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DETERMINANTS OF ACCESS TO FORMAL AND INFORMAL AGRICULTURAL LOAN AMONG FARMERS IN OBUBRA LOCAL GOVERNMENT AREA, CROSS RIVER STATE, NIGERIA

Kuye, Olufemi Oludayo*, Abiodun, Stephen Olalekan[1] and Edet, Emem Udo[2]
*,[2]Department of Agricultural Economics and Extension, Faculty of Agriculture and Forestry, Cross River University of Technology, Obubra Campus, PMB 102, Obubra, Cross River State, Nigeria
[1]Department of Economics, Tai Solarin College of Education, Omu-Ijebu, Ogun State, Nigeria
*Corresponding author's e-mail: dayokuye@yahoo.com

Abstract
This study investigated the determinants of access to formal and informal agricultural loans among farmers in Obubra Local Government Area of Cross River State, Nigeria. Specifically, the study described the socio-economic characteristics of the respondents in the area, identified the formal and informal sources of agricultural loans, analyzed the factors that determine the access of farmers to formal and informal agricultural loans and identified the farmers constraints in acquiring loan from formal and informal sources in the area. Primary data were collected by using multi-stage random sampling technique. Data were analyzed with descriptive statistics and binomial test model. Majority 60% of the respondents were females, about 67% were married and 32% were between 31-40 years of age. Also, about 48% had secondary education and 38% had farming experience of 15 years and above. About 81% obtained loan from informal sources while only nineteen percent (19.23%) obtained loan from formal sources. The binomial test results revealed that farming experience, education level, guarantor, farm size, farm income, household size, and cooperative societies' participation significantly influenced loan accessibility by formal loan sources users while gender, marital status, guarantor, farm size, and household size significantly influenced loan accessibility by informal loan sources users. Critical constraints of loan acquisition from formal sources were lack of guarantor, distant to loan sources and repayment period among others while high interest rate, lack of guarantor, repayment period and amount granted were identified as critical constraints of loan acquisition from informal loan sources. Formal financial institutions should relax their conditions on collateral and guarantor for obtaining loan. Farmers should be encouraged to join farmers' cooperatives groups to enable them pull their resources together in order to benefit from formal sources of loan.

Key words: determinants, loan, formal, informal, access, farmers

Introduction

In Nigeria, smallholder farmers are still suffering from low productivity, poor production techniques, low inputs usage and poor yield. They are trapped in a vicious cycle of poverty as a result of low productivity. Farmers face huge challenges in farmland preparation, accessing farm inputs, storage and marketing their products. In order to remove these challenges, farmers need adequate financial support (Kuye, 2016). According to Aihonsu, (2001) inadequate flow

of credit into agriculture is a critical factor against incremental food production in Nigeria. Ogunleye (2000) asserted that access to credit would change the way small holder farmers view agriculture and the strategies they follow. This would enable them select better varieties of crops, plant early and stick to sustainable practices. Adequate access to credit facilities has been found to be one of the key drivers of economic development which help to break the vicious cycle of poverty in most agro-based developing economies (Lighton *et al*, 2015 and Kuye, 2016). Agricultural credit is a veritable tool for sustainable agricultural development to be achieved in any country of the world (Ololade and Olagunju, 2013).

Angba and Imoke (2008) asserted that Nigerian farmers require a vast amount of capital for successful farm operations. They contended that capital is needed for the purchase of agricultural inputs such as fertilizers, pesticides, insecticides, farm tools, implements and herbicides. Agricultural loans are obtained by farmers through informal (traditional) and formal (conventional) financial institutions.

Smallholder mixed-farm farmers in Obubra Local Government Area in Cross River State are still lingering along the line of low external inputs usage, poor land preparation and fertilization which results in their low farm productivity, low income, and poverty year in, year out. This could be attributed to their inadequate access to loan facilities both from the formal and informal sources in the area for effective and efficient production. Sonka, (1980) asserted that the determinants of agricultural loan accessibility among farmers depend on the farmer's credit reserve and owned assets or collateral that can be used to demand for the loan. He concluded that farmer's income is the foundation of his credit reserve. This paper therefore intends to determine the socio-economic factors (determinants) that are responsible for farmers' accessibility to loan facilities in the study area, Obubra Local Government Area in Cross River State, Nigeria.
However, the specific objectives of this paper were to:
(i) describe the socio-economic characteristics of the farmers;
(ii) identify the formal and informal sources of loan to farmers;
(iii) analyze the factors that determine the access of farmers to formal and informal loan;
(iv) describe the constraints farmers face in accessing loan from formal and informal sources.

Methodology
The study was conducted in Obubra Local Government Area of Cross River State in Nigeria. Obubra LGA is made up of eleven council wards from three clans viz: Adun, Osupong and Okom clans. Obubra LGA has a population of over 134,255 people and occupies a land mass of 1,086.27 km^2 (NPC, 2006). Obubra LGA is located in the Central Agricultural Zone of Cross River State. It is bounded in the south by Yakurr Local Government Area, part of Yala and Ikom Local Government Areas in the north, Akamkpa Local Government Area in the east and Ebonyi State in the west. Obubra lies between longitude 4^0 60" and 8^o 10"N of the Greenwich Meridian and latitude 5^o 50" and 7^0 23"E of the equator. The climate of Obubra is characterized by distinct wet and dry seasons with a mean monthly average temperature of about 27^oC and annual rainfall of between 2,000mm-2,250mm.The topography is fairly flat with a good drainage system. The soil is predominantly sandy loam (CRADP, 2012). Obubra has a vast

arable land forest and forest-based resources such as timber and vegetables. Crops like cassava, yam, rice, maize, oil palm and cocoa are the major crops grown in the area. The predominant occupation of the people is farming, fishing and hunting. They rear animals like sheep, goat, swine and poultry and engage in civil service work, marketing of agricultural produce especially yam, garri and palm oil, fishing, hunting and other forms of non-farm activities (CRADP, 2012).

The population of this study comprised of beneficiaries from the available formal agricultural loan sources in Obubra Local Government (Bank of Agriculture (BOA), First Bank of Nigeria, CRUTECH Community Micro Finance Bank) and the informal sources. Multi- stage random sampling technique was used to select the sample size. All the three clans in the Local Government were purposively selected for a wide coverage of the study area. In the first stage, three communities were purposively selected from each of the clans (Adun, Osopong and Okom) based on their vigorous participation in agricultural production, access roads, and availability of either formal and informal sources of loan in their community than in other communities in Obubra Local Government. The second stage involved random sampling of respondents using twenty percent proportionality ratio of the farmers' sample frame in each of the nine communities. They are Adun clan: Ovonum (19), Ofodua (22), Ofatura (8); Osokpong clan: Obubra (25), Ofunbongha I (19), Ofunbongha II (18) and Okom clan: Apiapum (16), Ohana (23), Ochon (6) giving a total of one hundred and fifty six (156) respondents used for the study. Only one hundred and thirty (130) questionnaires were retrieved. Data were analyzed using descriptive statistics to achieve objectives (i), (ii) and (iv) while binomial test model was used to analyze objective (iii). The Binomial test model was used to determine the factors effecting access to formal and informal loan among farmers in the study area.

The binomial test model is specified as follows:

$P(A \text{ and } B) = P(A) \,.\, P(B) = (A+B)^n$

Where;

A= Number of "YES" response

B= Number of "NO" response

n= Number of observation

P= Probability

Results and Discussion

Socio-economic characteristics of farmers

Findings on socio-economic characteristics of the farmers as contained in Table1 showed that majority 60% of the respondents were females and about 67% were married while those not married (single, divorced, widow and widower) were 33%. Majority 32% were between 31-40 years while those in the age range of 51 years and above were 18.5%. This results suggests that majority of the farmers are young and still very active to carry out farming operations; which is in contrast with the notion that rural farmers in Nigeria are aged. It also indicates that access to formal credit by this age group will have a positive impact on their productivity. According to Feder *et al*. (1988), the age distribution may be favorable in terms of credit access because as

older people have more experience with the economic activities, they are more likely to be creditworthy. That is, the older the farmer, the higher the likelihood of longer business experience and the greater the confidence repose on them by the lenders. In contrary, younger farmers with lower asset value may rely more on credit markets to meet their needs for capital inputs and to adopt new technologies (Nguyan, 2003) quoted in Etowa *et al.* (2006). Therefore, according to Etowa *et al.* (2016) in rural credit markets where older farmers might be relatively more creditworthy but have less demand for it, the younger farmers relying on credit for their survival are often disadvantaged.

Also, majority 47% had household size of 6 – 9 members which is an indication that they would have more access to family labour. Schereiner and Nagarajam (1997) quoted in Etowa *et al*. (2006) found that, the more the labour force available to a certain household, the higher its ability to overcome credit risk. Majority 47.7% obtained secondary education while 13.8% attained tertiary education and 33.8% had only primary education. On the whole, 95.3% had formal education. The high level of education gives the farmers greater opportunity to access loan. This is because increase in their level of awareness as a result of education makes the processes of seeking, applying for and obtaining loan easier. Moreover, Feder *et al*. (1988) found that education constitute an asset which determines credit access through on-farm efficiency. Formal education increases the farmers' financial management skills thereby securing their access to credit (Musebe, Oluoch and Wangia, 1993 quoted in Etowa *et al*, 2016).

About 42% had farm sizes of between 1- 2 ha which shows that they are small scale farmers and about 38% had more than 15 years farming experience. This result indicates that most of the farmers had reasonable number of years of farming experience. More so, high farming experience may have positive effect on the farmers' ability to avert risk and effectively use resources at their disposal. Furthermore, about 63% practiced arable farming. Among the crops grown were yam, cassava, rice, maize and vegetables. Apart from farming activity, about 27% engaged in trading as secondary occupation while only 11% were civil servants.

Table 1: Distribution of respondents according to socio-economic characteristics

Variables	Frequency	Percentage(%)
Gender		
Male	52	40
Female	78	60
Marital status		
Single	22	16.9
Married	87	66.9
Divorced	4	3.1
Widow	11	8.5
Widower	6	4.6
Age (Years)		
<20	3	2.3
21 – 30	22	16.9
31 -40	41	31.5
41 -50	40	30.8
50 and above	24	18.5
Household size (Number)		
1-5	59	45.5
6-9	61	46.9
10 and above	10	7.75
Education Level (Number of years)		
Never Attended	6	4.6
Primary	44	33.8
Secondary	62	47.7
Tertiary	18	13.8
Farm size (ha)		
< 1	44	33.8
1-2	54	41.5
3-4	22	16.9
5 and above	10	7.7
Farming experience (years)		
1-4	11	8.5
5-10	37	28.5
11-14	33	25.4
≥ 15	49	37.7
Farming systems practice		
Arable Crop	82	63.1
Permanent Crop	22	16.9
Livestock	3	2.3
Arable/Permanent	10	7.7
Arable/Livestock	11	8.5
Arable/Permanent/Livestock	2	1.5
Secondary occupation		
None	49	37.7
Trading	35	26.9
Craftwork	18	13.8
Driving	6	4.6
Civil Servant	14	10.8
Hunting	4	3.1
Others	4	3.1
Total	**130**	**100**

Source: Field data, 2016

Sources of loan to farmers

The results of sources of loan to the farmers shown in Table 2 indicates that majority 80.77% of the farmers had their loans from informal loan sources while only 19.23% had their loans from formal loan sources. The informal loan sources include osusu groups, money lenders, friends and relatives, cooperative associations and produce buyers. This result indicates that informal sources render much credit to the farmers than the formal sources which could be due to high interest rate charge, long distance to the few formal sources of loan, untimely disbursement of loan, cumbersome processing procedure and other conditional terms of loan attached to formal loan service in the study area.

Table 2: Distribution of respondents according to sources of loan

Sources of agricultural loan	Frequency	Percentage (%)
Formal		
First Bank of Nigeria	8	6.16
Bank of Agriculture	14	10.77
CRUTECH Community Micro Finance Bank	3	2.31
Informal		
Osusu groups	32	24.61
Cooperative associations	32	24.61
Produce buyers	10	7.69
Money lenders	15	11.54
Friends/relatives	16	12.31
Total	**130**	**100**

Source: Field data, 2016

Factors that determine access of farmers to formal and informal loan

The results of the binomial test analysis employed to determine the factors that influence access of farmers to formal and informal loan are presented in Table 3. Farming experience (X_1), education (X_4), guarantor (X_5), household size (X_8), and cooperative participation (X_9) were significant at $p<0.01$ while farm size (X_6) was significant at $p<0.1$ and net farm income (X_7) at $p<0.05$. Among the informal loan source users the significant determinant variables were gender (X_2) at $p<0.1$ while marital status (X_3), guarantor (X_5), farm size (X_6) and household size (X_8) were significant at $p<0.01$. The positive sign of the significant variables implies that the probability of farmers having access to loan will likely increase with increase in the variables. Farming experience, guarantor, farm size, farm income, family size and cooperative participation had positive influence on the probability of accessing formal loan among the farmers while education have a negative influence. The results agreed with the findings of Obisesan (2013) whose study revealed that gender, age, main occupation, participation in off-farm activities, membership of farmers' group, years of farming experience and crop yield significantly influenced farmers' credit accessibility. The findings also agreed with that of Adebayo *et al*. (2016) which indicated that farm size, farming experience and farm income had positive influence on the probability of accessing formal credit among small-scale cassava farmers in Kogi State. Arene (1992); Okorji and Mejeha (1993) identified loan size, size of farm, farmers age, income, level of formal education, farming experience as contributors to farmers accessibility to loans.

Table 3: Binomial test result of the factors determining loan accessibility

		Formal			Informal		
Variables	Response	Observed prop. (%)	Exact sig. (2-tailed)	S/L	Observed prop. (%)	Exact sig. (2-tailed)	S/L
Farming experience (X_1)	1	96	.000	***	49	.913	Ns
	0	4			51		
Gender (X_2)	1	48	1.000	Ns	32	-.001	*
	0	52			68		
Marital status (X_3)	1	36	.230	Ns	21	-.000	***
	0	64			79		
Education (X_4)	1	12	-.000	***	64	,230	Ns
	0	88			36		
Guarantor (X_5)	1	100	.000	***	98	.000	***
	0	0			2		
Farm size (X_6)	1	80	.004	*	71	.000	***
	0	20			29		
Net farm income (X_7)	1	76	.015	**	60	.101	Ns
	0	24			40		
Household size(X_8)	1	92	.000	***	80	.000	***
	0	8			20		
Cooperative participation (X_9)	1	88	.000	***	43	.230	Ns
	0	12			57		

Note: S/L=Significant level, 1=Yes, 0=No, Ns= Not significant, ***=significant at p<0.01. **=significant at p<0.05, *=significant at p<0.1

Source: Field data, 2016

Constraints militating against acquisition of loan

The results presented in Table 4 shows that the critical constraints identified by respondents as militating against acquisition of loan from formal sources were lack of guarantor (84%), distance to loan source (80%), repayment period (76%) and lack of collateral (72%) among others. Amount granted (48%), lack of awareness of loan sources (44%) and application fee payment (44%) were not critical constraints. Also, high interest rate (86.9%), lack of guarantor (83%), repayment period and amount granted (81% respectively) were identified as critical constraints against loan acquisition from informal sources while inability to access loan source (48.8%), fear of inability to repay (45.2%) and application period (38.1%) were not critical constraints in acquiring loan from informal sources.

These results conformed to the work of Haruna (2007), Ololade and Olagunju (2013) who observed that some constraints like high interest rate, repayment period, distance from loan source, lack of awareness of loan source and lack of guarantor militate against the acquisition of loan from formal and informal sources.

Table 4: Constraints militating against acquisition of loan from formal and informal sources

Constraints	*Percentage (%) Formal	*Percentage (%) Informal
Lack of guarantor	84	83.3
Lack of collateral	72	81.0
Lack of awareness of loan sources	44	69.0
Inability to access loan sources	40	48.8
Fear of inability to repay loan	40	45.2
Application fee payment	44	20.2
Application period	56	38.1
Repayment period	76	81.0
Amount granted	48	81.0
Collateral value	72	70.2
Distance to loan source	80	28.6
High interest rate	68	86.9

Source: Field data, 2016
Note:*Multiple responses were recorded
<50% = not a critical constraint, ≥50% = critical constraint

Conclusion

This study reveals that seven out of the nine determinant variables analyzed were significant factors influencing farmers' accessibility to formal loan sources (farming experience, education, guarantor, farm size, farm income, household size and cooperatives society participation) while five variables only significantly influenced farmers' accessibility to informal loan sources (gender, marital status, guarantor, farm size and household size) in the study area.

More so, the respondents identified lack of guarantor, distant to loan sources and repayment period among others as critical constraints farmers faced in accessing loan from formal sources while high interest rate, amount granted, repayment period and lack of guarantor among others are the critical constraints the farmers are facing in accessing loan from informal sources in the study area.

Recommendations

The following recommendations are proffered based on the findings of this study:

i. Formal financial sources in the study area should relax their conditions on provisions of collateral and guarantors for obtaining loan by farmers so that more farmers could have access to their loan facilities.
ii. Financial institutions operating in the study area should improve on their loan repayment period to be favourable to farmers.
iii. Farmers should be encouraged by Extension Agents in the study area to belong to cooperative societies around their communities in other to benefit from cooperative dividends.

iv. Extension agency in the study area should be strengthened and supported by government to ensure awareness creation about credit sourcing and acquisition among farmers.
v. Government and Non-Governmental Organizations should enhance credit support schemes with long-term repayment period for farmers in the area.

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