Research Article
Araştırma Makalesi

Bartın University International Journal of Natural and Applied Sciences
1(1): 1-6
31 Temmuz/July, 2018

FUNDING STATUS OF SMALL SCALE POULTRY AGRIBUSINESS FIRMS AND THE NEED FOR STRATEGIC BAILOUT MECHANISMS

Achoja Felix ODEMERO
Department of Agricultural Economics and Extension, Delta State University, Asaba Campus, Nigeria.

Abstract

Financial intervention programme requires information on farm's financial capacity. Yet there is dearth of empirical information on the fund security status of small scale poultry agribusiness to warrant a bailout intervention. This study was carried to ascertain the financial capacity, financial security baseline and fund security gap/shortfall of poultry farms so as to make advocacy for a bailout intervention. A total of 280 small scale poultry farmers were randomly selected, and studied. Primary data were collected from respondents with the aid of structured questionnaire. Descriptive statistics (mean, percentage and frequency distribution) and logit model were used in the analysis of data. The result of the study showed that about 20% of the small scale poultry were fund secured, while 80% had fund capacity (N519, 238) that is below the fund security threshold (NI,000,000). The result revealed that majority depended on meager personal savings and cooperative loans as sources of financial capital. The variables that had positive and significant ($P<0.05$) relationship with fund security in the model were operator's educational attainment, age of the farm, retained earnings, membership of credit associations and volume of loan obtained. Family withdrawals, had significant and negative relationship ($P<0.05$) fund security status of poultry farms. It was recommended that there should be adequate and timely release of financial interventions through loan-able funds and grants by relevant financial institutions that will save the poultry farms from fund insecurity.

Keywords: Funding Status, Small Scale Poultry, Agribusiness Firms, Strategic Bailout Mechanisms.

1. Introduction

Finance is the strength for the survival and growth of firms. Inadequate funding has been identified as the constraint to the development of small scale firms. A poultry farm is considered financial secured if it has enough finance to adequately cover all short run operating expenses on daily basis without running short of cash (Adjan, 2009). Financial capital investment in poultry farms should adequately take care of all operating expenses and still be able to withstand eventual financial risk shocks. It is a known fact that the Nigerian small scale poultry farms hardly survive risk shocks. Von Blockland (2003), Oluboyede (2007); observed in their separate studies that inability to withstand financial risk as obvious problem of insufficient capital base of small scale enterprises. This is common among small farm businesses. Financial capital is needed adopt improved production technologies and other management practices. Without fund security, poultry sector cannot contribute substantially to food security and poverty alleviation in the Nigeria economy.

In many parts of Nigeria, small scale poultry farmers complain of limited access to funds. Inaccessibility to adequate funds is often linked with their low level of net farm income which translates to low savings, low investment and hence insufficient collateral securities for loans (Akanni, 2003). It is therefore the task of poultry entrepreneurs to raise fund and invest it efficiently, for profit making.

There is evidence of the disappearance of all those forms of financial support that helped maintain marginal enterprises in order to sustain operation in a competitive business environment. Adapting to this evolution would warrant a study of fund security status of poultry farmers. The problem of inadequate financing in the poultry industry has generated a lot of interesting research work and debates arising from the agitations in the brilliant minds of economic thinkers in recent time in Nigeria. For instance, Oboth (2003) observed that about 88.9% of large poultry farms were funded to the tune of N2.5 million per annum, while the average annual funding rate of medium scale poultry farms was Nl.7 million. This reflects the poor fund security status of the poultry farms in Nigeria. In the Southern Nigeria, particularly Delta State, the capitalization status of small scale poultry agribusinesses has not been comprehensively investigated. There is the need to extend the existing knowledge on financial security of poultry businesses though capitalization studies.

***Sorumlu Yazar (Corresponding Author):**
Achoja Felix Odemero (Dr); Department of Agricultural Economics and Extension, Delta State University, Asaba Campus, Nigeria, Phone No: +2348032726201, E-mail: lixmero40@yahoo.com.

Geliş (Received) : 16.03.2018
Kabul (Accepted) : 18.07.2018
Basım (Published) : 31.07.2018

This fundamental information on fund security is missing in poultry research in Delta State, Nigeria. Yet, Raw Materials Research Council of Nigeria is yet to report any research finding on this subject matter. What is the mean fund Capacity and fund security gap/shortfall among small scale poultry farm. What are the sources of fund for Small Scale Poultry Farms. What are the determinants of fund security status of small scale poultry farms.

This study was therefore designed to fill this important information gap. The objectives of the study were to the ascertain the financial capacity of poultry farms; determine the fund security gap/shortfall of poultry farms and the financial security baseline and to estimate the determinants of fund security status of small scale poultry farms in Delta State.

1.2 Theoretical Framework/Literature Review

This study was predicated on the concepts of fund security and small scale enterprises.

1.2.1.Concept of Fund Security of Poultry Enterprise

Fund security may be defined as the availability of fund for financing poultry enterprise operative expenses at all time. The poultry entrepreneur requires adequate funds for the purchase of raw materials right from the onset to the end of production cycle. The poultry entrepreneur also needs to put a contingency fund in place to be able to withstand risk shock in poultry production. Fund security is therefore an important developmental issue for consideration in the poultry industry. Research institutions and academic communities should be hinge concerted efforts on the fund security of poultry enterprises. Oroke (2008), reported that poultry entrepreneurs need to be financially secured so as to enhance expansion and sustainability of poultry enterprises.

1.2.2.Concept of Small Scale Enterprises

Small scale enterprises are often defined in relation to their unique features. They are usually small in sizes, owned and managed by one man, with small capital, target and satisfy small market (Achoja, 2011). Small scale enterprisesrequire adequate fund for technology and product development. Previous authors (Akanni, 2003; Oboth and Adjan, 2009; 2003) based their study on farm financing using equity base as yardstick without analyzing internal financial capacity indicators of small scale poultry farms in the study area. Analyzing the internal financial capacity of poultry farms using fund security base line becomes strategically crucial and more comprehensive. Financial intervention programme requires information on farm financial capacity. This will constitute a fundamental synergy in achieving financial sustainability in the poultry industry in the study area.

2. Materials and Methods

2.1. Description of Study Area and Sampling Techniques

The study was conducted in Delta State Southern Nigeria, in West Africa, due to the presence of ample number of small scale poultry farms. It lies between longitude 6°00 and $6^0$45 east and latitude $5^0$00 and 5°30 north. The state has an average annual rainfall of about 2667mm in the coastal area and 1905mm in the northern area. The average ambient temperature ranges between 29°c and 38°c. Its natural vegetation is demarcated into rainforest, fresh water forest and mangrove swamp forest. This makes Delta State an agriculturally advantaged State. It is suitable for the production of maize which is a raw material for poultry feed production. Delta State has potentials for poultry production. The production level; is classified into large and small scales. But small scale poultry production dominates, in the area. However; inadequate fund is a major challenge among poultry entrepreneurs in Delta State. A multi-stage sampling procedure was used in composing the sample. A total of 280 small scale poultry farmers were randomly selected, and studied. Primary data were collected from respondents with the aid of structured questionnaire. Descriptive statistics (mean, percentage and frequency distribution) and logit model were used in the analysis of data.

2.2. Logit Model Specifications

The logit regression model was fitted to estimate the determinants of the fund security status of small scale poultry farm operators. To be fund secured, a poultry farm requires $1,000,000 per annum. It measures the parameter of the condition probability of having access to the required funds and the effect of explanatory variables on the fund status of the poultry farms. The model is specified following Pindyck and Rubinfeld (1981) as: **pi C/ (1 +e $-^{zi}$).** Where **Pi** is the probability that the surveyed small scale farmers (i = 1, 2 ……..n) is fund secured or not given the information embodied by index, zi being predicted by the following relationship

$Z1=b_o+b_1 x_1+b_2x_2+..... +b_kx_k$

Where X_1 …….. x_k are the factors influencing the farmer funds security status. Constant 'C' was assumed to be without Loss of generality and the form in which logit model was empirically estimated following Bamire and Ola (2004).

Ln (Pi/(1 –Pi) = b_1 x_1 + b_2 x_2 + b_k X_k

Table 1. Description of Symbols of variables in the model.

Variables symbol	Description	Measurement
P_i	Probability of fund security status of the surved poultry farm	1 if yes, zero otherwise
X_1	Level of education	Cumulative years
X_2	Age of poultry farm	Cumulative years
X_3	Family withdrawal	Dolar
X_4	Retain earnings	Dolar
X_5	Cost of input used	Dolar
X_6	Household size	Numbers
X_7	Interest rate	Percentage
X_8	Membership of credit association	1 if yes zero otherwise
X_9	Loan size	Naira
b_o	Intercept term	
b_1. b_9	Coefficient of parameter estimates	

In a similar study, Bamire and Ola (2004) used the probit regression techniques while was not comprehensive at its best. For instance, they did not capture farmer's personal savings and membership of credit association in their equations. In the present study, these variables were captured and logit model was adopted due to its simplicity in use, ease of interpretation and comprehension.

3. Results and Discussion

3.1. Mean Fund Capacity, Fund Base Line and Fund Security Gap/Shortfall Among Small Scale Poultry Farm.

Table 2, shows the result of mean fund capacity, fund base line and fund security gap/shortfall among small scale poultry farm**.** The result of the study showed that about 20% of the small scale poultry were fund secured, while 80% had fund capacity that is below the fund security base line (fund security threshold) (Table 2). This result is in agreement with the earlier report of Oboth (2002) who reported that majority of small scale poultry farmers in the South Western Nigeria operated below fund security base line. To facilitate the performance of small scale poultry farmers, adequate and timely disbursement of hind $480.762) will savage the from the fund insecurity zone.

Table 2. Mean Fund Capacity, Fund base line and Fund Security Gap/Shortfall among small scale poultry farm.

Mean Annual investment (fund capacity)	Fund Security Base line/Threshold	%Frequency below threshold	%Frequency above threshold	Fund security Short fall	% Shortfall
$519,238	$1,000,000	80%	20%	$480,762	48%

Since fund security base line is $I,000,000 and the means fund capacity status of small scale poultry farmers was $519,238 the fund security gap (short fall) is the difference of $480, 762. The result indicates a 48% fund security gap among the surveyed farms. This is the amount of fund needed to bailout the small scale poultry farmers from fund insecurity zone in the study area.

3.2. Sources of Fund for Small Scale Poultry Farms

Table 3. shows the distribution of the sources of fund available to small scale poultry farmers in the study area. The result in Table 3 revealed that majority (48.7 5%) of the respondents obtained their financial capital from

cooperative society. This was followed by personal savings (25%). The implication of this finding is that informal financial institutions are important sources of short term loans in Africa. This is because accessibility of small scale farmers to personal savings and cooperative loans was easier, convenient and cheaper when compared to funds from formal financial institutions. It is therefore a common practice among small scale poultry farmers to combine personal savings with short term loans from co-operatives. The personal savings has advantage of prestige to the entrepreneurs.

Table 3. Distribution of Sources of fund for small scale poultry farms

Sources of fund	Frequency	Percentage
Personal savings	101	36.07
Loan savings (Osusu)	90	32.14
Co-operative society	50	17.86
Money lenders	20	7.14
Commercial banks	5	1.79
Nigerian Agricultural and Cooperative Banks	14	5.00
Total 80 100	280	100

3.3. Determinants of Fund Security Status of Small scale poultry Farms.

The logit regression model was used to estimate the determinants of fund security status of the small scale poultry farms. It measures the parameters of the conditional probability of a farm being financially secured as influenced by the explanatory variables. Respondents were classified into financially secured or insured. To be fund secured a poultry farm required a capital of about N1 million per annum. The variables that have significant relationship with fund security in the model were operators educational attainment, age of the farm, retained earnings, family withdrawals, membership of credit associations, volume of loan obtained (Table 4). Other variables that were not significant were dropped from the model.

Educational Attainment of Farm operator

This variable entered the model with a positive sign in line with a priori expectation. This implies that the educational status of poultry operator has a positive effect on the funds security status of the farmers. A Poultry operator who has acquired some level of education would ordinarily know the sources of fund identify business opportunities and take advantage of them. These can translate to improvement in the financial base of the farm.

Age of the Farm

The age of small scale poultry farms has a positive relationship with fund security status of the farm. The result of this study shows that the more the numbers of ears existence of poultry farm the more the likelihood of financial capital accumulation in the form of savings/retain earrings over the years. As a result long existing poultry farms have more tendencies to be fund secured than those that have just entered poultry industry.

Retained Earnings/Personal Savings

A positive relationship is expected between retained earnings personal savings of a poultry farm and its financial sustainability. Personal savings/ retain earnings in poultry business has positive and significant relationship with the fund security status of the farm. A high retain earning/ personal savings will translate to high capital base of the poultry farm. This implies that there will be enough financial capital for effective operation of the poultry business. There will be enough contingency funds to absorb the shock of financial risk.

Family Withdrawal

This variable has negative relationship with the funds security status of poultry farm firms. This indicates that large family withdrawal might be a drain on the business profit thereby adversely affecting the funds security status of the poultry farm. This basically explains why most small scale poultry farms are unable to grow to large scale farms in developing economies where there are cases of large family size with heavy financial burden. Family withdrawal tends to be higher where there are high family responsibilities.

Membership of Credit Association

The variable has a positive and significant relationship with fund security status of small scale poultry production. This result implies that the membership of credit association will enhance the access of farmers to loan. When loan is added to personal savings, fund security status of the farm will improve.

Flock Size
This variable has no significant effect on the fund security status of small scale poultry production. This implies that flock size does not enhance fund sustainability of small scale poultry farmers. Instead, available fund will determine flock size of a poultry farm.

Loan Size
This variable has a positive, but no significant relationship with fund security status of small scale poultry farms. This implies that small scale poultry farmers in the study area did not depend on loan as primary source of finance. That notwithstanding, the volume of loan accessed by poultry farmers would have substantially improved the fund security status of small scale poultry farmers in the study area.

Table 4. Distribution of Determinants of Fund Security status of small scale poultry farmers

Variables	Coefficent	Standard error	t/stat	Probability
Constant	6148135167	2419170	-	0.0110
Operators Educational attainment	2761855057E-01	14154997E-01	2.541*	-
Age of poultry farm	1801413677E-01	57898363E-02	1.951**	0.0510
Flock Size	.6003067315E-05	-82723793E-05	3.284*	0.0010
Retain Earnings	7819137387E-06	.13619158E-06	2.726*	0.046
Family withdrawal	-6305986541E-02	-.11429467E-01	-5.741	0.0000
Volume of loan obtained	2673528887	.2256362	2.181**	0.0292

* = significant at 1%
** Significant at 5%.

4. Conclusion

In this study, the fund security status of small scale poultry farms was critically investigated. The result shows that majority of the farmers obtained finance through informal sources (personal savings, cooperative society) and very few respondents obtained their funds through the formal sources. The average poultry farm in the study area is not financially secured. The implications of insufficient funding of small scale poultry farms include low level of output, low profit and slow pace of development of the poultry industry.

On the basis of the research findings, the following policy options were recommended:

1. There should be integration of more banks into the operations of Agricultural Credit Guarantee and Micro finance schemes.
2. There should an upward review of the maximum amount guaranteed to small scale borrowers from Credit Guaranteed Scheme.
3. There should be adequate and timely release of financial interventions through loan able funds and grants that will save the poultry farms from fund insecurity.
4. Financial institutions should try to reduce the constraint of collateral that prevent small scales, farmers from acquiring agricultural credit.
5. There is the need to improve on their level of retained earrings, reduce family withdrawals from the fund available to the farm and pool their resources together in the form of producers' co-operatives.
6. There should be special bailout mechanism for the small scale poultry enterprises, considering their fund insecurity status.

References

1. **Achoja, F.O. (2011).** Growth and survival of small scale Agribusiness firms in Delta State, *Nigeria in Agricultura Et Subtropica* vol.44(3)
2. **Adjan, O.D. (2009).** *Estimation of Fund Security Status of Small Scale Poultry Fanners in Ughelli- North L.G.A of Delta State.* Unpublished B. Agric project work, Department of Agricultural Economics, Delta State University, Asaba Campus. Pp.2-4.
3. **Akanni, R.A. (2007**). Effect of Microfinance on Small Scale Poultry Business in South Western Nigeria, *Emirate Journal of food and Agriculture* 19(20).
4. **Bamire, A.S. & Ola, A.O. (2004).** Determinants of Poultry Manure use in small-holder land Management Decision in the Rain Forest Zone of Osun State, Nigeria, *The Ogun Journal of Agricultural Sciences*, 3(1) pp 1-12.

5. **Oboth, G.A.T. (2003).** *Financing Poultry Production in Nigeria; The Role of Commercial Banks*, pp37 Ogun State: Poultry Association of Nigeria.
6. **Ojo, S.O. (2003).** Productivity and Technical Efficiency of Poultry Egg Production in Nigeria, *International Journal of Poultry Sciences*, 92(6): 459-464.
7. **Oluboyode, A. (2007).** Working Capital and Liquidity Position, *The Nigerian Accounts* 40(3).
8. **Oroke, O.S. (2008)**. *Economic Analysis of Financing poultry farms in Delta Central Agricultures Zone of Delta State.* An unpublished B.Agric project work. Department of Agricultural Economics, Delta State University, Asaba Campus.
9. **Prindyck, B. & Rubinfed, D. (1981).** *Econometric Model and Economic Forecasts*, 2nd Edition, New York McGraw Hill Book Company.
10. **Von Blockland, P.J. (2003).** *Introducing farm Business Analysis 1*, IFAS Extension Circular 655, university of Florida, U.S.A, pp. 1-9.