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DETERMINANTS OF ACCESS TO CREDIT AMONG POULTRY FARMERS IN ABAK AGRICULTURAL ZONE, NIGERIA.

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Abstract

This study analyzed the determinants of access to credit among poultry farmers in Abak Agricultural Zone, AkwaIbom State, Nigeria. Multistage sampling technique was used to obtain 180 poultry farmers for the study. The primary data obtained by administering questionnaire to the respondents was analyzed using descriptive statistics, binary logit regression model . The result on socio-economic characteristics showed that most(55.6%) of the respondents were male and 72.8% of the respondents were married. The sources of credit among the poultry farmers were family and friends (40%), cooperative (25.3%), commercial banks (22%), bank of agriculture (8%), microfinance bank (2.7%), online borrowing (1.3%) and religious group (0.7%). The result of the regression showed that age was positively related to poultry farmers access to credit while household size, farming experience and educational level were negatively related to poultry farmers access to credit in the study area. High interest rate (23.2%) was the major constraint associated with poultry farmers access to credit in the study area. The study recommends that government should formulate credit policies that will assist poultry farmers get more funds at the lowest rate of interest in order to assist them in production expansion.

Keywords: Credit access, Poultry, Farmers.

Introduction

Nigeria economy have been supported by numerous sectors such as oil and gas sector, industrial sector and agricultural sector. According to the report of Olomola (2018) and Afolayan (2017), the agricultural sector is a dominant sector of the Nigerian economy. Despite the fact that agriculture is domiciled as a rural enterprise, it still provides employment for approximately 70 million people that constitute about 65 percent of the working population (Thornton, 2010; FAO, 2020). Based on the report by World Bank (2014), agricultural sector contributes a large share (33%) of the Gross Domestic Product

(GDP) and provides food, raw materials and other resources to the country (Adebayo and Adeola, 2017). The sector has some sub-sectors such as crop farming, livestock rearing, fishing and forestry.

FAO (2020) reported that the livestock industry in Nigeria is a viable component of the general sector which continues to grow at annual rate of 12.7 per annum. The livestock industry has been a key contributor to economic growth and development with 2.29 percent to GDP in 2020 (FAO, 2020; Statista, 2020). The livestock industry comprises ruminant animal production, animal production and pseudo ruminant animal production. Among the livestock enterprises, non ruminant animal production such as poultry production occupies a pivotal position due to its performance and enormous potentials for caloric needs and supplement income from crops (Herrero et al., 2012).According to FAOSTAT (2020), South Africa has the highest number of poultry birds in Africa, followed closely by Nigeria which has about 180 million birds (Aladejebi et al., 2019).According to Pieter Osthuysen (2013), South Africa Produces 1.5 metri tons of Poultry meat per year.The demand for poultry and other livestock products will increase dueto population growth, gains in real per capita income and urbanization (FAO, 2020). Poultry enterprise requires additional financing apart from the farmer's capital due to its capital requirement for operations. Small scale farmers including poultry farmers, in Nigeria have low income and savings capacity due to their limited streams of income and increased expenditure (Audu et al., 2007). As a result, most of them find it challenging to adopt modern technology that would boost their productivity level as well as their incomes (Agom and Idiong, 2002).

Agricultural credits are loans extended to farmers for the purpose of production, storage, processing and marketing of farm products. Such credit can be short, medium or long-term depending on the duration and collateral used in obtaining the credit. The forms of these credits can be formal or informal (Adeyonu et al., 2017).

Poultry production system has some challenges which include illegal importation, high price of inputs, unavailability of inputs, poor production techniques and inadequate capital (Kuye and Ogiri, 2019).Livestock farmers make use of credit or loans to cushion the effects of the production challenges they encounter (ASL 2050, 2018). Credit facilitators consider giving loans to farmers as a high-risk venture due to the nature of the business (Adebayo and Adeola, 2017).According to the report of Adegbite (2009), poultry farmers and others in the agricultural sector are not credit worthy by most formal credit institutions due to the reason that most farmers are low-income earners with low saving capacity, illiterate and had no

collateral among others.

The broad objective of this study is to analyze the determinants of access to credit among poultry farmers in Abak Agricultural Zone, Akwa Ibom State, Nigeria. The specific objectives are to:

1. describethe socio-economic characteristics of poultry farmers in the study area.
2. identify the sources of credit among poultry farmers in the study area
3. determine factors affecting poultry farmers access to credit in the study area
4. examine the constraints associated with access to credit by poultry farmers in the study area.

Literature Review

Akintunde et al. (2020) investigated the factors influencing access to credit by poultry egg farmers in Southwestern, Nigeria. The primary data collected were analyzed using descriptive statistics and binary logit regression. The findings of the study revealed that majority (74.3%) were male with a mean age of 42 years. More than half of the farmers (57.8%) were educated above secondary education. The result of the regression showed that poultry farmers' access to credit was affected by gender, years of education, stock size and biosecurity level.

Osuntade and Babalola (2021) carried out a study on "Credit access and faecal management practices among poultry farmers in Ogun State, Nigeria". The primary data collected from 90 poultry farmers were analyzed using descriptive statistics and thelogit regression model, to evaluate the socio-economic factors determining the respondents' access to credit in the study area. The descriptive result showed that the farmers earned less than ₦100,00 monthly and up to 48% still lacked access to credit. The result of the regression showed that farming experience,farm size, awareness of credit source, cooperative participation, access to extension service and farm income were associated with access to credit by farmers in the study area.

Afolayan et al. (2021) analyzed credit access and utilization among poultry farmers in Nigeria. Primary data were obtained from 78 poultry farmers using multistage sampling technique. These data were analyzed using descriptive statistics, logit and multiple regression models. The result of descriptive statistics showed that the farmers were still in their active age and about 75.6% of the poultry farmers were males. The result of the logit regression revealed that number of years spent in school, farm income, labour cost, cost of feeds and sources of capital and interest rate were the factors affecting farmer's access to

credit in the study area. Furthermore, the result of multiple regression showed that farm income, cost of feeds, and number of birds were the factors influencing credit utilization by farmers.

Samuel and Asana (2021) analyzed factors influencing credit access among small-scale poultry farmers in the Sunyani West District of the Bono region, Ghana. Multistage sampling technique was employed to obtain 100 poultry farmers for the study. Data were analyzed using descriptive statistics, multiple regression.. The result of the regression showed that education, household size, size of farm, belongingness to farm based organization, savings were the factors affecting farmers access to credit facilities in the study area. Further investigation on the constraints associated with access to credit revealed that high interest rate on loans, high administrative and insurance costs on credit facilities from financial institutions, lack of collateral securities to secure loans and low educational background and lack of management skills were the major impediments to access to credit among poultry farmers in the study area.

Methodology

Description of Study Area

The study was conducted in Abak agricultural zone in Akwa Ibom State, Nigeria. The zone comprises five local government areas; these are Abak, Oruk Anam, Etim Ekpo, Ukanafun and Ika local government areas. Akwa Ibom State is one of the states in the South-South region of Nigeria. It is one of the Niger delta states rich in crude oil deposit. The state is in the rain forest belt and is prone to oil spillage, acid rain and increasing ocean encroachment. Some of the common food crops grown in the area are; cassava, plantain, waterleaf, fluted pumpkin, white yam, cocoyam, maize and banana.

Sampling Procedure and Sampling size

Multi-stage random sampling procedure was used to select the respondents. First, three local government areas were randomly selected from Abak agricultural zone. In the second stage, 6 villages were randomly sample from each of the selected local government area in the zone. In the third stage, 10 poultry farmers were randomly sampled from the 18 villages randomly selected. A total of 180 poultry farmers were used for data collection in the study List of poultry farmes that had registered with Akwa Ibom state Agricultural Development project(ADP), Abak zone making a total of One hundred and eighty respondents that were administered with questionnaire.

Source of Data and Instrument for Data Collection

Primary data were used in the analyses and these consisted of socio-economic data and production data. Structured questionnaire were administered to respondents and complemented by personal interviewed to ensure the consistency and accuracy of data collected.

Method of Data Analysis

Objective (i)analyzes the socio-economic characteristics of the poultry farmers using descriptive statistics such as means, percentages and frequency

Objective (ii) identifies the sources of credit among poultry farmers using descriptive statistics such as percentages and frequency

Objective (ii) determines factors affecting poultry farmers access to credit using binary logit regression as used by Osuntade and Babalola (2021).

$Zi = \beta Xij, + N$ .....(1)

Where;

Zi = credit access (provided as Yes=1, No=0)

Xi = vector of explanatory variables

N= stochastic error term

β = vector of the parameter estimates

$$Y = \ln\left(\frac{P_1}{1-P_1}\right) = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + ei \quad \text{.....(2)}$$

Where

Y= Dichotomous response variable (1 for poultry farmers who had access to credit, 0 otherwise)

X_1 = Household size (measured by number of persons in a household)

X_2 = Age of household head (years)

X_3 = Farming experience (years)

X_4 = Level of education (measured by years spent in school)

X_5 = Membership of Cooperative (dummy, where 1 = yes and 0 = no)

X_6 = Stock Size (number of birds)

X_7 = Access to Extension Service (dummy, where 1 = yes and 0 = no)

β_0 = Constant

$\beta_1 - \beta_7$ = Parameters to be estimated

e_i = error term

Objective (ii)examine the constraints associated with access to credit by poultry farmers

using regression analysis.

Results and Discussion

Socio-economic characteristics of the respondents

The data presented in Table 1 shows the results of the descriptive statistics used in the study. The result shown in Table 1 reveals that most (55.6%) of the poultry farmers were male while the remaining 44.4% were female. The implication is that male gender dominated the poultry enterprise in the study area. The findings are similar to the result of Osuntade and Babalola (2021) and Akintunde et al. (2020) who reported that agribusiness is generally labour intensive and strenuous which is one of the major reasons why male dominates this enterprise in Nigeria. The majority of the respondents (72.8%) were married, 15.6% of the respondents were single while the remaining 11.6% had other marital status. This implies that a high percentage of the poultry farmers in the study area could have access to family labour. The result also shows that majority of the respondents (71.7%) had household size ranging from 3 – 6 persons, 8.3% had below 3 persons in their household while 20% had above 6 persons in their household. The average household size in the study area was 4.9 persons.. A high proportion (47.2%) of the respondents were between the age range of 30 – 40 years, 30% were less than 30 years while 22.8% were above 40 years of age. The average age in the study area was 35.4 years. The implication is that the poultry farmers in the study area were within the active working age and would be able to adopt new technology brought to them. The majority (54.4%) of the respondents had below 10 years farming experience, 35.6% had between 10 – 20 years in farming while 10% had above 20 years in farming. The average years of experience in farming was 10.2 years. The implication is that the poultry farmers in the study area had a high level of experience in poultry farming and would basic knowledge on poultry management practices to improve their production.Their experience in poultry farming will futher enable them access credit.

Table 1a Socio-economic Characteristics of the Respondents in the Study Area n=180

Variables	Frequency	Percentage (%)
Gender		
Male	100	55.6
Female	80	44.4
Total	180	100.0
Marital Status		
Single	28	15.6
Married	131	72.8
Others	21	11.6
Total	180	100.0
Household Size		
< 3	15	8.3
3 – 6	129	71.7
>6	36	20.0
Total	180	100.0
Mean	4.9	
Age (years)		
< 30	54	30.0
30 – 40	85	47.2
> 40	41	22.8
Total	180	100.0
Farming Experience(years)		
< 10	98	54.4
10 – 20	64	11.7
> 20	85	35.6
Total	180	47.2
Mean	10.2	100.0

Source: Field Survey, 2021. Remove border lines and in-between lines. You should four columns, Variable, frequency, percentage and mean instead of writing mean below the variable.

Education plays a key role in adoption of innovations. The result on the educational level of the respondents in the study area as shown in Table 1b reveals that most (47.2%) of the respondents had OND/HND qualification, 35.6% had secondary education, 11.7% had primary education while 5.6% had no formal education. The implication is that majority of the poultry farmers in the study area were literate and as such they would be able to keep proper farm records and also adopt innovations brought to them in order to improve production as well as their income level. The high level of education is likely to impact

positively on poultry farmers in the study area and enhance their credit access Udoh and Essien, (2015)

The majority of the poultry farmers (91.7%) in the study area were not members of cooperatives while 8.3% were members of cooperatives. The implication is that majority of the respondents did not enjoy the benefits of belonging to cooperatives because they were not members of any. The findings also shows that majority (83.9%) of the respondents had no access to credit while the remaining 16.1% had access to credit. The implication is that majority of the poultry farmers were denied access due to lack of collateral and low saving capacity (Adegbite, 2009). Extension services fills the gap between technology developers and the end users. The result on access to extension services in the study area reveals that 56.7% had no access to extension services while 43.3% of the respondents had access to extension services in the study area.

The findings also reveal that majority of the respondents had a stock size of between 200 and 400 birds, 42.8% had above 400 birds while the remaining 11.6% had below 200 birds. The average stock size in the study area was 377.6 birds. The implication is the poultry farmers in the study area can be categorized as small-scale poultry farmers (Osuntade and Babalola, 2021)

The data presented in Table 2 shows the result on the sources of credit among poultry farmers in the study area. The result shows that family and friends (40%) was the source of credit mostly used by poultry farmers in the study area. The plausible reason for this could be that family and friends were informal source of obtaining credit and the duration for repayment is flexible. The results further showed that cooperatives (25.3%), commercial banks (22%), bank of agriculture (8%), microfinance bank (2.7%), online borrowing (1.3%), religious group (0.7%) were other sources of credits among poultry farmers in the study area. Relate this to previous works and support your findings.

Table 2 Distribution of Sources of Credit among Poultry Farmers in the Study Area

Sources of Credit	Frequency	Percentage (%)
Friends & Family	60	40.0
Cooperatives	38	25.3
Microfinance Bank	4	2.7
Commercial Bank	33	22.0
Religious Group	1	0.7
Bank of Agriculture	12	8.0
Online Borrowing	2	1.3
	150	100.0

Source: Field Survey, 2021.

Determinant of Farmers Access to Credit

Table 3 presents the estimation results from the Logit regression model. In addition, several goodness-of-fit measures are reported. The first one is the pseudo-R squared and the second, the Likelihood ratio Chi-square which is an estimation of how well the model classified respondents correctly based on estimated probabilities. The likelihood ratio Chi-square of 55.31 with a p-value of 0.0000 tells us that our model is statistically significant. Table 3 shows that out of the seven variables, four were significant for credit access among poultry farmers. These factors are household size, age, farming experience and educational level.

The coefficient (+1.00522) of household size was positive . The plausible reason for the positive relationship between household size and credit access is that household members are working and contributing to household income. The result is in line with the findings of Nwaru et al. (2011) who reported that substantial amount of income flow increases the financial security of households and these household may not necessarily access external funds. The result is also in line with that of Akpan et al. (2013) who reported that increase in household size reduces farmers access to credit because their expenditures on household increases which affect their saving capacity which is one of the criteria used by some credit facilitators.

The coefficient (0.187316) of age was positive and significant at 1%. The implication is that poultry farmers who were young will more probably have access to credit compared to poultry farmers who were older. Your explanation would have been correct if the coefficient of credit was negative. Credit use decrease with increase age. The result is in consonance with that of Bashir and Mehmood (2010) who reported that age positively affect access to credit. Age negatively affect the use of credit as there is always fear of repayment as one ages.

Farming experience (−0.149064) had a negative coefficient and was significant at 5%. The implication is that poultry farmers with less farming experience have more access to credit. The probability of having access to credit increases with increase in farming experience,. The result is in line with the findings of Ullah et al. (2020) who reported that increase in farming experience decreases farmers access to credit. Educational level (−0.296522) had a negative effect on poultry farmers access to credit and was significant at 1%. The implication is that farmers with low education level will less probably have access to credit. The result is in line with the findings of Dabone et al. (2014) and Hananu et al. (2015) who reported that uneducated farmers may not be able to understand credit scheme and loan regulations as well as borrowing procedure of the formal sector.

Table 3 Result of Binary Regression Analysis on the Determinant s of Farmers Access to Credit

	Coefficient	*Std. Error*	*Z*	*p-value*
Constant	1.33564	2.09503	0.6375	0.5238
Household size	−1.00522	0.248854	−4.039	<0.0001***
Age	0.187316	0.0586929	3.191	0.0014***
Farming experience	−0.149064	0.0645668	−2.309	0.0210**
Educational level	−0.296522	0.0692085	−4.284	<0.0001***
Cooperative membership	0.478396	0.952883	0.5021	0.6156
Stock size	−0.000490603	0.00138642	−0.3539	0.7234
Access to extension services	−0.649534	0.705787	−0.9203	0.3574
Mean dependent var	0.161111	S.D. dependent var	0.368659	
McFadden R -squared	0.348013	Adjusted R -squared	0.247348	
Log-likelihood	−51.81433	Akaike criterion	119.6287	
Schwarz criterion	145.1723	Hannan -Quinn	129.9855	
Number of cases 'correctly predicted' = 157 (87.2%)				
f(beta'x) at mean of independent vars = 0.369				
Likelihood ratio test: Chi -square (7) = 55.3141 [0.0000]				

Source: Field Survey, 2021 Computed Using gretl. Remove border lines and in-between lines.

Constraints Associated with Access to Credit by Poultry Farmers

The result on the constraints associated with poultry farmers' access to credit as shown in Table 4 reveals that high interest rate (23.2%) was the major constraint in the study area. Credit facilitators demand collateral for securities, some poultry farmers do not have the collateral requirement to access the volume of credit they need for their poultry business. This is one of the reasons why family and friends was the major source of credit to poultry farmers in the study area. Other constraints include; long process involved (19.9%); lack of collateral (17.7%); lack of confidence (13.5%); short duration for loan repayment (13.2%); inadequate information (12.5%). Support with related studies on this whether they agree or disagree with yours.

Table 4 Distribution of Constraints Associated with Access to Credit by Poultry Farmers

Constraints	Frequency	Percentage (%)
High interest rate	134	23.2
Long process involved	115	19.9
Lack of confidence	78	13.5
Lack of collateral	102	17.7
Inadequate information	72	12.5
Short duration for loan repayment	76	13.2
	577	100.0

Multiple Responses.

Source: Field Survey, 2021.

Conclusion

This study analyzed the determinants of access to credit among poultry farmers and further examined the constraints associated with the poultry farmers access to credit in Abak Agricultural Zone, Akwa Ibom State, Nigeria. The poultry enterprise in the study area were dominated by male and they were still within their active working age. Age was positively related to poultry farmers access to credit while household size, farming experience and educational level were negatively related to poultry farmers access to credit in the study area.

Recommendations

Based on the findings of this study, the following recommendations are suggested to improve poultry farmers access to credit in the study area.

1. Government should formulate credit policies that will assist poultry farmers get more funds at the lowest rate of interest in order to assist them in production expansion. .
2. Family planning programme should be intensified in order to reduce the household size of farmers which will contribute to increase savings and reduction in pressure on the demand for credit facilities in the study area.
3. It is also recommended that there should be timely release of credit facilities to farmers to enable them meet up with farming activities. This is because late release of funds may not benefit the farmers. The likelihood to deploy the funds to the purpose for which it was not meant is very high

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