

DETERMINANTS OF CREDIT ACCESSIBILITY AMONG COCOA FARMERS IN OSUN STATE

Adewuyi¹, S. A., Taiwo¹, O. T., Adegbite², D. A., Oyeyinka³, R. A. and Akerele¹, D.

ABSTRACT

¹Department of Agricultural Economics and Farm Development, Federal University of Agriculture Abeokuta. ²Agricultural and Media Resources Center, Federal University of Agriculture Abeokuta. ³Department of Agricultural Administration, Federal University of Agriculture Abeokuta. Corresponding author's email: elisam99@yahoo.com Phone: 08035994207

Limited access to credit opportunities keeps many Nigerian farmers in abject poverty, cocoa farmers inclusive. This study assessed the determinants of credit accessibility among cocoa farmers in Osun State. The study was based on primary data collected in a cross-sectional survey of randomly selected cocoa farmers. Descriptive statistics and logit regression were used to analyze the data. Results revealed that 83.8% of the cocoa farmers were male with a mean age of approximately 59 years. The majority (89.6%) of the farmers were married with more than 50% of them having access to formal education. Approximately 53.2% of the farmers had no access to credit. Major constraints to credit access by the farmers were distance to credit source (47.3%), delay in disbursement (41.3%), and high interest rate (39.0%). Logit regression revealed education and membership of association as factors with significant influence on credit accessibility among cocoa farmers. Improved access to formal education, timely disbursement of credits and efforts to strengthen cocoa farmers association for improved credit availability and accessibility are advocated.

Keywords: *cocoa farmers, credit access, loan disbursement, interest rate, collateral, credit sources*

INTRODUCTION

Agricultural credit is the process of obtaining control over the use of money, goods and services in the present in exchange for a promise to repay at a future date (Adegeye and Ditto, 1985). Agricultural credit enhances productivity and promotes the standards of living by breaking vicious cycle of poverty of small scale farmers. In modern farming business in Nigeria, provision of agricultural credit is not enough but efficient use of such credit has become an important factor in order to increase productivity. Credit for rural smallholders, especially in agriculture, is assuming increasing importance in many parts of the world in response to the needs of less privileged entrepreneurs with limited capital base in the sector. According to development professionals, the lack of access to credit by poor rural households has negative consequences for agricultural productivity, income generation and household welfare (Ayegba and Ikani, 2013). In the face of intense poverty in the rural economy where farmers are majority, credit is necessary for capital formation, diversified agriculture production and efficiency in resources use (Nwaru and Nnadozie, 2005). Credit is a way of live in today's world of specialization. It is essential for efficiency and growth in agriculture because technological growth has given rise to a situation in which farm business must get larger in order to remain competitive.

Capital plays an important role in agricultural development, but owing to the low margin of savings, most farmers are unable to accumulate capital, especially the peasant farmers whose lack of capital seems to be a crucial factor affecting their level of income. Credit facilities for farmers are poor and limited because among other things, they are unable to offer acceptable and marketable security. One of the major factors responsible for the declining agricultural productivity is the farmer's limited capacity in Nigeria to access credit facilities. This partly explains poor investment capital generation capacity of the rural farmers, which is the major culprit in the small scale nature of most rural farm and non-farm enterprise in Nigeria (Nwaru, 2004). In order to arrest the danger of this limited access to credit facilities, enough credit must be given to farmers to enable them cover the high cost of agricultural tools and implement and to be able to take the advantage of economic of scale. It was the problem of inadequate access to credit by the farmers that stimulated government in Nigeria to set up specialized form of institutions for the supply of credit to agriculture (Federal Ministry of Agriculture Report, 1989). Agricultural credit to small scale farmers can help in breaking the poverty cycle. Credit is required to purchase improved technology which is vital to increase output and overall expansion of the farm. Credit to small scale farmers in the absence of knowledge and use of capability of technology can prove harmful since the farmers can become heavily indebted and unable to pay back. Other factors that will enhance proper use of agricultural credit include the availability improved seeds, fertilizer and other inputs at the right time and the assurance of good prices for the products.

Cocoa production in Nigeria has been experiencing a declining trend in recent years due to the neglect suffered by the agricultural sector. In response to the neglect, cocoa farmers also neglected their farms and moved to other sectors of the economy. This has adverse effect on the general output of cocoa production. The current market conditions do not allow farmers to increase their income even if they offer better product or improved their production process. In addition, a very large proportion of the small and medium scale food and beverages

industries depends on cocoa as a basic raw materials; meaning that sustained production of cocoa is critical to the survival of these industries. Given this background, and the critical role credit access could play in raising farm production, it is imperative to examine the various forms of credit facilities available to the cocoa farmers, the accompanying constraints to credit access and factors influencing cocoa farmers' access to credit facilities.

METHODOLOGY

Area of the study

The study was conducted in Osun State which is considered as one of the cocoa growing States in Nigeria. The State shares boundary with Oyo State to the West, Ekiti State to the South, Kwara State to the North and to the South, Ogun and Ondo States. Osun State has 30 Local Government Areas according to the 2006 census and an estimated population of 3.4 million people with (an estimated) land area of 9,145 km². The majority of the inhabitants are predominantly smallholder farmers who depend on agriculture for their livelihood. Osun State is one of the major cocoa producing State in Nigeria (Amao *et al.*, 2015).

Sampling procedure and sample size

Osun State is divided into three agricultural zones which are Ife-Ijesa, Osogbo and Iwo. The study employed a multi-stage sampling technique to select cocoa farmers for data collection. A total number of one hundred and eighty (180) cocoa farmers were used for the study. The research employed four stages of selection. The first stage was a purposive selection of two agricultural zones which was Ife-Ijesha and Iwo based on sizeable number of cocoa farmers in the zones. Ife-Ijesha is made of 12 agricultural extension blocks while Iwo has 7 blocks. The second stage involved random selection of two blocks from each agricultural zone. The third stage was also a random selection of three cells from each of the agricultural blocks. This made a total of 12 cells, while the last stage was the random selection of fifteen (15) farmers from each cell making a total of one hundred and eighty (180) respondents. Out of the 180 questionnaire administered, only 172 were correctly filled and were used for analyses.

Data analysis

Descriptive statistics such as frequencies, percentage and logit regression are the tools of data analyses. Logit model was used to determine the factors that influence cocoa farmers' access to credit. If farmer had access to credit and it is to be invested in agriculture, value of dependent variable will be one and otherwise zero. The Logit regression model is specified as:

$$\text{prob}(Y=1) = \ln\left(\frac{P_1}{1-P_1}\right) = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \dots + \beta_{10} X_{10}$$

Where

Y=Access to credit which is either 1 if Yes or 0 if No.

X₁= Age of farmers (years)

X₂= Gender (1 for male, 0 for female)

X₃= Household size (Number of people)

X₄= Farming experience (Years)

X₅= Marital status (1 if married, 0 otherwise)

X₆= Educational status (Years of schooling)

X₇= Farm size (ha)

X₈= Scale of production (1 if large scale, 0 otherwise)

X₉= Association member (1 if farmers to association, 0 otherwise)

X₁₀= Average production (per year)

RESULTS AND DISCUSSION

Socio-demographic characteristics of the respondents

The socio-demographic characteristics of the respondents are presented in Table 1. The age of the farmers is a major factor in farming activities. The mean age of the farmers was 58 years and majorities (63.7%) of the farmers were still in their economic age between 40-60 years. Also from the report, 36.4% of the farmers were above 60 years indicating more experience and exposure on cocoa farming. This result also indicated that most of the youth in the study area shifted from farming as a business. A number of studies (MASDAR, 1998; MMYE, 2008; Baah *et al.*, 2010) have expressed concerns about the old age of cocoa farmers. Cocoa farmers in the study area were predominantly male (83.8%). This can be because cocoa production activities are highly tasking, rigorous and required high human physical effort (energy). Approximately 34.7% of the respondent had only primary education, 17.3% had secondary education and 5.8% were educated up to tertiary institution. Education can influence the rate at which farmers have access to formal credit facility available. It is also evident that 89.6% of the farmers were married while 10.4% of the respondents were widowed. This meant that majority of the cocoa producers are married. This agrees with the findings of Fabiyi *et al.* (2007) in Gombe State. The majority (78.6%) of the respondent had below 5 hectares of farm land, 19.7% of the farmers had between 5-10 hectares of land

while 1.7% of the respondent had above 10 hectares. The mean household size and farming experience of the farmers were 7 and 35 years respectively.

Table 1: Socio-demographic characteristics of the respondents

Description	Frequency	Percentage
Age		
40 and below	2	1.2
41-50	17	9.9
51-60	91	52.6
61-70	62	35.8
Above 70	1	0.6
Sex		
Male	145	83.8
Female	28	16.2
Educational status		
No Education	73	42.2
Primary Education	60	34.7
Secondary Education	30	17.3
Tertiary Education	10	5.8
Marital status		
Married	155	89.6
Widow	18	10.4
Farm size		
Below 5 hectares	136	78.6
5-10hectares	34	19.7
Above 10 hectares	3	1.7
Scale of production		
Small	135	78.0
Large	38	22.0
Household size		
5 and below	46	26.6
6-10	123	71.1
Above 10	4	2.3
Farming experience		
10 and Below	5	2.9
11-20	13	7.5
21-30	41	23.7
31-40	63	36.4
41-50	45	26.0
Above 50	6	3.5

Source: Field Survey Data, 2015

Distribution of respondents according to credit access and sources

Presented in Table 2 are the distribution of farmers according to credit access and the sources of credit. Approximately 53.2% of the respondents indicated that they did not have access to credit facilities while only 46.8% have access to credit. The forms of credit available to farmers in the study area are formal and informal. The formal credits are from the micro-finance banks, commercial banks and credit from the government agencies, while the informal sources of credit are cooperative society, friends and relatives. The result reveals that 33.0% of the respondents used informal source of credit while only 8.1% of the respondents used the formal sources of credit. One of the reasons for this was because informal credit is closer to the farmers than the formal credit. This agrees with other studies (MASDAR, 1998; MMYE, 2008; Baah *et al.*, 2010) which stated that farmers indicated that their main problems were inadequate access to institutional capital. In addition, most of the respondents are not educated or have a little education which makes it difficult for them to access the formal credit source.

Distribution of problems militating against access to credit

Presented in Table 3 are list of some key problems militating against access to credit by cocoa farmers in the study area. The table shows that about 39.0% of the farmers perceived high interest rate especially on informal credit as a major problem. This corroborates Kolade and Fakoya (2011) who reported that farmers depend largely on informal creditors who charge exorbitant interest rates. This is because most of the farmers in Nigeria use informal source of credit (Kolade and Fakoya, 2011; Ijioma and Osondu, 2015), and with this, limited amount of money is available for large number of people which could lead to high cost of capital (interest rate). The largest percentage (47.3%) of the farmers indicated long distance to credit source as a limiting factor. This is in line with Ijioma and Osondu (2015) who found similar findings among Anambra State, Nigeria. Lack of collateral is

another problem indicated as constraint to loan access by approximately 19.3% of the farmers. This has also been reported by a number of studies (Kolade and Fakoya, 2011; Akinmagbe and Adonu, 2014; Ijioma and Osondu, 2015) in Nigeria.

Table 2: Distribution of respondents according to credit access

Credit Access	Frequency	Percentage
No access	92	53.2
Had access	81	46.8
Credit Source		
Friends	29	16.8
Co-operative society	28	16.2
Government agency	3	1.7
Micro-finance bank	2	1.2
Commercial banks	10	5.8
Producer buyer	16	9.2

Source: Field Survey Data, 2015

Table 3: Problems militating against access to credit

Variable	Frequency	Percentage
High interest rate	67	39.0
High administrative cost	14	8.1
Lack of collateral	33	19.2
Lack of surety	22	12.8
Distance to credit source	81	47.3

Source: Field Survey Data, 2015. * Multiple Responses

Factors affecting access to credit

Table 4 presents the results of the estimated logit regression model on factors that influenced access to credit by the farmers. The log likelihood indicated the overall significance of the model. The logit regression showed that access to credit depended on age, gender, farming experience, household size, educational status and association member. The gender of the cocoa farmers was positively significant at $p < 0.10$ suggesting that male farmers are likely to access to credit in order increase scale of operation. This is in conformity with the findings of Rahji (2000), that gender is a significant factor that determines farmers' access to credit facilities. Education status of the farmers is significant at 10% which implies that increase in the level of education increases the probability of the respondents having access. Age of the cocoa farmers is also negatively significant at 5%, meaning that an increase in the age of the farmers will reduce the probability of the farmers' access to credit. In addition, household size is significant at 10%; indicating that an increase in the household size will decrease the likelihood of farmers' access to credit. This result agrees with the findings of Lawal *et al.* (2009). Farming experience has a positive significance at 1%. The significance is that an increase in the farmers' experience will increase the probability of the farmers' access to credit by 0.019. This agrees with Lawal *et al.* (2009) in their findings and they concluded that years of experience of the cocoa farmers have a significant influence on accessibility to credit facilities. The implication of this is that as the years of experience in cocoa farming increases, the chances of accessibility of credit increases. This is due to the fact that having so many years of experience in farming and production of cocoa is an indication that the farmer is not likely to misuse or divert the credit to other needs that it was not actually intended for.

Table 4: Logit regression estimates of the factors affecting access to credit

Variables	Coefficient	Marginal effect	z-value
Constant	2.958792		1.13
Age	-0.9969**	-0.0248	-2.40
Gender	1.0446*	0.2409	1.72
Household size	-0.1855*	-0.0461	-1.70
Farming experience	0.0765***	0.0190	2.65
Marital status	0.3554	0.0884	1.04
Educational status	0.4333*	0.1077	1.93
Farm size	-0.7503	-0.0187	-0.05
Scale of production	1.9135	0.4318	1.34
Association membership	-1.2364*	-0.2908	1.90
Average production	-0.0434	-0.0108	0.75
Log Likelihood	-102.5786		
Chi-square	0.0002		

Source: Field survey data 2015 Note: *** - 1% significant level, ** - 5% significant level, * - 10% significant level

CONCLUSION

The study examined factors that determine access to credit by cocoa farmers in Osun State. The majority of those that had access to credit borrow from informal sources. These sources have limited supply of money to provide for the borrower and leads to paucity. Age, household size, gender, farming experience and membership of association of cocoa farmers are factors that influence access credit. Improved access to formal education, timely

disbursement of credit and efforts to strengthen cocoa farmers association are suggested for improved access to credit.

REFERENCE

- Adegeye, A. J. and Dittoh, J. S. 1985. Essentials of agricultural economics. Impact Publishers Economics Nigeria, Limited, Ibadan.
- Akinnagbe, O. M. and Adonu, A. U. 2014. Rural farmers sources and use of credit in Nsukka local government area of Enugu State, Nigeria. *Asian Journal of Agricultural Research*, 8: 195-203.
- Amao, O. D. Oni, O. and Adeoye, I. 2015: Competitiveness of cocoa-based farming household in Nigeria. *Journal of Development and Agricultural Economics* 7(2):80-84
- Ayegba, O. and Ikani, D. I. 2013. An impact assessment of agricultural credit on rural farmers in Nigeria. *Research Journal of Finance and Accounting* 4(18): 80-89
- Baah, F., Anchirinah, V. M., Badger, E. and Badu-Yeboah, A. 2010. Report on the baseline survey of cocoa farmers in cadbury international operational districts under the public-private partnership cocoa extension programme. Tafo: cocoa research institute of Ghana, 152pp
- Fabiyi, E. F., Danladi, B. B., Akande, K. E. and Mohmod, Y. 2007. Role of women in agricultural development and their constraints: A case study Biliri local government area of Gombe State Nigeria. *Pakistan Journal of Nutrition* 6(6): 676- 680.
- Ijioma, J. C. and Osondu, C. K. 2015. Agricultural credit sources and determinants of credit acquisition by farmers in Idemili local government area of Anambra State. *Journal of Agricultural Science and Technology B* 5 (2015) 34-43
- Kolade K. B. and Fakoya, E. O. 2011: Impact of farm credit on farmers socio-economic status in Ogun State, Nigeria. University of Agriculture, Abeokuta. *Journal of Social Science* 26(1): 67-71
- Lawal J. O., Omonona, B.T., Ajaniand, O.I.Y. and Oni, O.A. 2009. Effects of social capital on credit access among cocoa farming households in Osun State, Nigeria. *Medwell Agricultural Journal* 4(4): 184-191
- MASDAR, 1998. Socio-economic study of cocoa farming in Ghana. Consultancy report, Accra: Ghana cocoa board / MASDAR international consultants. UK.
- MMYE (ministry of manpower, youth and employment) Ghana 2008: Ghana labour survey in Ghana-2007/2008: executive summary. National programme for the elimination of the worst forms of child labour in cocoa (NPECLC). Accra, Ghana.
- Nwaru, J. C. 2004. Gender and relative production efficiency in food crop farming in Abia State of Nigeria Ph.D. Dissertation, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria
- Nwaru, J. C. and Nnadozie, B. C. 2005. Impact of credit use on technical efficiency of arable crop farmers in Imo State, Nigeria. Proceedings of 39th annual conference of the agricultural society of Nigeria. Pg. 283-285.
- Rahji, M. A. Y. 2000. An analysis of the determinants of agricultural credit approval/loan size by commercial banks in south western Nigeria. *Nigerian Agricultural Development Studies* 1(1): 17-26