An Analysis of the Factors Influencing Access to Credit by Poultry Farmers in Abuja, Nigeria

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Summary

Access to credit remains an important tool in the development of poultry industry in Nigeria. Yet, the majority of poultry farmers in the country have no access to credit from formal sources. This paper therefore investigates the factors influencing access to credit by poultry farmers in Abuja. A two-stage sampling technique was used to elicit information from 107 poultry farmers in Abuja metropolis. Descriptive statistics and Heckman two-step model were employed to analyze the data. The results of the descriptive analysis show that commercial layer production enterprise was the most popular among the poultry farmers in Abuja, while the least was quail production. Only about 30% of the respondents had access to credit from formal sources and the majority of them got their loan from cooperative societies. Results from Heckman two-step model show that different sets of factors affect the probability of access and amount of credit. The factors that were found to be important in explaining access to credit include extension visits, distance to formal credit sources, hours of entrepreneurial training and commercial broiler production enterprise. Years of schooling, household size and broiler parent stock enterprise were the important factors influencing the amount of credit received. To enhance access to credit by poultry farmers in the study area, policies that will encourage the expansion of formal financial services to the rural areas and human capacity development should be strengthened.

Key words

poultry farmers, access to credit, formal sources, Heckman two-step model, Abuja

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Introduction

The poultry industry plays important roles in the development of Nigeria economy. The industry provides employment opportunities for both skilled and unskilled labour, thereby serving as a source of income to the people. It provides a good source of animal protein in terms of meat (chicken) and eggs (Abedullah et al., 2003). The most widely accepted meat in Nigeria is chicken because of its high-quality protein. Unlike beef or pork, it does not have any religious or health taboo. Also, eggs are a very good source of vitamin A, iron and zinc, which are essential for health, growth and well-being; egg is a complete protein with excellent quality (Food and Agriculture Organization, 2005; Tijani et al., 2006). A little wonder the poultry sub-sector today is unarguably one of the most attractive investment options in the agricultural industry in Nigeria. Poultry enterprise consists of chickens (breeders, cockerels commercial layers and broilers), turkeys, guinea fowls, ostriches, ducks, geese and quails.

A study by Laviria et al. (1998) in developing countries revealed that poultry production is capital intensive and the capital includes: poultry pens, feeds, drugs, equipment, day old chicks etc. Likewise, in Nigeria, poultry enterprise is among the agribusiness sub-sectors that require additional financing apart from the farmer's own investment fund because it is capital intensive. Unfortunately, majority of small scale farmers including poultry, in Nigeria have low income and savings capacity (Audu et al., 2007). As a result, most of them find it difficult to adopt modern technology that would have led to increase in their farm incomes (Agom and Idiong, 2002). Modern poultry production requires the application of modern technology in the management of the poultry businesses. Agricultural credit is widely recognized as one of the intermediary factors between adoptions of farm technologies and increase of farm incomes among poor farmers in Nigeria (Omonona et al., 2008; Oladeebo and Oladeebo, 2008; Anyiro and Orriaku, 2011; Akudugu, 2012). Access to credit is regarded as one of the key elements in raising agricultural productivity (Development Bank of South Africa (DBSA), 2005). More and more farm households have come to depend on credit. Credit provides cash reserves required to fast track the process of production and consumption in the next cycle. The development process of the agricultural sector can be triggered by the ease with which credit is obtained by farmers.

Agricultural credits are loans extended to farmers for production, storage, processing and marketing of farm products. It is one of the fundamental ingredients of sustainable agricultural production, as such, its accessibility and demand is among the prerequisites for attaining the national goal of reducing poverty and ensuring self-food sufficiency goal in the country (Nwaru, et al., 2011; Akudugu, 2012). Such credit can be short, medium or long term depending on its duration. Credit institutions range from well-developed and large sized commercial banks to localized small cooperatives. It can also be formal or informal. Diagne and Zeller (2001) opined that a household is said to have access if it is able to borrow from a credit source (formal or informal). The extent of access to credit is measured by the maximum amount a household can borrow at a time from a given source. Access to affordable agricultural credit enables farmers, who constitute the majority of population in most developing countries of which Nigeria is one, to adopt new technology and take advantage of new economic opportunities to increase production and income. The transfer is temporary and is made for a price, known as interest, which varies with the risk involved and with the demand for, and supply of credit (Kimuyu and Omiti, 2000).

One of the major problems confronting small and medium scale farmers including poultry farmers in Nigeria is poor access to adequate credit. This is despite that this category of farmers produces the bulk of the domestic agricultural output (Eze and Ibekwe, 2007). Unfortunately, several factors are perceived to be responsible for this dismal situation. According to Adegbite (2009), majority of the farmers in Nigeria are considered not to be credit worthy by most formal credit institutions and still prefer to deny the farmers access to their services. This posture is premised on the feeling that most farmers are low income earners with low saving capacity, illiterate and had no collaterals among others. On the part of the farmers, loans are not disbursed timely; high interest rate and complex application procedure are most recurrent. Also, Akpan et al (2013) analysed the determinants of credit access and demand among poultry farmers in Akwa Ibom State, Nigeria. The primary data collected was analysed using Independent Double Hurdle model. The analyses show that: farmers' age, gender, farm size, membership of social organization, extension agent visits, distance from the borrower's (farmer) residence to lending source, years of formal education and household size are important determinants of access to credit in the study area. On the other hand, the amount of loan demanded by the poultry farmers was significantly influenced by the farmers' experience in poultry business, cost of hired labour, previous years of experience on credit, availability of surety, farm size, years of experience among others. Asuquo (2013) examined credit access among small scale agro-based enterprises in Nigeria. The results of the Heckman two- stage model indicate that gender, membership of social group, years of experience, enterprise size and collateral were the determinants of access to formal credit by the respondents.

Furthermore, a study by Atieno (2001) on formal and informal institutions lending policies and access to credit by small scale enterprises in Kenya indicates that: income level, distance to credit sources, security, past credit participation and assets owned were significant variables that explain the participation in formal credit markets by farmers. The study by Mohamed (2003) shows that age, gender, household size, education level, race and the household's wealth status have been found to significantly affect a household's access to (formal) credit. Okurut (2006) employed multinomial logit models and Heckman probit models with sample selection to examine access to credit by the poor in South Africa. The results show that the poor and blacks have limited access to the formal and semi-formal financial sectors and that access to formal credit was influenced by age, being male, household size, education level, household per capita expenditure, race and rural location.

Quoc (2012) investigated the determinants of the decision to borrow and of the amount that is borrowed by using the double hurdle model and the Heckman selection model. He opines that, household capital endowments, marital status, family size, distance to the market centre and location were the determinants of households' access to formal credit in rural areas of Vietnam.

In a recent study, Kiplimo (2013) employs a binary logit model to determine the factors affecting smallholder farmers' access to credit in Kenya. The results show that the marginal effects of education, main occupation, group membership, household income distance to market, and access to extension services significantly influenced access to credit in the study area. Baiyegunhi and Fraser (2014) employed logit regression model to examine smallholder farmers' access to credit in the Eastern Cape Province, South Africa. Empirical evidence from the study showed that credit market access was significantly influenced by variables such as gender, education, households' income, value of assets, savings, dependency ratio, repayment capacity and social capital.

Most of these existing studies on access to credit by farmers focused on farmers involved in agricultural or agro-allied activities as a whole. To the best of our knowledge, the only known study on access to credit by poultry farmers is the one by Akpan et al. (2013). Owing to a dearth of study on access to credit by poultry farmers in the country, this study analyzed the factors influencing access to credit by poultry farmers in Nigeria using Heckman two-step model following (Asuquo, 2013; Okurut, 2006; Quoc, 2012). This will not only enrich literature on the subject matter in the country, but will also better inform the policy makers on how to tackle the problem of credit deficiency which portends danger for the growth and sustainability of poultry industry in Nigeria.

Material and methods

This study was carried out in the Federal Capital Territory (FCT), Abuja. It is the capital of Nigeria located in the middle of the country. Abuja is divided into six Area Councils namely: Abaji, Kwali, Kuje, Gwagwalada, Bwari, and Municipal. Economic activities in the FCT varied and include agriculture. Major crops grown include millet, corn, sorghum, rice, yam, cassava, plantain, groundnut and cowpea. Livestock production activities such as poultry, fishery, cattle, sheep, goat, duck and piggery are also common (Federal Capital Territory Administration (FCTA), 2013).

A two-stage sampling techniques was employed to obtain the data for the study with the aid of a well-structured questionnaire administered by trained enumerators. The first stage was the random selection of five poultry farm communities from each of the six Area Councils in Abuja. The list of poultry farmers was obtained from the Poultry Association of Nigeria and National Agricultural Insurance Corporation in Abuja. The second stage was a random selection of 140 poultry farmers proportionate to size. However, a total of 107 respondents have meaningful information needed for achieving the objectives of this study. The information collected include: age of respondents, gender, educational attainment, household size, value of poultry stock, farming experience, group or cooperative membership, types of collateral (land, for example), entrepreneurial training, access to extension agents, formal credit status, and sources of credit among others.

Empirical model specification

This study employed the Heckman two-stage selection model with the assumption that access to and amount of credit borrowed by poultry farmers in the area are two distinct or independent decisions. In addition, different sets of explanatory variables are believed to influence the decisions of a poultry farmer to access credit and the amount actually borrowed from any formal credit source. The model was formulated by Heckman in 1979. Since not all the farmers will have access to credit, then, poultry farmers' decision that leads to a particular outcome can be modeled in a logical order. The first stage is having access to credit and the second is a decision on the amount of credit to be acquired. The probability of access to credit outcome was estimated by means of a Probit maximum likelihood function on both farmers (those with access and those without access). The model is appropriate because the access to credit is discreet and it is specified as:

$$Prob\left[Y_i = 1 \middle| X = \int_{-\infty}^{x'\alpha} \varphi(t)dt = \varphi(X'\beta)\right] \quad (1)$$

Where Y_i is an identifier variable equal to 1 for farmers that had access, Xs are a set of explanatory variables, βs are a set of coefficients of the explanatory variables and $\varphi(.)$ is the standard normal distribution function. When the utility that farmer j derives from having access is greater than 0, $Y_i = 1$ and 0 otherwise. Therefore,

$$Y_i^* = \beta_j X_i + V_i \quad (2)$$

Where Y_i^* is the latent measure of utility the farmer gets from access to credit and V_i~N (0,1)

This means that:

$$Y_i = 1 \text{ if } Y_i^* > 0 \text{ and } Y_i = 0 \text{ if } Y_i^* \leq 0 \quad (3)$$

Empirically, the model can be stated as follows:

$$Y = \beta_j X_i + e_i \quad (4)$$

where Y is the probability of farmers' access to credit given the explanatory variables X_i and e_i is the error term.

The Inverse of the Mills Ratio (IMR), lambda (λ) that is the ratio of the ordinate of a standard normal to the tail area of the distribution was computed following Heckman (1980). The Mill's ratio reflects the probability that an observation belongs to the selected sample. It was then added as a regressor in the level of access to credit in the second stage of Heckman selection model to correct for potential selection bias. It was expected that the level of access to formal credit is self-selected because only few respondents had access to formal credit. Hence, the decision on the amount of credit to borrow is preceded by the access to credit outcome. Going by this, there arises an empirical problem of self-selection. In other to solve this problem, the access to credit outcome is treated endogenously in this study to control for the potential sample selection problem. Hence, the factors influencing access to formal credit outcome are estimated first. Thereafter, the IMR from the selected equation was used as an explanatory variable in the equation for analyzing the factors influencing the amount of credit. The empirical specification is:

$$E(Q_i Y = 1) = f(X_i\beta) + \gamma\lambda + u_i \quad (5)$$

Where E is the expectation operator, Q_i is the amount of credit received from formal sources, X_i represent the explanatory variables influencing the amount of credit obtained and β_s are the coefficients to be estimated, while λ is the estimated IMR. Therefore, Q_i can be represented as:

$$Q_i^* = \beta_j X_i + \gamma\lambda + u_i \quad (6)$$

Where Q_i^* is observed only if the respondent have access to credit (γ=1), hence, $Q_i = Q_i^*$.

Empirically, this is stated as:

$$Q_i = \beta_j X_i + \gamma\lambda + u_i \quad (7)$$

Where Q_i is the amount of credit borrowed given the explanatory variables X_i , λ is the IMR estimated in step 1 of the Heckman model and u_i is the error term. If λ is not statistically significant, then sample selection bias is not a problem (Heckman 1979: 1980). Equations (3) and (7) were then jointly estimated.

The definitions of the explanatory variables used in the model are shown below:

X_1 = Age of the respondents in years
X_2 = Sex of the respondents (1 if male, 0 female)
X_3 = Marital status (1 if Married, 0 otherwise)
X_4 = Years of schooling of the respondents
X_5 = Membership of an association (1 if yes, 0 otherwise)
X_6 = Years of experience in poultry business
X_7 = Household size in number
X_8 = Extension visits (1 if yes, 0 otherwise)
X_9 = Agricultural insurance cover (1 if yes, 0 otherwise)
X_{10} = Distance to nearest source of formal credit (km)
X_{11} = Hours of entrepreneurial training
X_{12} = Collateral (1 if yes, 0 otherwise)
X_{13} = Types of poultry enterprises (1 if Broiler parent stock, 2 if Commercial broilers, 3 if Commercial layers, 0 if turkey)
X_{14} = Value of poultry stock (₦)

Results and discussion

Socio-economic and demographic characteristics of the respondents

Table 1 shows the results of the respondents' socio-economic and demographic characteristics. The mean age of the respondents was about 48 years with the majority of them within the age range of 40-60 years. This implies that the respondents were relatively old. The mean age is however within the ages defined as economically productive in a population (ILO, 2006). The result is contrary to the submission of Udoh (2010) and Akpan et al. (2013) who reported a lower age for poultry farmers in Akwa Ibom State. About 63% of the farmers were males, while the majority of them (86%) had tertiary education. The high literacy rate among the farmers is a welcome development as this enhances farmers' access to credit and leads to the growth of the poultry industry in the future. This however is in sharp disagreement with the evidence provided by Chukwuji et al. (2006) who reported a lower years of schooling among broiler producers in Delta State.

Almost two-third of the respondents belonged to at least one association (mainly farmers' cooperative society). Membership of association will not only enhance farmers' access to credit but will also aid in the amount of credit they can access from such associations. The average household size of the respondents stood at about six members. The households in the sample were a bit larger than the recommended national average of four

Table 1. Socioeconomic and demographic characteristics of poultry farmers

Variable	Frequency (107)	Percent
Age (years)		
<40	25	23.4
40-49	30	28.0
50-59	30	28.0
>59	22	20.6
Mean	48.485±12.243	
Sex		
Male	67	62.6
Female	40	37.4
Schooling (years)		
0	6	5.6
6	2	1.9
12	7	6.5
15	92	86.0
Mean	14.131±2.438	
Membership of association		
Yes	67	63.0
No	40	37.0
Household size		
<4	15	1.4
4-6	63	5.9
>6	29	2.7
Mean	5.589±2.525	
Extension visits		
Yes	44	41.1
No	63	58.9
Agricultural insurance		
Yes	19	17.8
No	88	82.2
Distance to source of credit (km)		
<5	14	13.1
5-8	56	51.3
>8	50	46.7
Mean	8.2±3.489	
Entrepreneurial training (hours)		
0	21	19.6
1-12.99	7	6.5
13-23.99	16	15.0
>23.99	62	57.9
Mean	31.2759±27.614	
Collateral		
Yes	28	26.2
No	79	73.8
Value of stock (000) (₦)		
<1,000	30	28.0
1,000-4,999	40	37.4
5,000-9,999	12	11.2
9,999	25	23.4
Mean	6562729±8001546	

Note: ₦250 = 1 USD as at the time of survey
Source: computed from field survey, 2015

(Alabi and Haruna, 2005). Only about two-fifth of them had contact with extension agents in the last one year, while, less than 20% of them had agricultural insurance certificates. Farmers who have frequent contact with extension agents are expected to have more information that will influence farm households' demand to use credit from the formal sources (Yehuala, 2008). Possession of an agricultural insurance certificate is one of the conditions through which farmers can access loan from Bank of Agriculture in the country. Almost three-quarter of the farmers had no collateral required for obtaining loan from commercial

Table 2. Types of poultry enterprise respondents were involved in

Poultry enterprise	Frequency	Percent
Broiler parent stock	8	5.1
Pullet parent stock	2	1.3
Commercial broiler	43	27.4
Commercial layers	81	51.6
Turkeys	9	5.7
Cockerels	6	3.8
Ducks	2	1.3
Quinea fowls	5	3.2
Quails	1	0.6
Total	157	100

Note: some of the respondents were into more than one enterprise
Source: computed from field survey data, 2015

Table 3. Formal credit sources

Variables	Frequency	Percent
Credit access status		
Yes	33	30.8
No	74	69.2
Total	107	100
Sources of credit		
Cooperative society	14	42.4
Micro finance bank	5	15.2
Commercial bank	8	24.2
Bank of Agriculture	6	18.2
Total	33	100

Source: computed from field survey data, 2015

banks. The mean value of poultry stock held by farmers as at the time of the survey stood at ₦6562729.00 ($26250.92). Given the high cost of breeding stocks, day old chicks, feed and drugs among others at the time of the survey, the respondents can be said to be operating on a small-medium scale.

Types of poultry enterprise

The results of descriptive statistics of the various types of poultry enterprise farmers were engaged in is presented in Table 2. As shown in the table, more farmers were into commercial layer production enterprise than any of the other enterprises. The one next to it was the commercial broiler production enterprise. The reason for the involvement of many of the farmers in the two enterprises may be due to high return on investment associated with them, *ceteris paribus*. Concerning commercial broiler production, changing tastes and growing health concerns in Nigeria about smuggled imported frozen poultry products have spurred demand for locally dressed chickens derivable mainly from live broilers. The increase in demand may perhaps be responsible for the increase in the number of producers of live broilers. Very few farmers were into turkey production enterprise. The non-popularity of turkey enterprise may be due to seasonality in the demand for turkeys. Turkeys are sold mainly during festivities like Christmas, Easter, Ramadan and very recently, Eid-el-Kabir in the country. The non-popularity of cockerels, ducks, guinea fowls and quails among the respondents may be as a result of low demand. High level of start-up capital coupled with high technical know-how required in broiler and pullet parent stock enterprises may be responsible for their low patronage among the respondents in the study area. In the meantime, type of poultry enterprise the farmer is involved in will not only influence their access to credit but also the amount of credit acquired.

Characteristics of formal credit sources

The results of the characteristics of financial institutions are presented in Table 3. Cooperative societies, Micro finance Banks, Commercial Banks and Bank of Agriculture were the only formal sources of credit to small, medium and large scale agro-allied entrepreneurs in the country. The later was established to provide ready financial aids to farmers whenever there is need for it with little or no stringent conditions for obtaining the credit. It is evident from the table that only about 30% of the sample had access to credit from all the four main sources. This is rather too low, given the capital intensive nature of the enterprise and its importance in Nigeria economy. However, the reason for low rate of access may not be unconnected with the risky nature of poultry enterprise and low participation of the respondents in agricultural insurance policy (Obi, 2016).

The majority of the farmers (42.4%) who had access to credit borrowed from cooperative societies and a mere 18% of them sourced for their credit from Bank of Agriculture. However, the ease of accessing credit from cooperative societies by cooperators with little or no stringent conditions attached compared with other sources may be responsible for this. The reason for the low patronage of Bank of Agriculture by the respondents may not be farfetched; it may be due to the fact that farmers were not aware of the activities of the bank. Bank of Agriculture was established to provide loan to farmers and agripreneurs without any collateral but the bank favours provision of loans to farmers with agricultural insurance policy. Obtaining loans from commercial and micro finance banks involve provision of collateral such as landed property that has certificate of occupancy among others. Inability of some of the respondents to provide this may be responsible for their inability to obtain loans from such banks.

Factors influencing poultry farmers' access to credit and amount of credit obtained

The Heckman two-step procedure was used to analyse the factors influencing poultry farmers' access to credit and the amount of credit obtained. As stated in the methodology, the two equations were estimated simultaneously. Post estimation of selection equation results was done to determine marginal effects of changes in explanatory variables on the expected value of the dependent variable. This is because the coefficients generated are just values that maximize the likelihood function and have no exact interpretation unlike marginal effects. Marginal values of the explanatory variables were estimated to show their predictive power. The results of the analysis are presented in Table 4. As shown in the table, the likelihood function of the two-step model was significant at 1% showing a strong explanatory power. The coefficient of the mills lambda was significant also at 1% level showing evidence of the presence of self–selection upon which the choice of Heckman two step model is justified.

The analysis shows that extension visits, distance to credit source, entrepreneurial training and broiler parent stock

Table 4. Estimates of Heckman two-step model for the likelihood of access to credit and amount of credit obtained in the study area

Variable	Probability of access to credit			Amount of credit obtained	
	Coefficient	P-value	Marginal effect	Coefficient	P-value
Age	-0.0104	0.578	-0.0180	-0.1628	0.111
Sex	0.0105	0.801	-0.4788	-3.0959	0.623
Marital status	0.0449	0.885	0.3234	3.0850	0.502
Schooling	0.2080	0.442	0.1524	2.2399***	0.000
Membership of association	0.1021	0.771	0.7929	3.4365	0.821
Poultry experience	-0.0013	0.959	-0.0099	0.2473	0.502
Household size	-0.1008	0.163	-0.0332	-0.7156***	0.000
Extension visit	0.9287**	0.019	0.0316	3.8959	0.437
Agricultural Insurance	0.8530	0.139	0.2683	4.7105	0.559
Distance to credit source	-0.5139*	0.098	-0.1240	-0.4089	0.316
Entrepreneurial training	0.0003***	0.014	1.3212	0.0578	0.522
Collateral	0.2969	0.004	0.0019	5.5738	0.899
Types of poultry enterprises					
Broiler parent stock	0.0900	0.636	0.2970	4.2942**	0.040
Commercial broiler	0.5878**	0.035	0.0970	17.3510	0.920
Commercial layer	0.2853	0.126	0.6608	0.0400	0.210
Value of stock	-1.57e-08	0.603	0.3794	1.8e-08	0.561
Constant	-0.1442***	0.413		-2.1908***	0.131
Statistics:					
Total observation	107				
Censored observation	74				
Mills lambda	8.497***				
Wald Chi2	56.95***				
Pro >Chi2	0.0000				

Note: *10% significant, **5% significant, ***1% significant

enterprise were the factors that significantly explained the probability of the likelihood of poultry farmers' access to credit. Meanwhile, only distance to credit source and entrepreneurial training are the continuous variables that explain access to credit significantly to give meaningful explanation of marginal effects after probit. As depicted in the table, a unit increase in the distance between respondents' farms to the source of credit will reduce farmers' access to credit by 12.4%. Farmers near the lending institutions have a location advantage and can contact the lender easily and have more access to information than those who live in distant locations. The result supports evidence provided by Zeller (1994), Dallimore and Mgimeti (2003), Porteous (2003), Akpan et al. (2013) and Ebaidalla and Abdalla (2015), who reported a negative association between credit source distance and farmers' access to formal credit. Entrepreneurial training and access to formal credit are positively correlated, implying that a unit increase in the hour of training resulted in an increase in access to formal credit by 132%. This is understandable because, participation of farmers in capacity building programs increases their chances to get credit from formal institutions. This is because participation in training and extension activities increases awareness among beneficiaries, which enable them to gain adequate knowledge for better utilization of credit, as well as adoption of advanced technologies in farming operations and management. This fact highlights the importance of training and capacity building in allowing poor households to access formal credit. However, given the magnitude of the slope coefficients of this variable makes it to be the most important policy variable that influences famers' access to credit in Abuja.

On the other hand, years of schooling and broiler parent stock enterprise were positively related with amount of credit obtained from formal sources, while household size had an indirect association with it. The implication is that, ceteris paribus, a unit increase in years of schooling and being a commercial broiler farmer relative to been a turkey farmer will result in an increase in the amount of loan farmers obtained by 124% and 29% respectively. Increase in years of farmers' formal education would expose them to various sources of credit and thus, increase tendency to acquire more credit too. In addition, it will enhance access to various informations about credit sources and some criteria needed to formalize any credit acquisition procedures. This result supports literature that education and access to credit are positively related (Duflo and Crépon, 2008; Akudugu, 2012; Akpan et al., 2013). The relationship between amount of credit and broiler parent stock enterprise is perhaps not a surprising one due to capital intensive nature of the enterprise. Surprisingly, a unit increase in household size, all other things being equal, will lead to a decrease in likelihood of amount of credit by 71.5%. This might be a reflection of an increased number of earning members in the household. On the other hand, it could be that other members of the household were used as labor resources in performing farming operations instead of demanding credit from formal institutions to hire workers. The result is in line with earlier submission by Swain (2008) and Quoc (2012) but in sharp disagreement with Akpan et al. (2013) and Olomola and Gyimah-Brempong (2014) who reported a positive association.

Conclusion

This study identified the factors influencing access to credit by poultry farmers in Abuja, Nigeria. The results of the descriptive analysis revealed that poultry farmers in the study area were mainly engaged in commercial layers and broiler production.

Also, only 33% of them had access to credit from formal sources while the rest did not. Four different formal credit sources were involved in giving loans to poultry farmers with cooperative society been the most accessible of them all. The results of the Heckman two-stage model showed that distance to credit sources and hours of entrepreneurial training were positively associated with access to credit. On the other hand, years of schooling and broiler production enterprise positively influenced the amount of credit obtained, while household size negatively determined it. Thus, to improve poultry farmers' access to credit, the study recommended that financial services should be expanded in areas close to rural areas where most farms are located as this would improve poultry farmers' access to credit. In addition to that, provision of training to farmers by Poultry Association of Nigeria and cooperative societies in aspects of credit acquisition and utilization and modern poultry enterprise should be considered. Farmers too should be encouraged to accept improved technology disseminated to them by Poultry Association of Nigeria, Cooperative Societies and Extension Agents in relation to access to credit. Also, to improve on the amount of credit obtained, the study recommended that government should focus more on the policies that support educational development in the area.

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