DETERMINANTS OF ACCESS TO CREDIT BY COCOA FARMERS IN OSUN STATE, NIGERIA

J.T.O. Oke, A.D. Kehinde* and A.J. Akindele

Abstract

This study investigated the determinants of access to credit among cocoa farmers in Osun state, Nigeria. Specifically, the study described the socio-economic characteristics of cocoa farmers in the study area, examined the factors affecting access to credit by cocoa farmers in the study area; and identified the constraints faced by cocoa farmers in credit acquisition. The study was conducted in Osun state, south-western Nigeria. A multi-stage sampling procedure was used for selecting respondents for this study. A total number of 180 farmers were selected for the study. Data were analyzed using Descriptive statistics and logit Regression. The results for the entire respondents showed average values of 46 years for age, 25 years for year of experience, 8 persons for household size, and about 88% of the respondents have formal education. Farm size ($p<0.05$), income ($p<0.05$) and years of schooling ($p<0.05$) show significant and positive effects on access to credit. On the other hand, gender ($p<0.05$), distance to credit source ($p<0.1$) and interest rate ($p<0.01$) are significant but have negative effects on access to credit by cocoa farmers in the study area. Majority (85.6%) of the cocoa farmers acknowledged lack of collateral security as a constraint in credit acquisition, while about 71.1 % acknowledged that high interest rate was a factor hindering credit acquisition. Other factors are acknowledged in the following order: Bureaucratic procedures 60.6%, lack of information about available credit sources 45%, mode of repayment 40%, no credit association 31.1% and non- membership of farmers'-based organization had 23.3%. Following the findings of the study, government, non-governmental agencies and financial institutions should provide cocoa farmers with adequate access to credit facilities and soft loans with low interest and without collateral security. In addition, cocoa farmers should be educated on the acquisition of credit.

Keywords: Determinants, Access to Credit, Cocoa Farmers, Osun State.

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Introduction

Cocoa *(Theobroma cacao),* is of importance to the State of Osun in terms of its foreign exchange earning ability. With respect to employment, it offers a number of people employment both directly and indirectly. It is also served as a source of raw materials to industries, as well as source of revenue to the governments of cocoa producing states (Nkang *et al.,* 2007). Despite the potentials of cocoa to the economy, it is interesting but unfortunate to note that the trend of cocoa production in Nigeria is been declining. This could be attributed to low productivities on individual cocoa farms among other problems (Daniel, 2009). Consequently, low productivities have been attributed to lack of access to credit among other factors. Several authors (Ike and Umuedafe, 2013; Nwachukwu *et al.,* 2010; Idowu

et al., 2007) have noted that inadequate access to credit is prominent among cocoa farmers in Nigeria. This has kept cocoa farming at the subsistence level and has serious on the outcomes of the farmers (Nwankwo, 2004; Oladeebo and Oladeebo, 2008). Efforts have been made by Government to delivering credit services to cocoa farmers through a number of programmes (Ugbajah and Ugwumba, 2013).

Despite this, credit is still insufficient among cocoa farmers due to some factors (Abedullah *et al*, 2009; Eze *et al.,* 2010; Adebayo and Adeola, 2008; Ajagbe, 2012; Ololade and Olagunju, 2013; Akpan *et al.,* 2013). Following from this, this study investigated the determinants of access to credit among cocoa farmers in Osun State

Specifically, the study described the socio-economic characteristics of cocoa farmers in the study area, determined the factors affecting access to credit by cocoa farmers in the study area; and identified the constraints faced by cocoa farmers in credit acquisition.

Methodology

Study area

The Study area is Osun State carved out of Oyo State on 27 August 1991 with Osogbo as the state capital. It lies between latitude 7 and 30°N and longitude 4 and 30°E. The State shares interstate boundaries with Kwara State in the North, Ogun State in the south, Oyo State in the west and Ondo State in the east. The State has a landmass of about 9,251 km². It is currently made up of 30 Local Government Areas (LGAs). Osun State is divided into 3 Agricultural zones by Osun State Agricultural Development Project (OSSADEP) viz., Osogbo, Iwo and Ife/Ijesha. Estimates in the recently released provisional figures of the 2005 census put Osun State human population at 4.137627 million (NBS, 2006). The State exhibits the typical tropical climate with prominent wet and dry seasons with fertile soil, which encourages the production of crops cocoa, maize, yam, cassava, millet, rice, plantain and cashew. The rainy season generally occur between April and October while the dry season occurs between November and March. The mean annual temperature in the State varies between 21.1°C and 31.1°C. The mean temperature is highest at the end of the harmattan, which is from the middle of January to the onset of the rains. Rainfall figures over the State vary from an average of 1000 mm in the derived savannah agro-ecology to 1200 mm in the rain forest at the onset of heavy rains to 1600 mm at its peak in the rain forest part of the State.

Sampling procedure and sample size

A multistage sampling procedure was used to select 180 respondents for the study. The first stage involved the purposive selection of one agricultural development zone out of the three agricultural development zones in the State. The selection was based on the predominance of cocoa production in the zone. The second stage involved the simple random selection of six Local Government Areas out of the ten Local Government Areas in the agricultural zone. The third stage involved the simple random selection of two villages from each of the Local Government Areas. In the last stage, 15 cocoa farmers were randomly selected from each of the villages giving a total of 180 cocoa farmers used for the study.

Analytical technique

Descriptive statistics and logit regression model were used to analyze the collected data.

Descriptive statistics

Descriptive statistics (mean, percentages and frequency distribution) were used to describe the socioeconomic characteristics of cocoa farmers and constraints faced in credit acquisition in the study area.

Logit regression model

Binary logit model was used to analyzed the determinant factors affecting farmer's access to credit.

Explicitly, it expressed as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + e \quad .... \quad 2$$

Where, Y= ("1" if respondent has access to credit and "0" if respondent has no access to credit).
X_1=Gender (1 if male, 0 if female); X_2 = Farming experience (years); X_3= Extension contact (1 if respondent receives extension services, 0 if otherwise); X_4=Interest rate (%); X_5= Distance between the lender and borrower (km); X_6=Farm size (hectares); X_7=Group membership (1 if the respondent is a member of a farmer based organization (FBO), 0 if otherwise); X_8=total income from farming in the last cropping season (naira); X_9= Literacy status (1 if respondent has formal education, 0 if otherwise); X_{10}= Access to guarantor (1 if respondent has access, 0 if otherwise)
e=error term

Results and Discussion

Socio-economic characteristics of cocoa farmers

The socio-economic characteristics of the respondents were presented in Table 1. Majority (79%) of the farmers were male. This is in conformity with the findings of Ololade and Olagunju (2013). About 91% of the respondents were married. This finding is in line with Onyenucheya (2005). The mean age of sampled farmers was 46.3 years. This indicates that on the average, the respondents are within the active and productive age group, likely to source for credit to improve their production. This is in line with the findings of Oni *et al.* (2005). Majority (88%) of the respondents had formal education. The mean household size in the study area was 8 persons. This is in conformity with Ololade and Olagunju (2013). The mean years of experience was 24.9 years. This study reveals that majority of the respondents were highly experienced in cocoa farming. According to the Table, majority of the cocoa farmers (57.8%) in the study area had farm sizes of 2-4 hectares. This is in conformity with the findings of Akanni and Dada (2012). About 65% of the farmers in the study area were involved in fulltime farming. This shows that the predominant occupation of respondents in the

study area is farming and they earn most of their income from farming activities. This tallies with Arigbo and Ifenkwe (2013). A smaller percentage (40%) of the farmers in the study area had access to credit.

Table 1. Socio-economic Characteristics of Cocoa Farmers.

Variables		Cocoa Farmers
Age (years)		46.15 (±12.73)
Male (%)		79.00
Married (%)		91.00
Formal education (%)		88.00
Household size (#)		8.12 (±3.97)
Access to credit		40.00
Farm size (ha)		
Less than 2		12.80
2-4		57.80
More than 5		21.10
Years of farming experience		24.90 (±13.62)
Primary occupation (%)		65.00

Source: Field survey, 2017

Determinants of access to credit by cocoa farmers

The determinants of access to credit by cocoa farmers were presented in Table 2. The R-squared value for the determinants of access to credit was 67.90%. This suggests that 67.90% of the variability in the access to credit of the respondents is jointly explained by variations in the specified independent variables in the model. Years of schooling was statistically significant at 5% with positive effects on access to credit by cocoa farmers in the study area. This implies that an increase in years of schooling increases the likelihood of accessing credit. This finding concurs with the findings of Hussein (2007). The total annual income was statistically significant at 5% level with positive effects on access to credit by cocoa farmers in the study area. This implies that an increase in total income in the study area will lead to an increase in the likelihood of accessing credit. This result conforms to the findings of Ojo (2005). Farm size was statistically significant at 5% with positive effects on access to credit by cocoa farmers in the study area. This implies that an increase in farm size would lead to an increase in the likelihood of accessing credit by cocoa farmers in the study area. On the other hand, gender was statistically significant at 5% level with negative effects on access to credit by cocoa farmers in the study area. This implies that being a male reduces the likelihood of accessing credit by cocoa farmers in the study area. This is in line with the findings of Ololade and Olagunju (2013). Distance to credit source was statistically significant at 10% level with negative effects on access to credit to credit, this implies that the likelihood of accessing credit in the study area increases with a decrease in distance to the nearest financial services provider. This is in conformity with the findings of Hussein (2007). Interest rate was statistically significant at 1% level with negative effects on access to credit. This implies that the likelihood of accessing credit in the study area decreases as the interest rate charged on credit increases. This is in line with the findings of Ololade and Olagunju (2013).

Table 2. Determinants of access to credit by cocoa farmers.

Variables	Coefficient	P-value
Gender	-3.815**	0.031
Farm experience	-0.070	0.183
Extension services	-4.579	0.642
Farm size	0.938**	0.026
Group membership	-0.601	0.786
Income	0.000**	0.032
Education level	0.749**	0.016
Collateral security	-15.057	0.999
Interest rate	-5.029***	0.001
Distance	-0.287**	0.068
R^2	0.679	

Source: Field survey, 2017
*NB: * significant at 10%, ** significant at 5%, *** significant at 1%.*

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Constraints affecting farmers access to credit

Table 3 showed that majority (85.6%) of the cocoa farmers acknowledged lack of collateral security as a constraint in credit acquisition, while about 71.1 % acknowledged that high interest rate was a factor hindering credit acquisition. Other factors were acknowledged in the following order: Bureaucratic procedures 60.6%, lack of information about available credit sources 45.0%, mode of repayment 40.0%, no credit association 31.1% and non-membership of cooperatives had 23.3%.

Table 3. Frequency and percentage distribution of problems faced by cocoa farmers in credit access.

Constraints	Frequency*	Percentage
High interest rate	128	71.1
Lack of collateral security	154	85.6
Lack of information about available credit sources	81	45.0
Bureaucratic procedures in credit acquisition	109	60.6
Non-membership of farmers' based organization	42	23.3
No credit association	56	31.1
Mode of repayment	72	40.0

Source: Field survey, 2017
* Multiple response

Conclusion

The study concluded that cocoa is one of the major cash crops vastly produced in the study area with more male farmers than female farmers. Cocoa production was undertaken by smallholder farmers with large household sizes and vast experience in cocoa farming. Majority of the cocoa farmers had access to credit in the study area. The major determinants of access to credit by cocoa farmers in the study area were farm size, income, gender, education level, distance to credit source and interest rate. Cocoa farmers with larger farm sizes, more years of schooling as well as higher annual incomes were more likely to access credit in the study area. On the other hand, male farmers in the study area were unlikely to access credit. Also, high interest rate charged on loans decreased chances of accessing credit in the study area. Farmers were less likely to access credit from credit institutions that were farther away from them. The major constraints faced by farmers in accessing credit in the study area were lack of collateral security, high interest rate and bureaucratic procedures in accessing credit. Following the findings of the study, government, non-governmental agencies and financial institutions should provide cocoa farmers with adequate access to credit facilities and soft loans with low interest. In addition, cocoa farmers should be educated on the acquisition of credit.

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