



## The Determinants of Access to Credit Among Agricultural Entrepreneurs in Niger State, Nigeria

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### ABSTRACT

The difficulty in obtaining financial support to a start-up of entrepreneurial venture or expand business entrepreneurship is a serious problem for many entrepreneurs inspired by entrepreneurial spirit to build a sustainable business ventures especially in rural areas. This paper is motivated by the underlying argument that financing is a tool that can promote growth of entrepreneurial activities and possibly increase financial inclusiveness. Improving access to and use of formal financial products especially in the rural areas can significantly strengthening the fight against poverty, reduce unemployment, increase self-reliance, enhance productivity and competitiveness of business enterprises, and increase support for entrepreneurship development. This study will digress from the general culture of the previous studies of looking at access to finance for entrepreneurs from the aggregate entrepreneurship perspective by limiting the scope of this paper to agricultural entrepreneurs. The objective is to investigate the determinants of access to credit by sample of 225 agricultural entrepreneurs in of Niger State. Using both logit and probit regressions the result suggests years of entrepreneurial experience, financial literacy, initial amount of capital for start-up, possession of bank account, interest free loans, and membership of cooperative society are major significant factors increasing the ability of agricultural entrepreneurs to access credit from the banking sector. It also suggests both requirement for collateral and requirement for business plan, as well as distance to banking services are also other factors significantly decreasing the ability of agricultural entrepreneurs to access credit from the banking sector in the study area. The study recommends the need for policy makers and government to be more aggressive in mobilizing, encouraging and supporting more agricultural entrepreneurs to access and use formal financial services for start and expand their enterprises. Reducing high interest rate will also encourage agricultural entrepreneurs to access affordable credit and when financial institutions provide more options for sharia-compliance financial products, many entrepreneurs in Muslim-dominated areas will be encouraged to access interest-free loans and credits. It is also part of recommendation of this paper that financial institution should provide collateral free-loans to agricultural entrepreneurs through their cooperative societies. More agricultural entrepreneurs should be trained on financial literacy and investment opportunities to increase their ability to access affordable loans and credit for their enterprises.

**Keywords:** Access, finance, Agricultural entrepreneurs, rural areas, Niger State, Nigeria.

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## 1. INTRODUCTION

One of the major challenges affecting growth of entrepreneurship in Nigeria is difficulty in accessing credit to start-up business enterprises. The current estimate from Central Bank of Nigeria (CBN, 2017) suggests there are about 37 million small-scale entrepreneurial ventures in Nigeria but growth of each of them is being restricted by several factors including access to finance which has been singled out as a crucial prerequisite to the growth of the businesses entrepreneurship. Thus, many entrepreneurs in the country had to rely on their personal savings, contributions from family and parents, and financial services provided to them by informal money lenders to start and expand their enterprises. However, financial resources from personal savings, and family and friends' contributions may not be enough to undertake wide ranges of high value investment take risks and respond to new opportunities. Similarly, relying on informal money lenders may not be a wise decision. This is because they have their own challenges. In most cases, they are highly undercapitalized such that they often leave their clients with shortage of credits. For that, they hardly offered credit for long time capital investment.

Given this situation, expanding access to financial credit by entrepreneurs could have large effects on their entrepreneurial activities as it could ease external financing constraints that prevent enterprises from expanding. In the rural areas where access to financial services is very limited, removing obstacle to accessing credit for entrepreneurs can boost entrepreneurship which in turn improves livelihoods and economic independence of entrepreneurs. Recent study by World Bank (2015) suggests access to credit has positive effects on consumption, employment status and income generation. This type of argument has been earlier supported by Dupas and Robinson (2009) who provides evidence to suggest access to financial products by entrepreneurs have large effect on business investment and income.

However, the impact is more obvious to agricultural entrepreneurs who use their financial resources and innovative acumen to identify market opportunity for agricultural commodities and products and create entrepreneurial ventures to pursue the opportunity (Hofstrand, 2005). It is important at this juncture to understand the differences between managing farm enterprises and being an agricultural entrepreneurship. On the one hand, Kahan (2012) observe farm business management is about better planning, implementation, control and managing risk. On the other hand, agricultural entrepreneurship is all about identifying opportunities, creating a vision of how the business will grow, innovating and taking risks. Therefore, agricultural entrepreneurs lead the way and are always the first act when opportunity comes along.

This paper contributes to the body of knowledge in many respects. First, scholars have not closely examined measures to improve access to credit among agricultural entrepreneurs especially in the rural areas. In the light of this problem, this study bridges the gap by shedding more light on the important issues affecting ability of agricultural entrepreneurs to access credit. This is particularly achieved by identifying the major constraints to accessing credit by agricultural entrepreneurs in the rural areas of Niger State with the view suggest the best policy measures to minimise these problems and increase financial inclusion in the rural areas.



From the available study at hand, there very limited studies that attempt to compressively examine and identify major challenges affecting agricultural entrepreneurship in relation to access to formal financial product in the area. This study intends to bridge this gap in knowledge. Secondly, previous studies in Nigeria are more concerned about examining the factors influencing access to credit among agricultural farmers but not all farmers are entrepreneurs. In view of this fact as well as the obstacle in accessing credits, the study also investigates for the major determinants of access to credit among agricultural entrepreneurs in the study area. Thirdly, the study also contributes from methodological perspective by binary outcome econometric modelling. In this context, both logit and probit regressions were used to identify the determinants of access to credit among agricultural entrepreneurs.

Therefore, the main objective of this study is to address the important research question that is related to what are the major determinants of accessing credit among agricultural entrepreneurs in Niger State. The need to answer this question is motivated by argument in the literature that access to credit can enhance production efficiency of both farmers and agricultural entrepreneurs, thereby reducing rural poverty and food insecurity. It can also assist agricultural entrepreneurs to identify promising growth opportunities to improve and expand business enterprises. This paper is organized in five sections. The section consists of introduction. The second section reviews both conceptual and empirical literatures. In the section, we present methodology employed for the data analysis. In section four, we report empirical results and discussion. Finally, section five contains summary and recommendations.

## **2. CONCEPTUAL AND EMPIRICAL REVIEW**

### **Conceptual Review**

It is often very difficult to define who is agricultural entrepreneur but in real sense there is very good distinction between agricultural entrepreneurs and pure agricultural farmers. Ordinarily, pure agricultural farmers are more concerned about the productivity and efficiency of their agricultural activities and often do not stimulate diversification and innovative entrepreneurship. In most cases, they behave like entrepreneurs but lack the courage to take risks. As Vesala et al (2007) rightly asserted agricultural farmers were mostly trained to be craftsmen, producing food and fibres with no courage to diversify to higher value products. Thus, one hardly finds any evident to show development of entrepreneurial identity, skills and behaviours across pure agricultural farmers.

On the other hand, it is possible to produce entrepreneurs within agricultural farmers who are distinct as they combined their agricultural activities with entrepreneurship. For pure agricultural farmers to become agricultural entrepreneurs, they must develop more innovative entrepreneurship skills and evolve as visionary thinkers. They need to cultivate method of investing into new venture, taking risk and identifying new opportunities, and presenting self as an entrepreneur (Bock, 2004). In this context, becoming an agricultural entrepreneur means looking at agricultural activities as business orientated ventures. The enterprises must be managed as a long-term venture with view to turning them as sustainable enterprises. As entrepreneurs, one must also be ready to take calculated risk and other opportunities available in the market.



The concept of Agricultural entrepreneur is an evolving concept that sees anyone with agricultural entrepreneurship idea as entrepreneur. agricultural entrepreneurship mostly relates to marketing and producing of various agricultural products as well as agricultural inputs (Global Forum for Rural Advisory Services, (GFRAS, 2012). The collection of agricultural entrepreneurs is complex and dynamic depending on the environment one operates. Kahan (2012) categorize them to include farmers, traders, transporters, processors and many others. They all played a major role in producing agricultural products, moving them through to the market in a kind of value chain which make it very attractive and marketable.

Financial services are mostly extended to agricultural entrepreneurs to support their agricultural entrepreneurship. Financial institutions such as commercial banks, microfinance institutions, agricultural banks, savings and credit cooperatives are key to entrepreneurship development in the agricultural sector because they provide credit for investment in agriculture and other financial services. Conceptually, the credit is an instrument whose effectiveness depends on the economic and financial policies that go with it (Nwaru, 2005). The degree to which a person can get access to credit is measured by the credit limit of the individual. Thus, people with positive credit limits are said to have access and vice-versa.

Understanding the concept of access to credit require also that of credit accessibility. Salahuddin (2006) sees 'credit accessibility' as the ease or difficulty of acquiring credit from borrowers to enhance business performance. In this context, access to credit which other scholars also term financial inclusion is the absence of both price and nonprice barriers in the use of financial services. For this reason, Okurut et al, (2004) posit that access to credit is limited to a small proportion of the population who can overcome significant barriers to credit such as high minimum balance for account opening, collateral requirements and a long and costly bureaucratic process. Other factors have also been stated in the literature. They all revolve around socio-economic characteristics, managerial attributes, firm characteristics, and institutional factors as evident in the empirical literature review in this paper.

### **Empirical Literature**

Several empirical studies have been conducted on the factors influencing access to credit among agricultural farmers but they are very limited number of studies on access to credit among agricultural entrepreneurs. One of the recent study on determinants of access to credit by farmer is a study conducted by Samson and Obademi (2024). The authors were particularly interested in identifying factors determining access of accredit and its impact on productivity of agricultural farming in Oyo State, Nigeria. The result suggests farm size, labour cost, cost of seeds and amount of credit obtained are major factors that positively determine productivity among the farmers in the study area. Edet and Etim (2017) assess access to agricultural credit by poor farmers in Akwa Ibom state, Nigeria. Using logistic regression, the authors shows that the educational level, membership of social organization, and household size were directly related to farmers access to credit financial services whereas household income was inversely related to farmers access to credit. The findings suggest also that there is need to step-up the training of rural farmers through regular seminars, workshops, symposia, and participation of farmers in social organizations as a means of improving farmers access to credit. Kofarmata et al (2016) investigate the factors influencing microfinance banks credit supply to farmers across microfinance banks in Kano State, Nigeria.



The authors reveal employing more marketing staff in the microfinance bank can increase the rate of credit supply to farmers. They also show that having a bank account and being a farmer with off-farming business increased the chances of farmers accessing credit with the microbanks. However, they also found inverse relationship between increased distance from a bank and chances of a farmer accessing credit with the microbanks. Ijioma and Osondu (2015) evaluate sources of agricultural credit and its major determinants among farmers in Idemili, Anambra State, Nigeria. The result reveals age, household size, membership of cooperative societies, marital status, education level, farm size and amount of loan are significant determinants of amount of agricultural credit being demanded by farmers.

Anang et al (2015) explores access to agricultural microcredit in Ghana using household survey data collected for the 2013/2014 farming season. The results suggest factors that influence access to agricultural microcredit include gender, household income, farm capital, improved technology adoption, contact with extension, the location of the farm, and awareness of lending institutions in the area. However, gender, household size, farm capital, cattle ownership and improved technology adoption were found to be the significant factors determining loan size. The study recommends the improvement of extension service delivery to smallholder farmers to enable them to access microcredit facilities for agricultural production. Kiplimo et al (2015) examines factors driving access to credit among small-holder farmers in eastern region of Kenya. Results indicate that, education level, main occupation, and group membership were statistically significant with positive effects on access to credit financial services. The authors also found household income to be significant but with negative effects on access to credit.

Adekoya (2014) examines determinants of agricultural credit use among farming households in Oyo State, Nigeria. Using about 114 sampled of farmers, the authors started by revealing factors constraining rural farming households from accessing loans which include high interest rate and lack of collateral. They also identify factors such farm size, membership of a social organization, number of adult males in households and off farm income as major significant determinants that influence households' access to credit. Ololade and Olagunju (2013) examine the factors determining access to credit among rural farmers in Oyo State, Nigeria. Their result found factors such sex, marital status, lack of guarantor, high interest rate and access to credit played a significant role in determining whether role farmers access credit or not. Since they observed collateral security can seriously affect willingness to rural farmers to access credit, they recommend the needs for farmers to form a cooperative group to enable them pull resources together or form a group to collect loan or credit from bank.

Etonihu, Rahman and Usman (2013) explore determinants of access to agricultural credit among smallholder farmers in Doma, Nasarawa State, Nigeria. The finding reveals that education, distance to source of credit and types of credit source were significant factors affecting farmers' accessibility to agricultural credit in the study area. Chauke et al (2013) investigate factors influencing access to credit across small-holder farmers in the Capricorn district of South Africa. The findings suggest that the major factors contributing significantly to credit access were the need for credit, attitude towards risk, distance between lender and borrower, perception on loan repayment, perception on lending procedures and total value of assets.





Based on the findings of the study, authors recommend the establishment of loans offices close to farmers and operated by officers' familiar with farmers to reduce lending procedures, risks and educate them on perceptions on loan repayment

### 3. METHODOLOGY

#### Population of the Study

The population of the study consists of all the registered Agricbusiness with Cooperative societies under the Ministry of Agriculture and Rural Development in Niger State. The particular trade (Kulikuli) surveyed was purposively selected across the three senatorial zones in the state. This is to ensure that a zone is not over represented or under-represented. The target population consisted of all the registered Agricenterprises (Kulikuli business) with Niger State Ministry of Commerce and tourism through Cooperative and rural Department. According to the Ministry in 2016, there are 3,522 registered rural enterprises (Kulikuli business) in Niger State operating in various markets of the three senatorial zones in the state.

#### Sampling Size and Sampling Technique

A structured questionnaire was used as an instrument for the collection of the primary data. This method of data collection was used because it is more appropriate for the study. Also, by using this instrument of data collection, more relevant information was solicited easily from the respondents within a short period of time. Questionnaires were administered to Agripreneurs' in the study area, concerning information on the access to credit by the Agripreneurs in Niger State.

However, for the purpose of data collection in this study, a total of 225 questionnaires were distributed, instead of the pre-determined sample number of 150 Agripreneurs. This is to avoid the problem of the non-response rate. According to Jeff (2001) it is not likely that every selected sample will respond, there is a need for researchers to increase the sample size to avoid a non-response bias. (cited in Danlami, 2017)

The study used a cross-sectional study of questionnaire survey approach with a simple random sampling where the entrepreneurs/owner-managers of Kulikuli business in Niger State were selected as the targeted population of this study. The sample respondents in this study included both the entrepreneurs and owner-managers who are registered with the Niger State government. The respondents were identified through the Department of Cooperative and rural of Niger State Ministry of Commerce and Industries to obtain a comprehensive list of rural entrepreneurs.

In this work, a total of Two Hundred and Twenty Five (225) copies of questionnaire were administered to the respondents of the study. Of the Two Hundred and Twenty Five (225) copies of the questionnaire, 75 copies each were administered to each of the local government areas chosen for the study. The selection of Three LGAs was purposive because of their involvement in the trade. A multi-stage sampling technique was used in selecting three (3) communities. The communities are: Mokwa (Mokwa LGA); Bida (Bida LGA) and Rijau (Rijau LGA). In each of the randomly selected communities, Seventy Five (75) Kulikuli business producer through Co-operative societies were identified and purposively chosen.



Also, from each of the Cooperatives, some members were randomly selected in addition to other respondents, which were randomly chosen within each of the communities. In all, Seventy Five (75) respondents were investigated based on the population size and membership strength of the communities and Cooperatives respectively.

### Model Specification

The paper started with a specification of a binary model of accessing credit by agricultural entrepreneurs as follows:

$$p_{it}^* = \gamma p_{it-1} + x_{it}'\beta + \eta_i + u_{it} \quad (1)$$

where the subscript  $i = 1, \dots, N$  indexes households; the subscript  $t = 2, \dots, T$  indexes time periods;  $p_{it}^*$  is a latent dependent variable for whether agricultural entrepreneurs have access to credit or not;  $x_{it}$  is a vector of explanatory variables;  $\eta_i$  is a term capturing unobserved entrepreneurs-specific random effects;  $u_{it}$  is a random error term assumed to be normally distributed, and  $\gamma$  and  $\beta$  are parameters to be estimated. The observed binary outcome variable is:

$$P_{it} = \{1 \text{ if } >0, \text{ and } 0 \text{ otherwise.}\}$$

On the basis of this assumption, and following Kabuga and Badamasi (2014), this paper investigates determinants of access to credit among agricultural entrepreneurs in the rural areas of Niger State using binary outcome models, namely logit and probit regression models. The logic behind a class of binary response models arise from the following set of relationships:

$$P\{y_i = 1\} = P\{y_i^* > 0\} = P\{x_i\beta + \varepsilon_i > 0\} = P\{-\varepsilon_i \leq x_i\beta\} = F(x_i\beta) \quad (2)$$

Where  $P$  is a function taking on values strictly between zero and one, that is,  $0 < P(z) < 1$ , for all real number  $z$ . In addition, the expression implies evaluating the probability of  $x_i\beta$  i.e.  $F(x_i\beta)$  depends on the distribution function of  $\varepsilon_i$ . If the logit model follows logistic distribution function, the following simple model is obtained:

$$F(x_i\beta) = L(x_i\beta) = \frac{e^{x_i\beta}}{1 + e^{x_i\beta}} \quad (3)$$

On the other hand, for the probit model the standard normal distribution function is,

$$F(x_i\beta) = \Phi(x_i\beta) = \int_{-\infty}^{x_i\beta} \frac{1}{\sqrt{2\pi}} \exp\left\{-\frac{1}{2}t^2\right\} dt \quad (4)$$

Thus, both logit and probit can be derived from an underlying latent variable model. Let  $y^*$  be an unobserved or latent, variable, determined by

$$y^* = x_i\beta + \varepsilon_i, \quad \text{where } y = 1 \quad [y^* > 0] \quad (5)$$



The function  $1[.]$  is called the indicator function, which takes on the value one if event in brackets is true, and zero otherwise. Therefore,  $y$  is one if  $y^* > 0$ , and  $y$  is zero if  $y^* \leq 0$ . However, it should be noted that  $\varepsilon$  is independent of  $x$  and that  $\varepsilon$  has either the standard logistic distribution or standard normal distribution. In either case  $\varepsilon$  is symmetrically distributed to about zero. In other words, both logit and probit models are very similar; the only difference is the distribution of the error term ( $\varepsilon$ ). Thus, when both models are applied not much differences are observed as both models give almost similar result (Gujarati, 2007). For this study, the binary choice model is specified in form of.

$$Y^* = \beta_0 + \sum \beta_i X_{ij} + \varepsilon_i \quad (6)$$

Following the studies conducted by Kabuga and Badamasi (2014), Kabuga and Adamu (2015) and Adamu and Kabuga (2016), the logit and probit model to be used to investigate determinants of access to credit of a sample of 225 agricultural entrepreneurs in the rural areas of Niger State, Nigeria is given as follows:

$$Y_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 + \beta_9 x_9 + v_i \quad (7)$$

**Table 1: Variables Measurement**

Variables	Types	Description
$Y_i$	Binary	The probability of agricultural entrepreneur accessing credit from banking sector takes the value of 1, if otherwise, 0.
$x_1$	Continuous	Years of entrepreneurial experience
$x_2$	Categorical	Financial literacy
$x_3$	Continuous	Distance to banking services
$x_4$	Continuous	Initial amount of capital for start-up
$x_5$	Categorical	Requirement for collateral
$x_6$	Categorical	Possession of bank account
$x_7$	Categorical	Interest free loans
$x_8$	Categorical	Requirement for Business plan
$x_9$	Categorical	Membership of cooperative society

Sources: Computed by authors

#### 4. RESULTS AND DISCUSSION

The presentation and analysis of the results began with major characteristics of the entrepreneurs as reported in table 2. From the result the average age of the sample entrepreneurs is 42.54, meaning most of them are energetic and within peak period of their productivity. The result displayed also suggest average number of years spent by the entrepreneurs to acquire education is nine (9). They also have an average of five (5) household size and three (3) dependence. They also reportedly have average initial capital from their personal savings for investment into business enterprises (₦ 325,424). For some of them who could access credit from formal banking sector, the average amount access from this financial service was in the region of about ₦ 854,356 (Nigerian Naira). The average proximity of most rural entrepreneurs to banking services is approximately about 26 kilometres.





**Table 2: Characteristics of the entrepreneurs**

Variables	Mean	Standard Deviation
Age of entrepreneurs	42.54	8.22
Years of schooling	9.23	4.71
Household size	5.53	3.25
Dependency ratio	3.51	3.02
Personal savings for initial capital	325,424	24.63
Formal sources of initial capital	854,356	32.75
Proximity to Banking services (kilometre)	25.54	18.32

**Sources: Data from field study (2024) and computation using Stata 15**

In table 3, the output shows where most of the entrepreneurs sourced their initial capital. From the displayed result it is clear that majority of the entrepreneurs (22.2%) sourced their initial capital for agricultural entrepreneurship from their parents. In the contrary, about 21% of the respondents are reported to source their initial investment capital from informal money lenders. While at the same time exactly about 20% of the sampled entrepreneurs were to rely on personal savings to start-up their agricultural entrepreneurial activities in the rural areas. Approximately about 16% were to sources their initial capital from formal financial lenders including commercial banks and microbanks in the study area. The government also played a role in promoting entrepreneurial ventures with about 12% of the entrepreneurs clamming to obtain their initial investment capital from government assistances. Lastly, about 8.9% or 9% to be precise were opportune to receive financial assistance from friends to start-up agricultural business venture.

**Table 3: Sources of Initial Capital**

Sources	Frequency	Percentage
Personal servings	45	20
Parents assistance	50	22.2
Friends contributions	20	8.9
Informal money lenders	48	21.3
Formal financial lenders	35	15.6
Government assistance	27	12
Total	225	100%

**Sources: Data from field study (2024) and computation using Stata 15**

In table 4, the level of respondents' awareness about conditions for accessing banking credits is tested. The result suggests majority of the rural agricultural entrepreneurs are not aware of most of the conditions for accessing formal banking credits. The results show that about 67.1% are not aware of these conditions, and only 32.9% or 33% approximately are aware of these conditions. This means as shown in table 3 that, out of the 74 entrepreneurs that are awareness of these conditions only 35 of them could access the credits from the banking financial sector.



**Table 4: Awareness of the conditions to access banking credits**

Conditions		
1) Collateral. 2) Bank Accounts 3) Business Plan 4) Business financial projection 5) Guarantors		
Response	Frequency	Percentage
Yes	74	32.9
No	151	67.1
Total	225	100%

Sources: Data from field study (2024) and computation using Stata 15

In table 5, the sampled respondents were also asked to state any major obstacle of accessing formal financial credits among agricultural entrepreneurs in the rural areas. The results show that approximately 26% believed inadequate financial literacy is the major obstacle. They are followed by about 23% of the respondents who believed blamed lack of interest on formal financial products especially credit by agricultural entrepreneurs to non-sharia compliance of the financial products. This probably means they are yearning for Sharia-compliance financial products which are interest-free and are in accordance with Islamic principles of financial transactions. About 14% of the respondents opined the problem is linked to collateral requirements of many commercial banks. However, 15% of the respondent thought the issue lies with high interest charges that characterised most commercial banking loans. Complex process of obtaining credit in the formal financial institutions is also regarded as a major obstacle by at least 12% of the respondents. Lastly, about 10% of the respondents insisted they do not want any loans from formal financial institutions to start-up or expand their agricultural business enterprises.

**Table 5: Obstacles to accessing formal financial credits**

Obstacles	Frequency	Percentage
Unacceptable collateral requirements	32	14.2
Complex Procedure	26	11.6
Inadequate of financial literacy	58	25.8
Non-sharia compliance loans	52	23.1
High interest rate	34	15.1
Needs no credit	23	10.2
Total	225	100%

Sources: Data from field study (2024), and computation using Stata 15

In table 6, the result reveals number of respondents who have access to formal financial credits. From the results, majority of the respondents totalling about 84% do not have access to formal financial products as against 15.6% who benefited from the formal financial product.

**Table 6: Access to formal financial credits**

Respondents	Frequency	Percentages
Yes	35	15.6
No	190	84.4
Total	225	100



**Sources: Data from field study (2024) and computation using Stata 15**

In table 7, the output of both logit and probit regressions are presented. They are meant to identify and investigate the major determinants of access to credits among agricultural entrepreneurs in the rural areas of Niger State, Nigeria. The output was obtained using the latest Stata 15 software. Based on the assumption of the binary outcome econometric approaches used, the independent variable in the logit and probit models is dichotomous in nature. Meaning it takes the value 1 or 0. In this context, we assumed the value of 1 if the sampled agricultural entrepreneurs have access to credit from the banking sector, if otherwise, 0.

**Table 7: – The Logit and Probit Models (Dependent variable: Access to credit)**

Variables	Logit	Marginal Effect	Probit	Marginal Effect
Years of entrepreneurial experience	.518*** (.232)	.079 (.034)	.275*** (.131)	.079 (.037)
Financial literacy	.016*** (.008)	.002 (.001)	.009** (.004)	.003 (.001)
Distance to banking services	-2.463** (.463)	.330 (.067)	-1.176*** (.240)	.338 (.069)
Initial amount of capital for start-up	.515*** (.210)	.079 (.031)	.264*** (.117)	.076 (.033)
Requirement for collateral	-.526*** (.271)	.080 (.039)	-.225*** (.111)	.065 (.021)
Possession of bank account	.764*** (.324)	.315 (.141)	.379*** (.169)	.308 (.150)
Interest free loans	1.077*** (.599)	.164 (.083)	.626** (.335)	.180 (.098)
Requirement for Business plan	-.493*** (.223)	.054 (.027)	-.392** (.187)	.055 (.062)
Membership of cooperative society	.022** (.007)	0.004 (0.001)	.008** (.004)	.002 (.001)
Constant	1.227** (.426)		1.011** (.467)	
No of Obs. = 225 LR ch2 (9) = 56.60 Prob>chi2 = 0.0000 Pseudo R <sup>2</sup> = .3161			No of Obs. = 225 LR ch2 (9) = 55.23 Prob>chi2 = 0.0000 Pseudo R <sup>2</sup> = 0.3084	

**Source: Computation from survey data (2024) using STATA 15. Note: figures in parenthesis are standard errors. The asterisks are p-values implying \*\*\*significant at 1%, \*\*significant at 5% and \*significant at 10%.**

In Table 7, the regression output reported the determinants of access to credit among agricultural entrepreneurs in Niger State, Nigeria. On the one hand, the result suggests years of entrepreneurial experience, financial literacy, initial amount of capital for start-up, possession of bank account, interest free loans, and membership of cooperative society are major significant factors increasing the ability of agricultural entrepreneurs to access credit from the banking sector.



On the other hand, both requirement for collateral and requirement for business plan, as well as distance to banking services are also other factors significantly decreasing the ability of agricultural entrepreneurs to access credit from the banking sector in the study area. From table 7, it is reported that there is strong evidence to suggest a significant relationship between years of entrepreneurial experience and access to credit among agricultural entrepreneurs in the rural areas. The finding implies that as years of entrepreneurial experience increase there is likelihood that agricultural entrepreneurs in the rural areas will access credit in the banking sector. The marginal effect suggests as agricultural entrepreneurs added one year into their entrepreneurial activities, the probability of accessing credit from banking sector increase by at least 0.08% approximately.

After holding all other factors constant, financial literacy is also reported to have significant influence on the ability of agricultural entrepreneurs to access credit in the banking sector. The marginal effect suggests that as agricultural entrepreneurs spent more time to acquire knowledge on financial literacy, the probability of accessing credit from banking sector increase by at least 0.02% or 0.03% for logit and probit regressions respectively. The estimated result also indicates that distance to banking services plays significant role in driving agricultural entrepreneurs to access credit in the banking sector. The marginal effect reported in Table 7 suggests as distance to banking services measured in kilometre (klm) decrease by one klm, the probability of accessing credit from banking sector approximately increase by 0.3% for both logit and probit regressions.

It is also shown in Table 7 that, there is an inverse and significant relationship between requirement for collateral and ability of agricultural entrepreneurs to access credit in the banking sector. This implies as requirement for collateral decrease, probability accessing credit from banking sector increase among agricultural entrepreneurs by 0.08% and 0.07% for both logit and probit regressions respectively.

It is also reported that the initial amount of capital for start-up has a significant influence on the ability of agricultural entrepreneurs to access credit in the banking sector. In this context. The marginal effect suggests after controlling for all other variables, as the need more initial amount of capital for start-up increases by at least 1%, there is every probability of agricultural entrepreneurs looking to access credit from banking sector increase by 0.8% for both logit and probit regressions. The result also reveals that possession of bank account has a significant influence on the ability of agricultural entrepreneurs to access credit in the banking sector. In this context. The marginal effect suggests all things being equal, as bank account possessed by agricultural entrepreneurs increases by at least 1%, probability accessing credit from banking sector by agricultural entrepreneurs increase by 0.3% for both logit and probit regressions.

It is also reported that, there is an inverse and significant relationship between requirement for business plan and ability of agricultural entrepreneurs to access credit in the banking sector. After controlling for all other possible influence, the marginal effect suggests as requirement for business plan decreases by at least one new directive, probability accessing credit from banking sector by agricultural entrepreneurs increase by 0.05% and 0.06% for both logit and probit regressions respectively. The result also reveals a significant relationship between interest free loans and ability of agricultural entrepreneurs to access credit in the banking sector.



This implies that the marginal effect suggests as availability interest free loans increases in the banking sector, probability accessing credit from banking sector by agricultural entrepreneurs increase by 0.02% for both logit and probit regressions. It is also reported in table 7 that that membership of cooperative society has significantly influence on the ability of agricultural entrepreneurs to access credit in the banking sector. The marginal effect suggests as membership of cooperative society increase with at least one additional entrepreneur, probability accessing credit from banking sector by the agricultural entrepreneurs increase by 0.004% and 0.004% for both logit and probit regressions respectively.

## 5. CONCLUSION AND RECOMMENDATIONS

The objective of this paper is to investigate the determinants of access to credit of a sample of 225 agricultural entrepreneurs in the rural areas of Niger State. Using both logit and probit regression models, the paper found evidence to suggest years of entrepreneurial experience, financial literacy, initial amount of capital for start-up, possession of bank account, interest free loans, and membership of cooperative society are influential factors increasing the ability of agricultural entrepreneurs to access credit from the banking sector. The results also show that both requirement for collateral and requirement for business plan, as well as distance to banking services are also significant factors decreasing the ability of agricultural entrepreneurs to access credit from the banking sector in the study area.

Based on these findings, the paper recommends the needs for policy makers and government to promote not only rural entrepreneurship but also assist in mobilizing, encouraging and supporting more agricultural entrepreneurs to access and use formal financial services for start-up and expanding their enterprises. There is also the need to reduce high interest rate to encourage agricultural entrepreneurs to access affordable credit. Due to nature of study area, there is need for more sharia-compliance financial product accordance with Islamic principles and practices. Therefore, there is need to increase more information on available financial products in the financial sector. It is also part of recommendation of this paper that financial institution should provide collateral free-loans to agricultural entrepreneurs through their cooperative societies. More agricultural entrepreneurs should be trained on financial literacy and investment opportunities to increase their ability to access affordable loans and credit for their enterprises. The agricultural entrepreneurs should be encouraged to open bank accounts with less cumbersome requirements which will enable them save for the future and access credit with ease.





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