Original Research Article

Influence of Gender in Access to Credit Facilities Among Poultry Farmers in Edo South Zone of Edo State, Nigeria

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Abstract

The study investigated the influence of gender in access to credit facilities among poultry farmers in Edo State, Nigeria. The objectives were to examine the socio-economic characteristics of poultry farmers in Edo south agricultural extension zone, ascertain the influence of gender in access to credit facilities by the farmers and to identify the difference in the level of participation between males and females in poultry farming. The study employed the use of questionnaire and interview schedule to source for data for the study. It as well made use of primary and secondary sources of data. Descriptive and inferential statistics were used to analyze data generated for the study. Results revealed that the female poultry farmers had more access to credit facilities via loans from cooperative societies (58.4%) and micro-finance banks (46.8%). Most of the males on the other hand, linked their source to savings (65.6%) and loans from banks (42.2%). The respondents at both levels (male = 48.4%; female = 58.4%) had high participation but the proportion of females was higher than that of the males. Multiple regression result showed that age, educational level and farm size were significant to level of farmers' participation in poultry farming activities. Also, binary regression analysis revealed that age, educational level, farm experience and farm size were significantly related to farmers access to credit facilities. The study then recommends that efforts should be made by stakeholders to encourage more of farmers to jack-up their level of participation so that their productivity and income can be increased. Also government should do well to encourage more of the farmers into cooperative societies and still prevail on them to relax some of their strict rules in order not to discourage potential participants

Keywords: poultry, farmers, production, products, gender, incentives

Introduction

Poultry farming is an important sector of livestock agriculture. Poultry is actually the raising of domestic birds such as chicken, turkey, geese, etc. for the purpose of meat and egg production

(Sonaiya and Swan, 2004). Idodo-Umeh (2009) asserted that nutritionally, poultry provides the human body with protein, vitamins A, B-Complex, D, E and K as well as other nutrients (mineral salts), calcium, iron, phosphorus, sodium and potassium which are essentially needed for human growth and development. Based on the importance of poultry to man, Atteh (2004) stated that poultry and poultry products have grown tremendously in the past twenty years, and that almost every country in the world is involved in poultry production due to its wide acceptance by all religious and cultural sects.

In Nigeria in particular, poultry production seems to be on the increase, but this has not been able to meet up with the demand for its products. FAOSTAT (2013) confirmed that the poultry industry growth rate actually increased from 185,300 metric tons in 2001 to 268,000 metric tons in 2011. Even with this level of production, the demand far exceeds production capacity. It becomes obvious that more needs to be done in the aspect of commercial poultry farming. In line with the shortfall, Okonkwo and Akubuo (2001) identified that a major constraint responsible for this lag is the subsistence and small-scale nature of poultry farming as practiced by farmers in Nigeria. Amongst these farmers, Ekong (2003) indicated that about 95% of them are women, and that their involvement in poultry production cannot be overemphasized. Meanwhile, Okoh *et al*. (2010) disclosed that these same women and their involvement in decision-making in the farm have been relegated to the background by their male counterparts. This limitation has a lot of implication for women's access to and control of their resources.

This discrimination brought about by the issue of gender differences in resource availability and control, amongst other factors, amounts to gender discrimination. FAO (2007) defined gender as the relations between men and women, both perceptual and material. Moser (2009) stated that gender differences affect the distribution of resources and responsibilities between men and women and are shaped by ideological, religious, ethical, economic and cultural determinants. Okitoi *et al.* (2007) stated that women have been reported to be the predominant owners of poultry businesses. The author stated that as a result of this claim, the resource-poor women cannot be kept at the background of decision-making. The government and financial institutions have not done much in providing financial incentives and loans to poultry farmers especially women to expand their capacity of production in order to meet up with the demands for poultry and its products. It therefore becomes pertinent for the government to provide credit facilities at low interest rates for potential and already existing poultry farmers without gender being a barrier.

Despite the benefits derived from poultry and its products, it is realized that it has earned little attention from research in the area of studies, and from government in terms of making credit available for increased production. This study therefore seeks to bridge this gap. In achieving this purpose, the study examined the socio-economic characteristics of poultry farmers in Edo State agricultural extension zones, ascertained the influence of gender in access to credit facilities by the farmers, and identified differences in the levels of participation between males and females in poultry farming.

The hypotheses were stated in their null forms:

H_{o1}: Poultry farmers' socio-economic characteristics have no significant influence on their level of participation in poultry farming activities.

H_{o2}: Socio-economic characteristics of poultry farmers have no significant relationship with access to credit facilities in the study area.

Materials and Methods

Edo South agricultural zone was the area of study. The zone is made up of seven (7) Local Government Areas (LGAs) namely, Oredo, Ovia North-East, Ovia South-West, Uhunwode, Egor, Ikpoba – Okha and Orhionmwon. The LGAs respectively have their headquarters at Benin – City, Okada, Iguobazuwa, Ehor, Uselu, Idogbo and Abudu (NAEC, 2008). The 2006 National population census report had it that the population size of Edo South was 1,678,411; the official language is English Language and, climatically, Edo State has two seasons, the rainy (April - October) and dry (November - March) seasons. Okwuokenye (2014) stated that the people of Edo South are great wood carvers and bronze sculptors. Also, they are popular in Arts and crafts and these have contributed to the tourism and creative industries in the state. The soil of the area is rich in humus, and the major crops grown include rubber, oil palm, plantain, pineapple, maize and yam.

The study employed a multi-stage sampling technique. The first stage involved a simple random sampling of four (4) out of the seven (7) LGAs that make up the agricultural zone In the second stage, four (4) communities in each of the LGA were selected at random to obtain sixteen (16) communities. The third stage was concerned with the random selection of ten (10) poultry farmers per community who had been in existence for up to three years and were functioning at the time of the research. This brought the total number of poultry farmers administered with question instruments to one hundred and sixty (160). From the returned instruments, one hundred and forty one (141) of them that were found suitable for analysis were used for the study. The instruments were separated based on gender to obtain sixty four (64) males and seventy seven (77) females.

Primary (from the farmers) and secondary sources (from documented sources) of data were used for the study. It employed the use of questionnaires (for literate farmers) and interview schedules (for non-literate farmers) for data collection. The question instruments were evaluated for validity and reliability. These respectively involved the content method and the Cronbash Alpha method which produced a value of 0.67 indicating a high level of reliability (Okwuokenye, 2014).

Objectives of the study were analyzed using descriptive statistics (percentages, frequencies, means and standard deviations).

The hypotheses were analyzed using multiple regression and binary logistic regression.

Multiple regression was used to analyze hypothesis one, and it was used to produce estimates of linear equations. The implicit form of multiple regression is stated as:

$Y = a + b_1 X_1 + b_2 X_2 + b_3X_3, - - -, + b_nX_n + e$

Where Y = dependent variable (level of participation)
a = the coefficient of the constant term
b_i = the coefficient of the independent variables
X_i = the independent variables
e = error term

The explicit form of the multiple regression equation is shown below:

$Y = a + b_1 X_1 + b_2 X_2 + b_3X_3, - - -, + b_nX_n + e$

The variables in the model can be specified as:

Y = Level of participation
X_1 = Age (years)
X_2 = Educational status (years)
X_3 = Farming experience (years)
X_4 = Household size (number of people living and feeding together)
X_5 = Farm size (Number of birds in the farm) .

Out of the Linear, Cobb-Douglas, Exponential and Semi – log functions used to determine the best-fit model, Linear regression model was selected as it best explained the influence of socio-economic characteristics on the farmers' level of participation in poultry farming activities (Iyoha and Ekanem, 2002).

The binary logistic regression was used to analyze hypothesis two. The implicit form of the equation is:

$$\ln P/(1 - P) = B_o + B_i X_i + e$$

Where:

P = Probability of occurrence; 1 – P = Probability of non-occurrence
B_o = The coefficient of the constant term
B_i = The coefficient of the independent variable
X_i = The independent variables

The explicit form of the equation is:

P = Access to credit facilities (dependent variable)
X_1 = Age (years)
X_2 = Educational status (years)

X_3 = Farming experience (years)
X_4 = Household size (number of people living and feeding together)
X_5 = Farm size (Number of birds in the farm) .

Results and Discussions

Socio-economic Characteristics of respondents.

The socio-economic characteristics of the respondents are shown in Table 1. The result revealed that most (male = 42.19% and female = 42.86%) of the respondents were within the same age bracket of 40 – 49 years. The mean ages for the male and female farmers were 44.84 years and 41.49 years respectively. This is an indication that the farmers were young and active. The result conforms to that of Kaine *et al.* (2015) who reported a mean age of 43 years for farmers.

Their educational level showed that they were all literate, with the mean number of years spent in school being 22.22 years for the males and 20.18 years for the females, indicating that most of them schooled beyond secondary education level. However most of the males (75%) and that of the females (53.25%) had post-secondary and secondary education qualifications. On marital status, a larger proportion of the males (64.06%) and female farmers (62.34%) were married. The result showed that poultry farming was dominated by married farmers. This result is supported by report of Akinbile *et al.* (2008) who noted that farming activities are dominated by the married ones and that is for the purpose of catering for their households.

Most of the male (39.06%) and female farmers (42.85%) had 7 - 9 persons as their households. The result revealed the same mean household size (6 persons) for both categories of farmers. This is an indication that the respondents have people depending on them for economic purpose, and who in return may likely serve as a source of family labour. Reports of Ojo and Ajibefun (2000) concurred with these findings as they reported a similar household size, and stated that it influences the supply and availability of family labour. A larger proportion of male farmers (32.81%) and female farmers (36.36%) had farm (flock) sizes of between 350 and 549 birds. The mean farm sizes for both groups were 412 and 356 birds respectively. The result depicts that the farmers were small – medium scale farmers. The result is in consonance with findings of Okonkwo and Akubuo (2001) whose report stated that about 10% of Nigerians engage in poultry farming and they do that at small scale level. Respondents' farm experience showed that majority of the males (34.38%) and that of the female farmers (37.66%) had 10 – 14 years and 5 – 9 years farming experience respectively. The mean was 10.8 years for the male farmers and 8.5 years for the female farmers, suggesting that the males had more experience than their female counterparts. The long experience of the male poultry farmers could go a long way in determining efficiency and skillfulness in farming.

Table 1: Socio-economic characteristics of the respondents

		Male farmers = 64			Female farmers = 77		
Characteristics	**Categories**	**Freq.**	**%**	**Mean**	**Freq.**	**%**	**Mean**
Age	< 30	7	10.94		5	6.49	
	30 – 39	11	17.19		28	36.36	
	40 – 49	29	42.19		33	42.86	
	50 – 59	14	21.88		11	14.29	
	≥ 60	5	7.81	44.84	-	-	41.49
Education level	Primary	3	4.69		4	5.19	
	Secondary	13	20.31		41	53.25	
	Post-secondary	48	75	22.22	32	41.56	20.18
Marital status	Single	9	14.06		11	14.29	
	Married	41	64.06		48	62.34	
	Divorced	8	12.50		14	18.18	
	Widow(er)	6	9.38		4	5.19	
Household size	1 – 3	13	20.31		11	14.29	
	4 – 6	19	29.69		28	36.36	
	7 – 9	25	39.06		33	42.86	
	10 – 12	7	10.94	6	5	6.49	6
Farm size	< 150	12	18.75		17	22.08	
	150 – 349	15	23.44		20	25.97	
	350 – 549	21	32.81		28	36.36	
	550 – 749	8	12.50		6	7.79	
	750 – 949	5	7.81		6	7.79	
	≥ 950	3	4.69	412	-	-	356
Farm experience	< 5	9	14.06		16	20.78	
	5 - 9	17	26.56		32	37.66	
	10 – 14	22	34.38		19	28.57	
	15 – 19	12	18.75		10	12.99	
	≥ 20	4	6.25	10.8	-	-	8.5

Source: Field survey, 2017

Influence of gender on access to credit facilities by respondents

Respondents' access to credit facilities was sought and this was analyzed based on different sources of credit and their influence on gender. Results on Table 2 showed that majority of the males (48.4%) and females (58.4%) got their credit facility from the same source which is from loans given by cooperative societies. The finding is at variance with the report of Kaine and Chukwuma (2017) who indicated that males had greater access to credit facilities. In the case of source of start – up capital, most of the males (65.6%) indicated that they got it from their savings while most of the females (67.5%) got theirs from thrift savings. Through personal communication, the respondent identified thrift savings as one of the major means of generating savings, and it is mostly patronized by women in the Southern part of Nigeria.

Table 2: Sources of credit facilities by respondents

		Male = 64		Female = 77	
Source of finance	**Category**	**Freq.**	**%**	**Freq.**	**%**
Credit facilities	Collected loan from commercial banks	28	43.8	19	24.7
	Collected loan from cooperatives	31	48.4	45	58.4
	Micro finance banks	12	18.8	36	46.8
Source of start-up capital	From savings	42	65.6	12	15.6
	From banks	27	42.2	12	15.6
	From cooperatives	30	46.9	43	55.8
	Thrift	23	35.9	52	67.5
	others	42	65.6	45	58.4
Rate of keeping farm records	Daily	44	68.8	51	66.2
	Weekly	20	31.3	26	33.8
	Monthly	-	-	-	-
	Inconsistent	-	-	-	-
Conditions for loan provision	No collateral	21	32.8	17	22.1
	Provision of collateral security	34	53.1	31	40.3
Other sources of funds	Friends	3	4.7	5	6.5
	Family	11	17.2	16	20.77
	LAPO loans	9	14.1	21	27.27
	Osusu	5	7.8	12	15.6
	Other businesses	7	10.9	5	6.5

Source: Field survey, 2017

Both categories of respondents (male = 68.8%; female = 66.2%) indicated that they kept farm records on daily basis. Such practice would help the farmer to know the performance of the farm at every point in time and so be sufficient to serve as collateral for loans especially when the farm is doing well. In conditions of loans provisions, most of the males (53.1%) and the female (40.3%) indicated that they provided collateral security as demanded before getting their loans from the concerned organizations. Other source of funds as indicated by most of the males (17.2%) was from their families while most of the female (27.27%) indicated that they got their funds for their poultry businesses from Live Above Poverty Organization (LAPO).

Differences in the level of participation between respondents

The respondents were categorized on their level of participation in poultry activities (Table 3). From the table, results on analysis based on gender revealed that most of the males (48.4%) and females (58.4%) were high participants in their poultry farming activities. However, the females

seem to have participated more than the males in the farming activities. The possible reason adduced for this may be to the fact that the males may have chosen to leave most of the jobs for their wives to carry out, hence their greater involvement in the farming activities.

In reporting generally, most of the respondents (53.9%) were high participants of their poultry activities. Having high participation in poultry activities is likely to produce positive and significant results in the farmers' productivity and income. Results of Taiye *et al.* (2006) supports this finding. They advanced that high participation in farming activities had a positive impact on farmers' productivity and income.

Table 3: Difference in the level of participation between respondents

	Male = 64		Female = 77		Pooled = 141	
Categorization	**Freq.**	**%**	**Freq.**	**%**	**Freq.**	**%**
High participants	31	48.4	45	58.4	76	53.9
Average participants	27	42.2	23	29.9	50	35.5
Low participants	6	9.4	9	11.7	15	10.6
Total	64	100.0	77	100.0	141	100.0

Source: Field survey, 2017

Respondents' socio-economic characteristics and level of participation in poultry farming activities.

Multiple regression analysis was used to analyze hypothesis one (see Table 4). The variables in the model jointly accounted for about 74.2% variation in participation in poultry farming activities (Adjusted R^2 = 74.2%). The model's appropriateness was borne out of its F-ratio (12.75%) which was significant at the 5% level (Critical F-value = 2.62). Out of the five socio-economic characteristics, three were significant at the 5% level. They included age, educational level and farm size.

Age of the respondents (b = - 0.083; t = - 1.796) was negatively signed and significantly related at 5% to farmers level of participation in poultry farming activities. The negative sign implies that the younger farmers seem to participate more than the older farmers. The reason for this could be tied to the physical weakness associated with advance in age which limits activity level of those concerned. Reports of Ogunbameru (2001) concurred with this finding. He advanced that the young and middle age people were most active in farming activities. The educational level of the respondents (b = 1.812; t = 1.992) was positively signed and significant at the 5% level. The result's implication is that more educated farmers would have higher levels of participation than their less educated counterparts. This findings is in agreement with reports of Sinkaiye (2005) which noted that farmers with higher levels of education participated more in their farming activities.

Farm size (b = 5.168; t = 6.132) was also positively signed and significant at the 5% level. The implication of the result is that farmers with higher farm or flock sizes seem to participate more in

the poultry farming activities. The result of Okoh *et al.* (2010) is in line with this finding as they acknowledged that farmers with higher farm sizes (birds in this case) were likely to participate more in farming activities.

Table 4: Relationship between respondents' socio-economic characteristics and participation in poultry farming activities

Independent variables	b	t	Prob. level
Constant	34.713	5.641	0.000
Age	-0.083*	-1.796	0.019
Educational level	1.812*	1.992	0.001
Farm experience	0.171	1.110	0.372
Household size	0.263	0.461	0.719
Farm size	5.168*	6.132	0.000

$F = 12.75$ ($p < 0.50$); Adjusted $R^2 = 0.742$
*Significant at 5% (Critical t-value = 1.645)

Relationship between respondents' socio-economic characteristics and access to credit facilities

The study tested hypothesis 2 using binary logistics regression. Table 5 shows the regression result. The variables; age, educational level, farm experience, household size and farm size jointly accounted for about 64.1% of the variation in poultry farmers' access to credit facilities (adjusted $R^2 = 64.1\%$) . The result showed that age, educational, farm experience and farm size had significant relationships with respondents' access to credit facilities.

Age of the respondents (B = 0.74; S.E. = 0.05) was positively signed and significant at the 5% level. This implies that the older farmers (possibly based on level of responsibility) had more access to credit facilities than their younger counterparts. Educational level (B = 0.81; S.E. = 0.23) was positively signed and significant at the 5% level. This implies that more educated farmers had more access to credit facilities. Studies of Adisa and Akinkunmi (2012) stated that education enhances the individual farmer's capacity to have a better access to information. Farm experience had a coefficient and a standard error of 0.91 and 0.27 respectively. It was significant at the 5% level and positively signed which is an indication that more farm experience of respondents would yield more access to credit facilities. The more experience farmers have, the better positioned they would be to know their farm needs and how to go about solving them.

Result on farm size showed a coefficient of 0.79 and standard error of 0.21. It was significant at the 1% level. By implication, larger farm sizes would attract more access to credit facilities. Larger farm sizes would yield larger income and this would position the farmers in a better situation to providing collateral for loans when the need arises. Okoh *et al.* (2010) agrees with this finding. They noted that higher farm size would attract higher access to credit facilities.

Table 5: Relationship of respondents' socio-economic characteristics and access to credit facilities

Variable	B	S.E.	Wald	DF	Sig.	Exp (B)
Age	0.74*	0.05	13.04	1.00	0.022	0.27
Educational status	0.81*	0.23	10.71	1.00	0.081	0.42
Farm experience	0.91*	0.27	9.02	1.00	0.003	0.39
Household size	- 0.38	0.29	3.10	1.00	0.701	1.09
Farm size	0.79**	0.21	7.53	1.00	0.001	0.40
Constant	0.25	1.38	0.05	1.00	0.87	1.28

Source: Computed from field survey, 2017; *Significant at 0.05 level;
**Significant at 0.01 level; -2 log Likelihood = 121.381; Nagelkerke R^2 = 0.641

Conclusion and Recommendations

From findings, the study concludes that there is difference in the farmers' interest from where to source for credit facilities. Nevertheless, the female poultry farmers had more access to credit facilities via loans from cooperative societies, micro-finance banks and thrift. On the other hand, the males accessed their credit facilities from mostly savings and banks. Findings also showed that though majority of both categories of the farmers had high participation in farming activities, the female farmers appeared to have participated more than the males.

Based on its findings, the study advances the following recommendations:

i. The level of participation of the farmers was just about average as revealed by the study. Efforts should be made by stakeholders to encourage more of farmers to jack-up their level of participation so that their productivity and income can be increased.

ii. Cooperative societies appeared to be the major source of credit facilities to the farmers, especially the women. The government should do well to encourage more of the farmers into cooperative societies and still prevail on them to relax some of their strict rules in order not to discourage potential participants. In addition, the cooperative societies still need to be supported by the government so that they can serve the people better.

iii. Cooperative societies appeared to be the major sources of credit facilities to the farmers, especially the women. The government should do well to encourage more of the farmers into cooperative societies and still prevail on them to relax some of their strict rules in order not to discourage potential participants. In addition, the cooperative societies still need to be supported by the government so that they can serve the people better.

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