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Full Length Research Paper

An Examination of the Use of Agricultural Credit by Poultry Farmers in Plateau State, Nigeria's Jos South Local Government Area

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The use of agricultural loan by chicken producers in Plateau State, Nigeria's Jos South Local Government Area was examined in this study. All of the registered poultry farmers in the Jos South Local Government Area make up the study's population. The study's respondents were chosen using a multistage sampling process. Questionnaires and interview schedules were used to gather primary data, which were then analyzed using both descriptive and inferential statistics. According to the study's findings, the majority of poultry producers (86%) were men, and their mean age was 42. The majority (89%) were married, with an average household size of five persons. The study also revealed that, with an average stock size of 1658 birds and a mean farming experience of 9 years, 51% of the farmers had more education than a high school diploma. The average money used for the poultry company was ₦290164, while the average credit amount given to the respondents was ₦357224. Approximately 75% of the farmers used the loan to grow their current farming operations. Use of agricultural loan by poultry farmers was significantly influenced by gender, household size, farming experience, and flock size. The primary barriers to using agricultural financing among chicken farmers were the insufficiency of the credit amount received (58.0) and conflicting family demands (32%). In order to facilitate larger quantities of payments to farmers, the study suggested that banking institutions increase their budgetary allocations and implement farmer-friendly policies.

Key words: Analysis, Agricultural credit, Poultry farmers, Utilization.

INTRODUCTION

The growth of the agriculture industry is significantly influenced by agricultural finance. It can be essential to the prosperity of agriculture and satisfy a variety of purposes. There is circumstantial evidence that as agriculture has risen more rapidly, so has institutional credit [1]. [2] defines agricultural credit as the total amount of investment money available for agricultural output from sources outside the farm sector. These are loans given to farmers so they can produce, store, process, and sell agricultural goods.

Depending on how long it lasts, this credit can be short-, medium-, or long-term. Since it is one of the essential components of sustainable agricultural production, achieving the national objectives of poverty reduction and self-sufficiency in food is contingent upon its availability and demand [3]. Agricultural credit, according to [4], is the promise made by individual farmers or farm operators to borrow funds from intermediaries for their operations. Therefore, it is impossible to overstate the importance of credit. Giving farmers credit is often seen as a successful strategy for raising agricultural output [5]. Small, local cooperatives and well-known, large commercial banks are examples of credit institutions. It could also be informal or formal. It has been suggested that if sufficient agricultural financing were made available, Nigeria's dwindling

supply and production of chicken products may improve [6].

Nigeria's livestock business is a thriving and active part of the country's agricultural economy, which is expanding at a rate of 12.7% annually [7]. 30.3 million hectares are used for pasture and other livestock needs, and the global livestock industry occupies around 30% of the planet's unfrozen terrestrial area [8; 9]. Nigeria's cattle industry is valued at $78 billion, while the sector's global assets are projected to be around $1.4 trillion [7]. With 2.29 percent of GDP in 2020, this sector is a significant part of the nation's agricultural economy and plays a major role in economic growth and development [7; 9]. Among animal livestock operations, poultry holds a crucial place because of its performance and enormous potential for generating income, meeting calorie needs, and contributing to economic growth [10]. The poultry industry has had a major impact on Nigeria's economic development. The industry serves as a source of income for the populace by offering jobs to both skilled and unskilled workers. In terms of meat [chicken] and eggs [2], it offers a great source of animal protein. Due to its high-quality protein, chicken is the most popular meat in Nigeria. It has no health or religious taboos, unlike beef or pork. Additionally, eggs are a complete protein of superior quality and a great source of vitamin A, iron, and zinc—all of which are necessary for growth, health, and well-being [11]. Because of its high capital requirements, Nigeria's poultry industry is one of the agribusiness subsectors that needs additional funding on top of the farmer's own investment budget. The country has roughly 180 million birds, second only to South Africa in Africa, according to the Food and Agricultural Organization of the United Nations [12] and [13]. Nonetheless, a number of issues have plagued poultry farming, such as the cost and accessibility of inputs, illicit product imports, and subpar production methods that need funding to be improved [14]. Most small-scale poultry producers in Nigeria earn little money and have limited savings capacity, according to [2]. Because of this, most farmers find it difficult to adopt new technologies that could have increased their farm incomes. Utilizing contemporary technologies in poultry company management is essential to modern chicken production.

The adoption of agricultural technologies and growth in farm earnings among Nigeria's poor farmers are often linked to agricultural funding, according to [15]. Most livestock producers use credit and loans to lessen the impact of these production problems because they provide financial reserves that may be used to revitalize their enterprises' production processes. Lending money to farmers is seen as a high-risk activity by the official and informal institutions that offer agricultural credit or loans [16]. According to the majority of peasant poultry farmers, they have very little access to these financial services, whether they are formal or informal [17]. The ability to secure funding from easily accessible sources will help to eliminate barriers to their companies' ability to produce and make large amounts of money [18]. Beyond restricted access, effective use of financing is quickly becoming a key element influencing agricultural output and income in Nigeria [19]. According to [5], the primary issues impeding the efficacy of current credit schemes have been limited loan availability along with subpar fund utilization and repayment. According to [20], a large number of farmers are not proficient in managing agricultural finance, and some of them divert credit funds to non-farm production activities.

Smallholder farmers transfer a percentage of the money they borrow from financial institutions to non-farming activities, according to numerous empirical studies. According to their research, 83% of smallholder farmers in Nigeria's Abia State use their borrowed money for purposes other than those for which it was intended [15]. Similarly, smallholder farmers in Abia State, Southern Nigeria, only reported 12.15% of their credit being diverted into non-farm activities [21]. Conversely, a study [22] that looked into how formal finance affected Ghanaian poultry farmers' performance found little evidence of credit being diverted to non-farming uses. The use of credit determines its impact on agricultural productivity. Farmers frequently mishandle agricultural loans, which prevents them from fully understanding how it affects their output and, consequently, their standard of living. [23] argued that smallholder farmers squander agricultural funds for personal consumption, hence underutilizing them for investments.

Socioeconomic, farm-specific, and institutional factors may account for farmers' propensity to misappropriate agricultural loans from its intended uses. [20] used the Tobit model to determine the main factors influencing the distribution of agricultural credit to the farm businesses of a subset of Ghanaian maize farmers in order to evaluate the constraints and agricultural credit allocation of these farmers. According to the Tobit model's results, bank visits to farmers and the quantity of credit they receive have a substantial positive impact on the percentage of credit allotted to farm activities, whereas the age of the farmer has a big negative impact. [24] used a multiple regression model to identify the factors influencing the rate of credit allocation to the farm sector in their study on the factors influencing the formal agricultural credit allocation to the farm sector by farmers growing arable crops in Benue State, Nigeria. The study found that the rate of credit allocation to the agricultural sector is significantly influenced by age, education, household size, farm size, loan delay, and bank visit.

The development of innovative methods for providing smallholders with formal loans is essential to raising agricultural productivity. But the credit use problem is concerning. The significance of credit in raising agricultural productivity levels, according to [25], depends not only on accessibility and availability but also on how the loan is used. It has been suggested that the main reasons working against the performance of current credit schemes include low awareness and access to credit, as well as inadequate money utilization and repayments [26, 27, 28]. Beyond limited access, effective credit use is quickly emerging as a key barrier restricting agricultural output and profitability in Nigeria's

modern farming industry [19]. It is unknown if the farmers in the research region use the credit they have access to for farming or for non-farm uses, such as social gatherings. Given this growth, it is crucial to comprehend the likely elements influencing farmers' use of vital production help, such as loans. This study's main goal is to examine how chicken producers in Plateau State's Jos South Local Government Area use agricultural loans. The study's particular goals are to:

i. outline the socioeconomic characteristics of poultry farmers in Plateau State's Jos South Local Government Area;

ii. identify the sources of agricultural credit used by poultry farmers in the study area;

iii. look at the amount of credit received by poultry farmers in the study area;

iv. look at the amount of credit used by farmers in the study area exclusively for poultry business; and

v. identify the factors influencing the amount of credit used for poultry business by farmers in the study area.

The null hypothesis was tested as follows: Ho1: The socioeconomic traits of poultry farmers and loan utilization do not significantly correlate.

MATERIALS AND METHODS

Study Area

The investigation was conducted in Plateau State, Nigeria's Jos South Local Government Area, which is situated between latitudes 90 300 and 100N and longitudes 80 30'E of the Greenwhich meridian. It is located in the northwest of the state, with its main office at Bukuru, roughly 15 kilometers from Jos, the state capital. Du, Gyel, Kuru, and Vwang are the four districts that make up the local government area. The average land area of the local government is 1,037 km2, and its population is 650,835 [29]. Jos-East Local Government to the East, Bassa Local Government to the West, Barkin-Ladi Local Government to the South, and Riyom Local Government to the South West form its borders. Because of its elevation of more than 1450 meters above sea level, it is renowned for being rocky and frigid. With an average daily temperature of 180°C, November through February is the coldest time of year, while March through April is the warmest. Rainfall peaks in August and lasts from May to October. Rainfall averages range from 137.75 to 146.0 cm per year. Despite being a semi-urban area, the local government is surrounded by a lot of agricultural land, and mining ponds easily provide irrigation water. Rice, maize, Irish potatoes, yam, acha, sweet potatoes, cocoyam, tomatoes, groundnuts, and other vegetables are among the common food crops that are farmed. Many homes raise cattle, sheep, goats, pigs, and poultry.

Sampling Technique

All registered poultry producers in the four districts of the Jos South Local Government Area make up the study's population. They consist of the districts of Gyel, Du, Kuru, and Vwang. The Plateau Agricultural Development Programme (PADP) and the Poultry Association of Nigeria (PAN) provided the official sample frame of poultry producers in the study area. As a result, a purposeful count of poultry producers who benefited from agricultural financing was conducted. Only 136 beneficiaries in total were gathered due to the small number of credit recipients; as a result, this figure served as the study's sample size. Data was gathered in accordance with the study's goals. The primary source of information used in this study is primary data. Oral interviews and the distribution of questionnaires were used to gather the data. The questionnaire was created with the study's goals in mind.

Data Analysis

Both descriptive and inferential statistics were applied to the study's data. To describe the socio-economic characteristics of poultry farmers, determine the sources of agricultural credit they obtain, determine the amount of agricultural credit they receive, determine the actual amount of credit they use for their poultry business, and determine the barriers to credit utilization by poultry farmers, descriptive statistics such as frequency, percentages, and mean were employed. The factors impacting the amount of credit used by the farmers for their poultry company were identified through the use of multiple regression [inferential statistics].

of the OLS multiple regression models namely; linear, double logarithmic, exponential, and semi-logarithmic functions were used. Statistical and economic factors, such as the size of R2, the

A. Model Specification (Multiple Regression)

In The lead equation was selected using the four functional forms level of significance of the F-ratio, the quantity of significant variables, and the conformity of the variables to a priori expectations in order to identify the factors influencing the poultry farmers' use of agricultural loans. The four functional forms of OLS model are explicitly stated as:

Linear function:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + ei$$

Semi-log function:

$$Y = a + b_1\ln x_1 + b_2\ln x_2 + b_3\ln x_3 + b_4\ln x_4 + b_5\ln x_5 + b_6\ln x_6 + b_7\ln x_7 + b_81\ln x_8 + ei$$

Double-log function:

$$\ln Y = a + b_1\ln x_1 + b_2\ln x_2 + b_3\ln x_3 + b_4\ln x_4 + b_5\ln x_5 + b_6\ln x_6 + b_7\ln x_7 + b_81\ln x_8 + ei$$

Exponential function:

$$\ln Y = a + b_1x_1 + b_2x_2 + b_3\ln x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7\ln x_7 + b_8x_8 + ei$$

Where
Where Y = Volume of credit utilized (Naira)
X1 = Age (years)
X2 = Sex (Dummy, 1 if male, 0 if female)
X3 = Marital status (I if married, 0 if otherwise)
X4 = Educational status (years of formal education) X5 = Household size (Number of persons)
X6 = Farming experience (years) X7 = Flock size (number of birds)
X8 = Membership of organized group (Dummy) b1 – b8=Regression Coefficients
e = Error term

RESULTS AND DISCUSSION

A. Socio-economic characteristics of Poultry Farmers'

The According to the results in Table 1, 51.0% of the poultry farmers, or the bulk of the respondents, were between the ages of 41 and 50, 28.8% were between the ages of 31 and 10, 13% were over 50, and only 8% were between the ages of 21 and 30. Poultry producers were 42 years old on average. This suggests that the majority of poultry farmers in the research region are old enough to make credit decisions that will allow them to continue producing chickens. It is anticipated that, given their active and productive age, they will be able to make

good use of the loans they have received by implementing new and enhanced manufacturing technology. This result is closely linked to that of [30], who found that the average age of loan recipients in Ekiti State, Nigeria, was 47 years old.

According to the results in Table 1, 14% of the poultry farmers in the research area were women, whereas the majority (86%) were men. Given that many women may find poultry farming overly demanding, this study may not come as a surprise. The prevalence of male farmers may be explained by the fact that raising chickens is a very dangerous, labor-intensive, and uncertain business that is typically best left to men. This result is consistent with that of [30], who also found that the majority of loan recipients (81.5%) were men in their study on the impact of socioeconomic characteristics on smallholder crop farmers' ability to use loans in Ekiti State, Nigeria. Additionally, the results indicate that 11% of respondents were single and 89% of respondents were married. This only suggests that the majority of these farmers were accountable and had families to support. Because marriage is believed to improve emotional, physical, and mental stability, it is anticipated that the large number of married recipients will have a good impact on the use of loans obtained.

51% of the poultry farmers had university education, 45% had secondary education, and 4% had primary education, according to the results in Table 1. This finding indicates that the research area's chicken farmers had a high literacy rate. Formally educated farmers are fortunate to be among the first to learn about new developments and enhanced technology that aim to increase production and output. Furthermore, because formal education lessens the tendency toward risk aversion, these farmers are early adopters. Formal education gives farmers in the poultry sector, particularly those with agricultural training, the chance to comprehend how to handle resources effectively in chicken production. It is expected that education will have a favorable impact on farmers' decisions to embrace new and improved production practices, which will improve their capacity to make efficient use of their credits [31].

The findings also show that 27% of poultry farmers in the research area had households with six to ten people, 8% had more than ten people, and 65% of poultry farmers had households with one to five people. The respondents' average household size consisted of five [5] people. The small family size may be caused by the country's present economic crisis and the high literacy rate of the farmers. If the income is sufficient, a modest household size may always be advantageous to credit consumption because the credit obtained will not be used to support the family. A direct relationship between household size and spending is expected.

Farmers are more likely to shift monies intended for farm production to meet domestic home requirements when household sizes increase. This study supports [32], who found that households of chicken producers in Ibadan, Oyo state, often had five members.

According to the distribution of poultry farmers by number of years of farming experience, 26% of the farmers had between 11 and 15 years of farming experience, and 47% of the farmers had between 6 and 10 years. Additionally, 6% had more than 15 years of expertise raising chickens, whilst 21% had less than 5 years. On average, the poultry farmers had been in the business for nine years. This finding suggests that the farmers had a respectable number of years of experience raising chickens and are not new to the practice because they are familiar with the complexities and conditions of raising chickens and have firsthand knowledge of some of the risks and unknowns involved in raising chickens. It is comparatively lengthy enough for them to have mastered the enterprise, having gone through over nine production cycles [33].

Previous experiences play a significant role in management choices and business operations, and it is anticipated that farmers with more credit-using years will demonstrate superior money management, making effective use of the loans they have taken out [34].

Table 1 also revealed that 29% of farmers had between 1501 and 2000 birds in their stock, 26% had between 1001 and 1500 birds, 19% had between 500 and 1000 birds, 12% had between 2001 and 2500 birds, 8% had between 2501 and 3000 birds, and the remaining 6% had more than 3000 birds. Poultry producers in the research area have an average stock size of 1658 birds, which may be regarded as tiny. This suggests that the majority of the recipients were running their businesses on a modest scale. It is anticipated that the larger the farm, the more obligated the farmer will be to use the loan to increase his level of output.

Every respondent (100%) belonged to the Poultry Association of Nigeria and a few other farmer associations. Because farmers' associations are legitimate forums and helpful avenues for informing and educating their members about government policies, including credit programs for farmers, membership in one may have a favorable impact on loan availability. [19] has underlined the value of cooperatives in lending money to farmers.

Table 1's results also revealed that just 27% of farmers in the research area had contacted extension agents since the previous crop year, while the majority (73%) had not. In the research area, the extension agents' supposed efforts to give farmers relevant knowledge about agricultural financing and fund management to support commercial output seem to fall short. Educating farmers about government policies and how they affect their farming operations is the extension worker's main focus. The high farmer-to-extension worker ratio in the nation may have contributed to the extension agents' inadequate coverage of the farmers. Nigerian farmers have limited access to extension services, according to [35].

TABLE 1. SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS [N=136]

Age	Frequency	Percentage	Mean
21-30	11	8.0	
31-40	38	28.0	
41-50	69	51.0	
>50	18	13.0	42
Sex			
Male	117	86.0	
Female	19	14.0	
Marital status			
Married	121	89.0	
Single	15	11.0	
Educational status			
Primary	6	4.0	
Secondary	61	45.0	
Tertiary	69	51.0	
Non formal	-	-	
Household size			
1-5	88	65.0	

Age	Frequency	Percentage	Mean
Farming experience			
< 5	28	21.0	
6-10	64	47.0	
11-15	36	26.0	
>15	8	6.0	9
Stock size [Birds]			
<500	-		
500- 1000	26	19.0	
1001-1500	35	26.0	
1501-2000	40	29.0	
2001-2500	16	12.0	
2501-3000	11	8.0	
>3000	8	6.0	1658
Membership			
Yes	136	100.0	
No	-	-	
Contact			
Yes	37	27.0	
No	99	73.0	

Source: Field survey, 2024

B. Mineral Contents

According to Figure 1's results, the majority of respondents (55%) got their credit through cooperative savings and lending programs. Approximately 39% of people got their credit from microfinance banks, and 6% from agricultural banks. According to this finding, the main financial institutions meeting the respondents' credit needs are informal or non-institutional credit sources such cooperatives and money lending programs. It is surprising that small-scale farmers receive virtually little loans from agricultural banks. This can be the result of the small number of agricultural banks in the research region, the lengthy loan approval and disbursement process, the requirement for collateral security, the high interest rate, and the repayment schedule. The extensive use of local cooperatives may be due to the cheap loan rates and lack of need for collateral security, which make them more appealing to farmers. This result is consistent with that of [36], who found that informal credit sources were highly used since they offered lower interest rates and no collateral security requirements. According to [37], only roughly 11% of rural farmers obtain their financing from these official sources. In a related scenario, [33] found that the largest percentage of credit obtained was from microfinance (68.8%). According to a different study, almost 46.7% of farmers received agricultural loans via cooperative societies [18]. The strong patronage may be the reason why farmers can easily borrow money from microfinance banks without collateral [38].

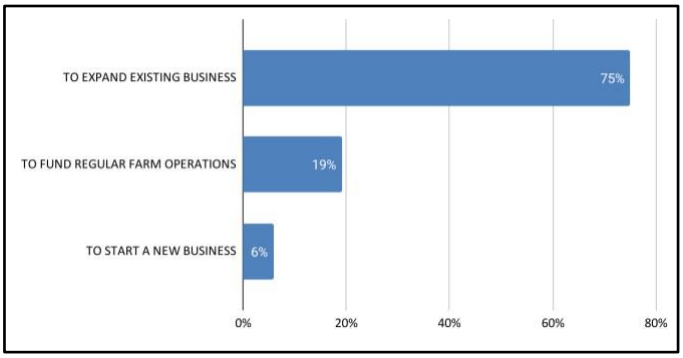
Because of the inherent risk associated with the agriculture sector and the farmers' incapacity to provide the necessary collateral, banks are hesitant to lend money to farmers. Due to the lengthy and difficult loan application process, the high cost of bank loans, the banks' delayed loan distribution, and the farmers' far location from the loan source, farmers are reluctant to apply for credit from banks on their own [39]. An excessive dependence on the unofficial credit system has resulted from the majority of rural farmers' reluctance to utilize the legal credit system [40].

Plant roots typically take up mineral nutrients from the soil, but a variety of factors can impact how well plants absorb nutrients, including the chemistry and composition of particular soils, which can make it more difficult for plants to absorb nutrients, or the presence of nutrients in forms that are inaccessible to plants [31]. Consequently, discrepancies in the mineral composition of the seeds gathered from Shakawe and Kasane could be caused by variances in soil characteristics such as water content, pH, and compaction. Significant mineral concentrations have been found in the False Mopane seeds that were gathered from Shakawe and Kasane, making them potential excellent sources of minerals for human diet.

The human body requires minerals in meals for proper development and operation. Iron, zinc, calcium, potassium, magnesium, phosphorus, sodium, and other minerals that were analyzed in the study are vital for good health. Calcium is stored in teeth and bones to help build and maintain their strength, according to Oria et al. [32]. The hemoglobin protein, which carries oxygen from the lungs to the tissues, contains iron. Magnesium helps the body control blood pressure, blood sugar, muscles, and nerves. Blood artery function and bone health are maintained by phosphorus. Potassium supports healthy neuron, muscle, and cell function. Zinc aids in the body's defense against invasive bacteria and viruses, while salt supports healthy nerve and muscle function and maintains fluid balance. For people to obtain a sufficient mineral intake and prevent toxicity from excessive mineral dosages, each mineral has a suggested daily consumption value.

Given that the daily recommended requirements for magnesium, iron, zinc, calcium, and potassium are 310, 8, 8, 1000, and 3400 mg/day, respectively, False Mopane seeds may be an excellent source of these nutrients [32]. Accordingly, 174.65 mg/100 g Mg, 3.34 mg/100 g Fe, 2.96 mg/100 g Zn, 367.59 mg/100 g Ca, and 468.69 mg/100 g K may be obtained from False Mopane seeds, which accounts for 56% of the daily required intake of Mg, 41.75% of Fe, 37.25% of Zn, 36.76% of Ca, and 13.79% of K. However, because False Mopane seeds only supply less than 1% of the 1,200 mg/day of salt and 700 mg/day of phosphorus that are required daily, they cannot be considered good suppliers of these nutrients.

Fig. 1. Respondents Credit Sources. (Source: Field survey, 2024)



Volume of Agricultural Credit Received and Utilized

The amount of credit that the respondents got and used for their poultry business is displayed in Table 2. Based on the total amount of ₦48582464 that all farmers got, the average credit received by the respondents was ₦357224. An average of ₦67059, or 19% of the credit received, was diverted for other uses, while ₦290164, or around 81% of the credit received, was used only for the poultry company. The percentage of 19% for the non-farm sector indicates a respectable degree of loan diversion, despite the fact that 81% of the credit used for the farm sector is comparatively greater. In support of this conclusion, [41] found that only 18% of individuals who received loans utilized them for non-agricultural purposes in their study on the factors influencing loan utilization among small farmers in Sudan.

TABLE II. DISTRIBUTION OF RESPONDENTS BASED ON VOLUME OF CREDIT RECEIVED AND VOLUME UTILIZED

Credit	Amount [₦]	Mean	Percentage
Volume of credit received	48582464	357,224	
Volume utilized for poultry	39462396	290,164	81.0
Volume not utilized for poultry	9120068	67059	19.0

Source: Field survey, 2024

C. ***Mode of Credit Utilization***

75% of the farmers used the loan to grow their current farm enterprises, according to the results in Figure 2. Six percent used it to launch new businesses, while 19 percent used it to finance standard farm operations including labor and input purchases. It was evident from the results that the majority of these farmers already had farms, were largely running them on a small scale, and merely required loans to expand. Productivity in the poultry subsector would increase with the availability and prudent application of agricultural finance.

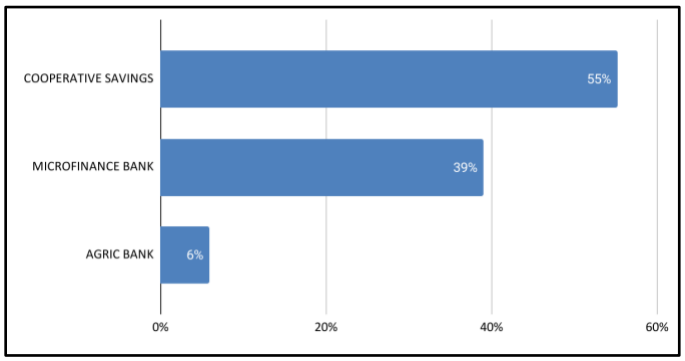


Fig. 2. Respondents Mode of Credit Ultilization. (Source: Field survey, 2024)

D. ***Determinants of Volume of Credit Utilized for Poultry Enterprise***

Table 3 displays the multiple regression analysis's outcome. The linear function was chosen as the lead equation because it provided the best fit at the 1% level of significance. The model explains approximately 59.70% of the variation in loan use among chicken farmers in the study area, with 40.3% of the variation being exogenous to the system, according to the coefficient of determination of 59.70. The findings indicate that four out of the eight explanatory factors included in the model had a substantial impact on the poultry farmers' use of agricultural finance. These factors include flock size, farming experience, gender, and household size.

Gender (X2): At the 10% level, the respondents' gender was determined to be significant and negative [-0.0643]. This data implies that compared to their male counterparts, the female beneficiaries used the credit more wisely. To put it another way, women typically devote a larger percentage of the credit they receive to their farming operations than do men. This might be due to the widespread perception that women are better money managers than males, as this study shows. Another explanation for this outcome is that, regardless of marital status, men are typically burdened with greater obligations than women, particularly in Nigeria. Due to their obligations to their parents, siblings, and other relatives, they could have to use the money they have borrowed to pay for their dependents' need. This outcome is consistent with the findings of [30], who in their investigation of the impact of socioeconomic characteristics on the ability of smallholder crop farmers in Ekiti State, Nigeria, to utilize loans, similarly discovered a negative and substantial association between gender and agricultural credit utilization.

Household size (X5): With a negative coefficient [-0.0533], the household size coefficient was significant at the 5% probability level. This indicates that credit use will fall by 5.3% for each unit rise in the poultry producers' household size. As anticipated, an increase in the number of family members may put the household at risk of experiencing some level of poverty due to the high cost of supporting a large family and the low income level. As a result, poultry producers who have a lot of family responsibilities may turn to using the available credit to

address family issues. Furthermore, in their study on the association between loan utilization and farm income of arable crop farmers in Kwara State, Nigeria, [33] also found a negative and significant relationship between household size and credit utilization.

Farming experience (X6): At the 1% level of probability, the respondents' farming experience had a positive coefficient (0.1556) and was statistically significant. This implies that when poultry farmers gain more farming experience, the likelihood that they will request for agricultural credit for poultry businesses will climb. This conclusion was supported by [38], who employed the OLS regression technique in his research on small-scale farmers in Oyo State, Nigeria, and discovered that the agricultural experiences of the borrowers had a favorable impact on loan utilization and payback.

Flock size (X7): At the 5% level of probability, the flock size coefficient was found to be positive (0.02129) and significant. This suggests that there is a clear correlation between the quantity of birds raised on a poultry farm and the use of credit. It is anticipated that a farmer will be more inclined to borrow money for his farm if the quantity of his flock increases. This suggests that the farmer is more likely to use the loan to implement better production techniques and technologies as the size of the farm grows. Additionally, when farm investment rises, farmers may engage more time and money in protecting their holdings. The results of [42], who discovered that farm size favorably influences repayment ability through loan use to adopt improved technology, are consistent with this.

TABLE III. DETERMINANTS OF VOLUME OF CREDIT UTILIZED FOR POULTRY ENTERPRISE

Variable	Coeff	Standard error	T-ratio	P-value
Constant	6.0310	0.0302	199.701	0.000***
Age (X_1)	0.0018	0.0101	0.178	0.856
Gender (X_2)	-0.0643	0.0357	1.801	0.075*
Marital status (X_3)	-0.0226	0.0313	0.722	0.472
Educational level (X_4)	0.00206	0.00835	0.246	0.806
Household size (X_5)	-0.0533	0.0182	2.928	0.004**
Farming experience (X_6)	0.1556	0.0363	4.286	0.000***
Flock size (X_7)	0.02129	0.00979	2.174	0.032**
Cooperative M/bership (X_8)	-0.0200	0.0178	1.123	0.264
Number of observations	136			
R-squared	59.70			
Adj R-squared	56.90			
Pob > F	0.0000			

*, ** and *** indicate significance at 10%, 5% and 1% probability levels.

Test of Hypothesis

Three socioeconomic factors—sex, family size, and farming experience—were shown to have a significant link with poultry farmers' usage of agricultural loan, according to the results of the linear regression in Table 3. As a result, we reject the null hypothesis and accept the alternative hypothesis, coming to the conclusion that there is a substantial correlation between the socioeconomic traits of farmers and their use of agricultural financing.

E. Constraints to Agricultural Credit Utilization

Poultry farmers were asked to list the main obstacles to using financing for their businesses. According to the responses in Figure 3 below, the majority of respondents (58%) ranked insufficient credit or loan, followed by competing family demands (32%), a lack of credit institution supervision (24%), and a risky business (20%). Credits that seem inadequate for significant farm work are frequently readily redirected to non-farm pursuits. In Northern Nigeria's Bauchi State, small-scale farmers who obtained meager institutional credit intended for agricultural use allegedly used the money for non-farm purposes [43]. It was predicted that farmers who obtain a lot of credit will probably devote a larger portion of it to the agricultural industry than farmers who receive little credit. Additionally, comparatively more loans are being diverted to non-agricultural applications in an effort to meet the increasingly conflicting needs of households. Credit officers who visit farms to make loan offers are said to have a tendency to direct more funds into the agriculture sector and less toward the nonfarm sector. Additionally, the dangerous nature of the poultry farming industry adds to the apprehension about investing all of the loan acquired in the company out of concern for potential losses. Instead, as a safety net in case the poultry industry failed, some farmers would redirect a portion of the credit into nonfarm endeavors.

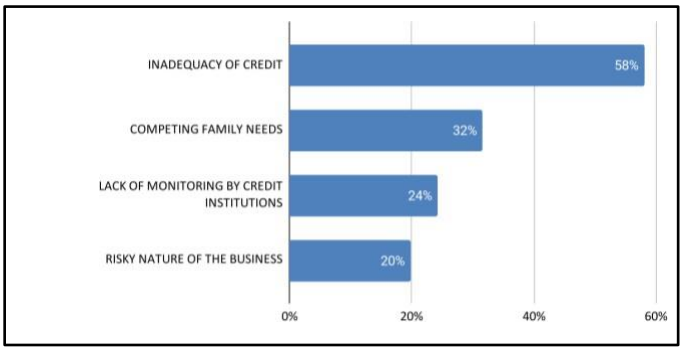


Fig. 3. Constraints to credit utilization among respondents. (Multiple responses)

CONCLUSIONS AND RECOMMENDATIONS

The majority of farmers were young, married, had formal education, and had a respectable amount of farming experience, according to the main findings. The majority of respondents got their credit from microfinance banks, and they received an average of ₦357224 in loan, with ₦290164 being used on average for chicken company. The majority of farmers used finance to grow their current farming operations. The poultry farmers' usage of agricultural loan was significantly influenced by their gender, household size, level of farming experience, and flock size. The main factors preventing chicken producers from using agricultural financing were insufficient credit, conflicting family requirements, a lack of credit institution oversight, and the risky character of their enterprise.

Based on the findings, the following recommendations were made:

i. To allow for larger payments to farmers, financial institutions should adopt farmer-friendly policies and increase budgetary allocations.

ii. Loans agencies and institutions ought to oversee and keep an eye on how small-scale poultry industry operators use loans. Before giving small-scale poultry business owners additional credit, lenders should make sure that prior loans are being used effectively.

iii. To guarantee that loans obtained for the operation of poultry businesses won't be diverted to other uses, extension workers and credit institutions should educate poultry farmers on financial literacy and credit management.

iv. Because the poultry industry is risky, the government should create insurance plans to protect investments in this subsector. This will lessen farmers' concerns about the business's complete resource allocation and increase their faith in it.

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