more likely to access credit compared to those that do not belong to any cooperative organization as the burden of remittance depend on group rather than individual.

The result of the logistic regression also showed a positive (2.437) and significant (5%) relationship between farm size and the access to microfinance credit. This opined that the larger your farm sizes the higher the chances to access credits. Farm ownership was positive (4.378) and significant at 1% depicting that those who own their farms lands are more likely to access credit compared to those that hire or rent their farm land. Years of formal schooling was positive (0.526) and significant (5%) in relation to access to credit, unveiling that the more someone engage in formal education, the more the person have access to credits.

However, age, education, household size, experience and annual income were not significant at conventional level. This result disagrees with the findings Anang *et al.* (2015) who observed a positively and significant relationship between household income and access to microfinance credit. Their finding suggests that farmers with higher income are more likely to have access to agricultural loans compared to those with lower farm incomes.

Table 1: Logistic regression analysis of determinants of farmers' access to credit from microfinance institutions

Parameter	B	S.E.	Wald	Exp(B)	Sig.
Age	0.221	.156	2.006	1.248	.157
Gender	-3.451	1.956	3.112	.032	.078*
Marital Status	2.437	1.174	4.308	.087	.038**
Educ. Qualification	1.433	1.117	1.644	.239	.200
Household Size	0.295	.252	1.372	.745	.242
Membership of Coop.	5.152	2.327	4.900	172.802	.027**
Experience	0.182	.116	2.446	.834	.118
Farm Size	2.437	1.217	4.009	11.439	.045**
Farm Ownership	4.378	1.598	2.215	10.778	.003***
Years of Formal School	0.526	.286	3.390	1.692	.066**
Annual Income	0.000	.000	1.318	1.000	.251
Constant	0.005	2.626	.000	1.005	.998
Cox & Snell R = 0.353					
Nagelkerke R square = 0.594					
-2 Log likelihood = 27.951*					

Source: Field survey, 2017; *** = Significant at 1%

** = Significant at 5% * = Significant at 10%

Constraints associated with access to microfinance credit by farmers

The major constraints to access of micro finance credit identified by farmers in the study area include high interest rate (73.3%), delay in disbursement of the credit applied by farmers (66.7%), complicated application procedure (45.0%) as most farmers lack time for such procedure and therefore would not be patient enough, and not given the amount of credit applied (40.0%) (Table 2). Other constraints identified by the respondents in the study area include; strong level of conditions associated with acquiring credit, short repayment

period, fear of harassment by creditors, and the issue of collateral. This finding corroborate with the findings of Anyanwu (2004), who observed that the interest rates in the microfinance institution are much higher than the prevailing rates in the banks. The finding is also in line with that of Iganiga (2008); and Omobi (2011), who identified short repayment period as constraint to farmer's access to credit. Schmidt and Kropp (2008) revealed that the type of financial institution and its policy will often determine access. They further revealed that where credit duration, terms of payment, required security and the provisions of supplementary services do not fit the needs of the target group, potential borrowers will not apply for credit even where it exists and when they do, they will be denied access. Bigsten *et al.* (2003) and Fleisig (2005) stated that in developing countries asymmetric information, high risks, lack of collateral, lender-borrower distance, small and frequent credit transactions of rural households make real costs of borrowing vary among different sources of credit.

Table 2: Constraints militating against effective accessibility of micro finance credit by farmers (n=60)

Constraints	Frequency	%	Rank
Lack of information	16	26.7	9
Short repayment period	19	31.7	5
Delay in disbursement	40	66.7	2
Complicated application procedure	57	45.0	3
Bank is far away	15	25.0	10
High interest rate	44	73.3	1
No collateral	17	28.3	8
Fear of harassments by creditors	18	30.0	7
Strong level of conditions associated with acquiring credit	19	31.7	5
Not given the amount applied	24	40.0	4
Risk associated to agriculture due to crop/livestock failure	10	16.7	12
Price fluctuation associated with agricultural produce	11	18.3	11

Source: Field survey, 2017

*Multiple responses

In developing societies like Nigeria, men and women engage in different economic activities, which have different implications on the demand for credit. Social roles and norms dictate the segregation of activities by gender where women mostly concentrate on farm activities and household chores while men undertake income earning activities because those are largely that society prescribes for them (Ilahi,2001). This is exacerbated by the differential power relations between men and women where women have virtually no control of assets such as land, animals and buildings that could be used as collateral. Omobi (2011), study found that major reason for not seeking credit was lack of required security and being pessimistic on their ability to repay the credit.

Moreover, Women who step outside traditional gender roles by taking a more independent and entrepreneurial approach in their economic lives will be blamed with the traditional constriction of gender and activity-regulating social norms. If these norms are strong enough, such women may express no demand for credit even when they have profitable investment opportunities. If they do, the society will object them thinking that women who actively engage in market-oriented activities are not able to take adequate care of their home responsibilities (Fletschner and Carter, 2008). As a consequence, the probability of demanding credit is negatively correlated with being female-headed household (Bendig *et al.*, 2009; Nwaru, 2011). Single-headed (for instance widowed) households are often considered 'less lucky' or disadvantaged and thus have difficulties in social networks. Old headed households have less ability to smooth

consumption by themselves if they face adverse shocks, as they do not have enough working household members to increase income by increasing labour working hours. Thus, they are forced to borrow from informal institutions (Kochar, 2007). Married couples could be given more credit because they are less mobile and loan may be jointly underwritten and his report proved that singles are 3.4 percent more likely to be constrained than married couples (Jappelli, 2010).

Conclusion

The study examined the factors that determine access microfinance credit by farmers in Southern Agricultural Zone of Nasarawa State. The study reveals that gender, marital status, membership of cooperatives, farm size, farm ownership and years of education were the major factors that determine credits demand by farmers in the study area. In addition, high interest rate and delay in disbursement of the loan are major constraints associated with credit demanded by farmers in the study area.

Recommendations

Based on the information from this study, for policy making by all stakeholder and subsequently increased agricultural output especially in this period of diversification. The study recommendations were made;

- i. Farmers should participate in cooperative organizations and societies as it plays a key role in determining their access to credit.
- ii. Farmer should access own and access larger farm sizes to serve as their collateral to enable them have access to credits for optimum output.
- iii. It also recommends that loans of low interest rate should be disbursed to farmers as at when due especially at the start of production season for effective utilization by farmers.
- iv. Farmers are encouraged to undergo both formal and non formal education for proper understanding and documentation of loan facilities.

Conflict of Interest

Authors declare that there are no conflicts of interest.

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