

Assessment of Agricultural Credit Acquisition among Small Scale Poultry Farmers in Katsina-Ala and Konshisha Local Government Areas in Benue State, Nigeria

Ashikegh, S. A^{*1}; Prof. Iheanacho, A. C²; Atser, E. A³

¹Nigeria Security and Civil Defence Corps, Plateau State command, Jos.

E-mail:ashikeghstephen@gmail.com

²Department of Agribusiness, Federal University of Agriculture, Makurdi.

³Nigeria Agricultural Quarantine Service, Abuja.

*Correspondence Author

Abstract— The objectives of this study were to assess agricultural credit acquisition among small scale poultry farmers in Katsina-Ala and Konshisha Local government areas in Benue State, Nigeria. The study adopted the survey research design, using the cross-sectional approach because it involves assessment of agricultural credit acquisition among small scale poultry farmers in the study area. Structured questionnaire was administered to eighty –eight (88) randomly selected respondents in the study area and interview technique was also used to obtain additional information from the respondents whenever the need arose. The study concludes that agricultural credit is adjudged as an important input to increase poultry production and poultry enterprise using loans in the study area is profitable; however the profitability level is a function of the scale of production. The study suggested that government should remove security advancement of collateral conditions that discourages poultry farmers from commercial banks facilities, formal and informal money lenders should reduce the interest rate to one digit for farmers to afford convenient repayment and more borrowers to be encouraged, and lenders should timely approve/disburse fund to farmers for effective acquisition and curtail the protocols involved in credit acquisition.

Keywords— Credit, Acquisition, Poultry, Farmers.

I. INTRODUCTION

Agriculture is the bedrock on which every successful and stable economy the world over is built. In Nigeria, agriculture accounts for one third of the Gross Domestic Product (GDP) and employs about two third of the labour force (Otunaiya *et al.*, 2012.). The challenges of food insecurity and hunger in developing countries like Nigeria have caught the attention of experts and governments worldwide (Emaikwu *et al.*, 2011; FAO, 2003). Population growth, urbanization, and income improvements are the main drivers of increased demand for foods of animal origin in developing countries (Abdullah *et al.* 2011; Steinfeld, 2003). The sufficient supply of animal protein is most critical in the global food basket crisis (FAO, 1995). As a result, growing demand has led to a rise in the production of foods of animal

origin all around the globe, especially from poultry and pigs (FAO, 2010).

What is known as poultry farming in Nigeria developed slowly but steadily from the 1950's until, when as a result of introduction of Structural Adjustment Programme (SAP), it began to experience the crisis which persisted until today (Okonjo, 2000). The importance of animal protein apart from its palatability is undisputed. Animal protein provides man with high quality food nutrients for growth and tissue replacement. It determines the level of nutrition of the population and the health of the work forces, which in turn determines the development of a nation and its economy.

The Nigerian government in an attempt to alleviate this problem has always resorted to mass importation of meat. The Obasanjo led administration has put more effort towards

self-sustainability in poultry production by placing ban on the importation of frozen chicken. The problem which solution is sought is that of harmonizing or balancing the shortage in supply caused by the ban on importation of frozen chicken. This can only be achieved by increasing poultry production. Also, many Nigerian livestock farmers in their own effort have preferred to invest in the poultry industry making it easy for the transformation of the previous back yard and less efficient system of poultry keeping to a more scientific system, despite their poor capital base. The potential of poultry industry in reversing the inadequate protein intake by most Nigerians has also been recognized. In comparison to other livestock enterprises, broiler production have the advantage of the fast growth rate, cheaper, high feed conversion efficiency, can be eaten by one family man and is not forbidden by any culture or religion. The Nigerian agricultural economy enjoyed decade of boom in poultry production between mid-70's and mid 80's. For instance, the population of cattle (174.32 million), goat (156.6 million) and sheep (190.31 million) while that of poultry was estimated to be 660 million against other animal population in 1983. The production level was so high that the sub-sectorial economy becomes second in African (Onyebimana, 2000) with proper attention, poultry can be relied upon in a short run solving the deficit in protein supply.

Several suggestions have been offered as a short term measures to combat meat shortages in Nigeria. Mua'dAbdul, *et al.*, (2008) has suggested emphasis on massive poultry production, but the limitations posed by shortages and high cost of food grains and medication were obvious. Even the call for increasing awareness of Nigerians about the serious consequences of animal protein shortages, the encouragement of every Nigerian to keep a few livestock as a hobby by as well as liberalization of credit facilities and subsidies on factors of production for genuine livestock farmers to increase production and reduce price has not significantly solved the problem.

In Benue state, poultry production plays an exceptionally important role; approximately 80% of rural households are engaged in smallholder poultry production (Kryger *et al.* 2010). Poultry production plays an important role in rural incomes in sub-Saharan Africa; especially in Nigeria (Mengesha 2011; Van der Sluis, 2007). The enforced demand for foods of animal origin could be satisfied especially by the production of poultry, as these products have seen the greatest increase in production in recent years (FAO 2011; Speedy, 2003; Delgado and Narrod 2002).

Access to credit is expected to enhance farming households' ability to acquire capital intensive technology and assets to facilitate and improve farming activities resulting in greater capacity to invest in cultivation of high yielding crops and larger farm holdings (Emereole, 1995; Nwaru, 2003; Nwaru and Onuoha, 2010; Ammani, 2012). Qureshi *et al.* (1996) observed that an increase in credit to agriculture will lead to increase in food production and farmers' income, because as the demand for credit increases farmers output also increases, resulting in improvement in their wellbeing.

However, agricultural loan remains a critical means through which many problems confronting poultry farmers can be resolved. Primarily, it assists in breaking the chains of the vicious circle of poverty which is the main cause of low productivity and low income of the poultry farmers (Bamiro *et al.*, 2012). The level of credit available to these farmers is however, grossly inadequate and therefore, limits the realization of their full potentials. It is against this background that this paper seeks to assess credit acquisition and utilization among small scale poultry farmers in Katsina-Ala and Konshisha local government areas in Benue State, Nigeria.

The objectives of this paper are to:

- i. identify sources of agricultural credit among poultry farmers in the study area; and
- ii. determine the factors affecting credit acquisition by poultry farmers in the study area;

II. CONCEPT OF AGRICULTURAL FINANCE

According to Ayodele and Adeusi (2002), agricultural finance is all about the acquisition and utilization of capital (i.e. finance), the factor of production that facilitates the acquisition, procurement and management of the other factors of production namely, land, labour, capital – physical, and entrepreneur (management), in agriculture and which, is not only a lubricant but the lifeblood of the economy. It cuts across financial management and the financial institutions serving the agricultural sector of the economy. It is the most important factor in economic development. Capital has two concepts – the physical capital which refers to the physical assets (land, buildings, plants, machinery and equipment) used in the production of goods and services either for further or final consumption, and the finance capital which is used not only to procure the physical assets but also operates and manages the assets on daily basis to ensure continuous production of goods and services.

Finance is seen and viewed as the most important and the most talked about (and still being talked about) problem of

agriculture. It is regarded as the greatest limiting factor to the development of agriculture in Nigeria and consequently, the eradication of extreme poverty and hunger. Indeed, World Bank (1975) observed that finance is the only one element in the package of inputs and services needed to raise the productivity of small farmers. Ayodele *et al.*, (2002), see it as one of the basic problems facing the less developed countries is the scarcity of domestic capital relative to the size of investment required to achieve high and self-sustaining rates of growth of national and per capital income. Finance, in an economy, is basically from two (2) main sources – savings and borrowings. Savings, otherwise regarded as equities, is the basis of money economy which allows the release of production resource for investments in the production of goods and services and which enhances real economic growth. It is that part of the disposable income that is not immediately consumed. Borrowings, on the other hand, are the use of other people's money for investment purposes. While savings (equities) is a direct source of financing in an economy, credit (borrowings) is an indirect source. In the integrated and technology driven economy of today, it is evident that there is no amount of equities that can sustain the expected productivity of agriculture to meet the increasing need of the nation, either individually or corporately. It is therefore apparent that borrowing, otherwise regarded as credits, is the major and most ideal source of adequate financing for agriculture, just like any other commercial venture and/or any sector of the economy. World Bank (2005) recognized that credits constitute the largest component of its agricultural lending. It is the duty of the financial institutions that as the financial intermediaries must intermediate efficiently between the savings unit and the investing unit to sustain continuous availability of borrowings (credits).

The objective of agricultural financing policies is to establish an effective system of sustainable agricultural credit schemes, programmes and institutions that could provide micro and macro credit facilities for small, medium and large scale producers, processors and marketers in the agricultural sector of the economy. The CBN (2005) asserted that “robust economic growth cannot be achieved without putting in place well focused programmes to reduce poverty through empowering the people by increasing their access to factors of production, especially credit.”

Study Area

Katsina-Ala Local Government Area (LGA) is one of the twenty three local government areas in Benue State. It was

created as a division on February 3, 1976. At the 2006 Census, the LGA had a population of 225,471 persons made up of 114,093 males and 111, 093 females (Federal Government of Nigeria, 2009). Major crop grown include yams, maize, rice, groundnut, beans beniseed and soyabeans. Livestock like piggery, goat rearing and poultry production are commonly found in the local government among other agricultural products.

Konshisha local government area is one of the 23 local government area of Benue State, Nigeria. The Local Government Area has a population of 143,045 (1991 census). Konshisha is essentially an agrarian local government, The people of Konshisha Local Government are predominantly of crops such as yams, cassava, rice, soya beans guinea corn, groundnuts, , oranges, etc. Similarly the people also do raise livestock such as piggery, goat rearing and poultry production.

III. METHODOLOGY

The study used survey design research employing the cross-sectional approach because this entails evaluation of selected respondent views on the subject matter. The study population consists of small scale poultry farmers in Katsina-Ala and Konshisha local government areas in Benue State. To ensure even distribution of the sample for the study, a multistage sampling technique was used in selecting small scale poultry farmers within the study area. In order to arrive at a reasonable sample size, the Yamane, (1973) technique was used. The method is mathematically derived Yamane formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where,

n = required responses/sample size

e² = error limit

N = population size

Using the formula at 95% confidence level and an error limit of 5% result in Table 1 below:

Table 1: Sampling Distribution using Bourley's Proportional Allocation Technique

Local governments under study	Population frequency	Sample size distribution using bourley's technique
Katsina-Ala	500	$n_b = \frac{500 \times 350}{2800} = 62$
Konshisha	206	

$$n_b = \frac{206 \times 350}{2800} = 26$$

Overall Total **706** **88**

Source: Field survey data, 2017

Structured questionnaire was administered to eight –eight (88) randomly selected respondents in the study area and interview technique was also used to obtained additional information from the respondents whenever the need arose. The data collected for the study were analyzed using descriptive and inferential statistical tools.

IV. RESULTS AND DISCUSSION

Available Sources of Agricultural Credit

Table 2 below indicates the available sources of agricultural credit used by small-scale poultry farmers in the study area. These include, Bank of Agriculture (BOA), commercial banks, micro-finance banks, cooperative societies, money lenders, local bam, friends & relatives and personal savings. About 26.8 % and 17.1 % of the respondents received credit from cooperative societies and micro-finance banks respectively. These results could be attributed to the lower bureaucracy and delays associated with requesting and receiving financial loans from cooperative societies as compared to micro-finance banks, and this must have encouraged farmers to borrow more frequently from the cooperative societies. This finding is consistent with those of Hussein (2007); Olagunju (2007); Babalola (2012); Ololade and Olagunju (2013) who posited that loans from credit cooperative may be perceived to be devoid of administrative delays and as such there was no insistence on collateral especially for members of such cooperative societies which motivated members to preferably borrow from their cooperative societies at the expense of micro-finance credit.

The results also revealed that farmers who benefitted from credit facilities from the commercial banks and the Bank of Agriculture (BOA) constituted 6.1 and 6.9% respectively. The low patronage of BOA may also be due to inadequate awareness by the farmers of the existence and availability of such facilities in the rural areas. Furthermore, low patronage of commercial banks may also be attributed to lack or limited presence of these banks in the rural areas, coupled with the delays associated with the approval and disbursement of loans to beneficiaries as well as with the insistence on collateral security from the prospective beneficiaries by the bank authorities. Interest rates of commercial banks are always relatively higher due to the higher transaction cost

involved. It could also be insinuated that the setup of commercial banks is usually cumbersome and expensive and exist mostly in urban centres where farmers are less concentrated. This finding agrees with the observations of Okwoche, *et al.*, (2012), who observed that the informal source of credit was more popular among small-scale farmers, and this may be due to the relative ease in obtaining credit devoid of administrative delay, non-existence of security or collateral, and flexibility built into the repayment system, which is against what is obtained in the formal sources.

Table 2: Percentage Distribution of Farmers according to Available Sources of Institutional Credit (n=246)

Sources of credit	Frequency	Percentage
Bank of Agriculture	17	6.9
Commercial Banks	15	6.1
Micro-finance bank	42	17.1
Cooperative Societies	66	26.8
Money lender	35	14.2
Local Bam	33	13.4
Friends & Relatives	25	10.2
Personal savings	20	8.1

Source: Field survey data, 2017* Multiple responses existed, hence > 100 %

Determinants of Credit Acquisition by Poultry Farmers

The results in Table 3 indicate that five out of the 13 variables in the Logit Model have significant coefficients. These included gender X_2 , household size X_3 , and amount of credit X_8 , main occupation X_9 and access to extension agents X_{13} .

The coefficients of age (X_1) education level (X_4), source of credit (X_5), non -farm income (X_6), net farm income (X_7) and number of dependents (X_{10}) were significant. This implies that age, education level, source of credit, amount of nonfarm

income, net farm income and number of dependents of the poultry farmers do not affect the decision on the likelihood of the use of agricultural credit in the study area. The gender of the farmers represented by the coefficient of variable X_2 was positively signed and significant at 10 %. This result, as indicated by the marginal effect, shows that a male farmer has about 90 % likelihood to acquire an agricultural loan to finance a poultry business than a female farmer. This may be attributed to cultural practices of the respondents in the study area as loans are mostly preferably given to males than their female counterparts on the conviction that such loans are more secured in the hands of males than the females. Furthermore, males are more likely to have adequate collateral, such as landed properties and assets that guarantee them access to loans from commercial banks and other formal sources as compared to their female counterparts.

The coefficient of X_3 representing the farmers' household size has negative sign but was significant at 10%. This is in conformity with the *a priori* expectations. Poultry farmers who have large household size are not more likely to use agricultural loans for the purpose for which they were obtained as a result of diverting the loans to solve other emerging family needs, such as clothing, hospital bills, burials and school fees among others. The marginal analysis

shows that the likelihood of a poultry farmer to obtain and utilize the agricultural loan will reduce by about 35 % if the household size increases by 1%, thus affected by many other factors that may not have been covered in the present study area. The effects of the amount of loan available to the poultry farmer (X_8) variable on the decision to acquire agricultural credit closely conformed to *a priori* expectations. The positive coefficient of the parameter estimates for variable X_8 indicates that the more the volume of loanable agricultural credit facilities are provided, the more the likelihood of a decision by poultry farmer to access it. The marginal effect shows that a percentage increase in the volume of loan available to poultry farmers will increase the likelihood of decision to acquire loan by about 12 %.

The negative signs of the coefficients representing poultry farmer's main occupation and access to extension agents indicate contrary results to *a priori* expectations. As indicated by Table 5, a full-time farmer's likelihood to decide for agricultural loan is about 13 % lower than that of a part-time farmer. Similarly, a poultry farmer with more extension contacts are (about 79 %) less likely to use agricultural loan. This high percentage is as a result of extension training and linkage to other farm input supply sources.

Table 3: Logit Regression Model of decision to use Credit by Poultry Farmers

Variable	Estimated coefficient	Marginal effect	Z-value	Standard Error
Constant	-0.1306	-0.5326	-0.225	0.0756
Age (X_1)	0.7546	0.3077	0.323	0.0785
Gender (X_2)	0.2195*	0.8953	1.706*	0.0918
Household size (X_3)	-0.8579***	0.3499	3.659***	0.08596
Education level (X_4)	0.2328	0.9494	1.077	0.13140
Source of Credit (X_5)	0.7332	0.2990	0.383	0.1310
Non Farm Income (X_6)	0.3206	0.2798	1.975	0.9342
Net farm income (X_7)	-0.4489	-0.1831	-0.302	0.2801
Amount of credit (X_8)	0.2861**	0.1166	1.996***	0.1373
Main occupation (X_9)	-0.3200**	-0.1305	-2.015**	0.9342
Number of dependence (X_{10})	0.8092	0.3300	0.656	0.0676
Market Source (X_{11})	-0.3321	-0.1354	-0.565	3310
Credit use experience (X_{12})	-1.3137	-0.5357	-1.325	0.896
Extension service (X_{13})	-1.9316***	-0.7877	-3.189***	0.0270
Log likelihood	-1486.36			
LR Chi2 (10)	42.21			
Proba>chi2	0.000			
Pseudo R2	0.368			

Source: Field survey data, 2017

***, ** and * denote that, the association coefficients are significant at 1, 5 and 10% levels, respectively.

V. CONCLUSION

Agricultural credit is adjudged as an important input to increase poultry production. The study shows that certain factors responsible for the decision to obtain or otherwise agricultural loan from any source. This study also shows that poultry enterprise using loans in the study area is profitable; however the profitability level is a function of the scale of production.

VI. RECOMMENDATIONS

The study suggested that government should remove security advancement of collateral conditions that discourages poultry farmers from commercial banks facilities, formal and informal money lenders should reduce the interest rate to one digit for farmers to afford convenient repayment and more borrowers to be encouraged, and lenders should timely approve/disburse fund to farmers for effective utilization and curtail the protocols involved in credit acquisition.

REFERENCES

- [1] Abedullah, N., Mahmood, A., Khalid, M. & Kouser, S., (2009). The role of agricultural credit in the growth of livestock sector: A case study of Faisalabad. *Pak. Vet. J.*, 29: pp81-84.
- [2] Ammani, A. A., (2012). An Investigation into the Relationship between Agricultural Production and Formal Credit Supply in Nigeria. *International Journal of Agriculture and Forestry* 2(1), pp. 46-52
- [3] Ayodele, T.D. and Adeusi, S.O.(2002): *Agricultural Financing In Nigeria*: Balfak Educational Publishers, Ado – Ekiti. Nigeria.
- [4] Babalola, D. A., (2012). Determinants of Farmers' Adoption of Agricultural Insurance: the Case of Poultry Farmers in Abeokuta Metropolis of Ogun State, Nigeria. *British Journal of Poultry Sciences* 3(2), 36-41.
- [5] Babalola, D. A and Babalola, Y., (2013). Economic Effects of Media Campaign against Pandemic diseases: The Case of Bird Flu (H5N1) on poultry business in Ogun state, Nigeria. *Arabian Journal of Business and Management Review* 2(12), 80-88.
- [6] Bamiro, O.M., Otunaiya, A.O. & Idowu, A.O. (2012). *Economics of Horizontal Integration in Poultry Industry in South-West Nigeria*. *Int. J. Poult. Sci.*, 11: pp. 39-46.
- [7] Central Bank of Nigeria, (2005). Micro-Finance Policy Regulatory and Supervisory Frame Work for Nigeria, CBN, Abuja.
- [8] Delgado, C.L. and Narrod C.A. (2002). Impact of Changing Market Forces and Policies on Structural Change in the Livestock Industries of Selected Fast Growing Developing Countries. *FPRI.FAO*. <http://www.fao.org/WAIRDOCS/LEAD/X6115E/x6115e00.htm> (accessed August 13, 2014).
- [9] Emereole, C.O., (1995). Demand for Institutional Credit by Farmers in Abia State, Nigeria: A Case Study of the Nigerian Agricultural and Cooperative Bank, M.Sc. Thesis, Federal University of Technology Owerri, Nigeria.
- [10] FAO (2011). Food and Agricultural Organization. Monitoring African Food and Agricultural Policies: Analysis of incentives and disincentives for cassava in Nigeria, Technical notes series, MAFAP, FAO, Rome.
- [11] Hussein, H. K, and Ohlmer B. O., (2008). Influence of Credit Constraints on Production Efficiency: The Case of Farm Households in Southern Ethiopia. Swedish University of Agricultural Sciences, Sweden; 2008.
- [12] Kryger KN, Thomsen KA, Whyte MA, & Dissing M (2010). Smallholder Poultry Production – Livelihoods, Food Security and Socio-cultural Significance, Smallholder Poultry Production. *FAO.Rome Italy*. P. 76.
- [13] Mua'dAbdul, A., Munir, T., Mohsen A. & Abdel, R. A., (2008). Effect of plant Density and Nitrogen rate on Herbage yield of Marjoram under Mediterranean Conditions. *American Eurasian J. Agric and Environmental Sciences*, 3(2): pp.153-158.
- [14] Nwaru, J.C. (2003). Gender and relative production efficiency in food crop farming in Abia State, Nigeria. *Nigerian agricultural Journal* 34: pp. 1-30
- [15] Nwaru, J.C. and Onuoha, R.E., (2010). Credit Use and Technical Change in Smallholder Food Crop Production in Imo State of Nigeria, *New York Science Journal* 3(11), 144-152
- [16] Okonjo, C.N., (2000). The Nigeria poultry industry the past, present and future. A paper presented at the 5th annual conference of Animal society of Nigeria Rivers state University of Science and Technology. Port Harcourt.
- [17] Okwoche, V. A, Asogwa, B. C, & Obinne, C. P. O.(2012) Evaluation of agricultural credit utilization by cooperative farmers in Benue State of Nigeria. *European Journal of Economics, Finance and Administrative Sciences*. 47: pp. 123-133.
- [18] Olagunju, F. I. (2007). Cost and Returns on egg production in South-Western Nigeria. *Research Journal of Agricultural Economics*, 3(9): pp. 468 – 474.
- [19] Ololade, R. A. and Olagunju, F. I., (2013). Determinants of Access to Credit among Rural Farmers in Oyo State, Nigeria, *Global Journal of Science Frontier Research Agriculture and Veterinary Sciences* 13 (2), 50-58
- [20] Onyebimana, U.A.U., (2000). *"Economics and production management for Agriculture"* Alphabet Nigeria publisher. Nigeria, pp: 64-71.
- [21] Otunaiya, A.O., Okuneye, P.A. & Aihonsu, J.O. (2012). Pattern of Inorganic Fertilizer use among Food Crop Farmers in Ogun State, Nigeria. *Asian J. Agric. Sci.*, 4: pp.26-31. *Pakistan Development Review*. 31:4.
- [22] Qureshi, S. K and Shah. A (2002). A Critical Review of Rural Credit Policy in Pakistan. *The Pakistan Development Review*. 31:4.
- [23] Speedy, A.W. (2003). Global production and consumption of animal source foods. *Journal of Nutrition* 133(11): 4048-4053.
- [24] Yamane, T. (1973). *"Statistics: an introduction analysis."* Singapore: Times Printers, c1973.