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ANALYSIS OF FACTORS INFLUENCING LOAN DEFAULT AMONG POULTRY FARMERS IN OGUN STATE NIGERIA

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ABSTRACT

This study is interested in determining factors influencing default in loan repayment among poultry farmers in Ijebu Ode Local Government Area of Ogun State. A total of 100 poultry farmers were randomly sampled from the study area. Probit model was employed to determine and analyse the factors influencing default in loan repayment in the study area. Descriptive statistics were also employed to describe the socio-economic characteristics of the farmers. Finding revealed that majority of the farmers in the study area are educated. About 55.0 percent of the farmers source their credit from formal financial institutions. Result from the probit model revealed that flock size of the farmers significantly influence default in loan repayment at $(P \leq 0.10)$ level. Age of the farmers significantly influence default in loan repayment at $(P \leq 0.01)$ level, while Educational level and Income of the farmers also significantly influence default in loan repayment at $(P \leq 0.05)$ level.

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INTRODUCTION

The Nigerian's livestock resources consist of 13,885,813 Cattle; 34,453,724 Goat; 22,092,602 Sheep; 3,406,381 Pigs; 104,247,960 poultry [1]. From these figures, poultry is about 58.72 percent of the total livestock production, which indicates the place of poultry sub sectors in the livestock industry. Poultry meat and eggs play a very useful role in bridging the protein gap in Nigeria. They are palatable and generally acceptable. This acceptability cuts across nearly all cultural religion boundaries in Nigeria. Poultry birds mature earlier than most breeds of livestock and can bring economic returns within relatively short periods of about 10-12 weeks.

These important roles played by poultry production makes imperative the need for financial assistance for livestock farmers. The importance of agricultural credit cannot therefore overemphasized. Apart from owned sources, major sources of credit existing for Nigeria farmers are: Informal Sources, Formal Sources. The non-formal credit sources include lending and gifts from relative, merchants, friends, and local moneylenders. In line with above examples of informal credit, loan sources, informal sources are usually non-governmental. The formal institution sources of farm credit in Nigeria include; Agricultural Credit Guarantee Scheme (ACGS), the Nigeria Agricultural and Cooperative Bank (NACB), the Commercial and Merchant bank, the Cooperative institution and the agricultural development programme which give credit more in kind rather than in cash. The formal sources are those established by law and which can be influenced by government policies. The payment of a loan usually receives less attention than it deserves. The loan is said to be defaulted if any of the terms of repayment is not met. This statement is backed up by [2] that default in its simple sense as non-adherence to agreed terms.

There is a generally acceptance of the important role of farm credit and a wide appreciation by most government of the need for credit. Loans are expected to be paid back on time to ensure the recycling of money for the benefits of other farmers. However, credit to the poultry farmers may not work smoothly owing to loan delinquency which is a serious problem to most agricultural tending institutions. This can be hypothesized as one of the reasons for the high rate of default among poultry farmers. However, in order to empirically determine why defaults occur in loan repayment, a study of this nature becomes imperative. The main objective of the study is to determine the factors influencing loan defaults among livestock farmers. Specifically the study examines the socio-economic status of farmers, various types of credit available to farmers and determines factors influencing default rates of loan repayments among livestock farmers.

METHODOLOGY

Ijebu Ode Local Government Area of Ogun State is the area of study. It is a large town with a land area of about 82,986.62 hectares and a population of 193,794 people It is located in the rainforest belt of Nigeria and has an annual rainfall of 1,500 to 2,000 mm and a temperature of 30^{0C}. The major occupation of people in Ijebu Ode is trading. Many people engage in farming, of crops, such as cassava, maize, melon and palm oil and livestock production especially poultry production both small scale and large scale. A total of 100 farmers were randomly drawn for interview in this local government. The data was obtained from primary source through structured questionnaires tat were administered on the poultry farmers. The data were analysed using descriptive statistics like frequency distribution and percentages and the probit model.

The probit model is expressed as : $Y = Bo + BiXi + ei$

Where Y is dichotomous dependent variable which can be explained as;

Y = 1, if farmers default, Y = 0, if farmers do not default,
Bo = is the intercept

Bi are regression coefficients that explain the probability of default by poultry farmers, ei is the error term and Xi = independent variables (i=1,2,3……14) as defined below

The independent variables specified as factors affecting loan default are identified below from literature.

X_1	=	Age (years)	X_9	=	Marital Status (Dummy; Married = 1, Single = 0)
X_2	=	Education (years)			
X_3	=	Flock Size (Number)	X_{10}	=	Occupation
X_4	=	Household Size (Number)	X_{11}	=	Financial Outlet
X_5	=	Home distance from credit source (Kilometres)	X_{12}	=	Preference
			X_{13}	=	Amount end up sourcing from financial outlet
X_6	=	Income (Naira)			
X_7	=	Interest Rate (percentage)	X_{14}	=	Sex (Dummy; Male = 1, Female = 0
X_8	=	Loan Size (Naira)			

RESULTS AND DISCUSSION

Results on the personal characteristics of the respondents show that about 88 percent of respondents are within the age group of 21 – 50 years with a mean of 37.72 years, 90.0 percent are married, and 39.0 percent of the respondents have less than 6 members per households with average household size of 6 members per household. Similarly majority of the respondents are literate. According to [3] literate farmers are likely to accept new innovation than illiterate farmers thereby enhancing their productivity and greater farmers' returns. About 86.0 percent of the respondents are male, while only 14.0 percent are female with 50.0 percent of the respondents in the study area are self employed.

The gross farm income of farmers is seen as an interplay of many factors. Weather and socio-economic characteristics of farmers are considered as some of such factors [4]. Table 1 shows the income distribution of respondents. From the table 2 36.0 percent of the respondents earn N20,000 and below. 45.0 percent earn between N20,000 – N40,000. Only 6.0 percent of the farmers earn above N80,000. The average income of respondents is N34,050. This indicates that the farmers income in the study area is relatively low. This could be as a result of their large household size.

Table 1 shows the distribution of respondents by credit source. The main objective of the subsection of this chapter is to identify the source of credit to poultry farmers in Ijebu Ode Local Government Area of Ogun State. This result also shed more light into the borrowing behaviour of farmers in Ijebu Ode Local Government Area of Ogun State. Investigations reveal that poultry farmers obtained their credit through formal and non-formal sources. The formal sources include Banks and Cooperatives while the non-formal sources include individual, friends, relatives and money lenders. Data

obtained from the farmers in table 4.8 shows that 55.0 percent of the respondents sourced their credit from formal sources. About 15.0 percent of the respondents sourced their credit from informal sources, while 30.0 percent of the respondents sourced their credit from both formal and informal sources. It is therefore evident that majority of the respondents in the study area sourced their credit from formal sources.

Table 2 shows the result of the probit model. This was used to determine the influence of the dependent variable on rate of loan default of poultry farmers. The model has a good fit and it is significant at 10%. The autonomous level of loan default is –1.604106. Four explanatory variables were significant while ten variables were insignificant. The significant variables include Educational Level, Age, Flock size, and income. The insignificant variables, were household size, Distance of financial outlets, Interest Rate, Loan size, Marital Status, Occupation, financial outlet, loan preference, ration and sex.

The probit model was employed to determine factors influencing loan default among poultry farmers in Ijebu Ode Local Government Area of Ogun State. The probit model seeks to explain the probability of loan default as a result of any of the fourteen identified independent variables. The signs of the coefficients of independent variables and significance of the independent variables were used in determining largely the impact of each variables on probability of loan default among the poultry farmers. The Educational level of the poultry farmers has a negative coefficient and it is statistically significant at 5 percent. This indicates that there is an indirect relationship between educational level and loan default. An increase in the educational level (that is, more formal education acquired), will decrease the probability of the farmers defaulting in loan repayment. The sign of coefficient of the age of the farmers did not comply with

Table 1: Distribution of Respondents by credit source

Credit Sources	Frequency	Percentage
Formal	55	55.0
Informal	15	15.0
Both	30	30.0
Total	100	100.0
Income		
< 20,000	36	36.0
20,001 – 40,000	45	45.0
40,001 – 60,000	13	13.0
60,001 – 80,000	0	0.0
80,001 – 100,000	1	1.0
> 100,000	5	5.0
Total	100	100.0

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Table 2: Result of Probit Model.

Variable	Regression Coefficient	Standard Error	Coefficient Standard of Error
INTERCEPT	-1.60	-1.57	-1.016
AGE	0.07	0.026	2.73***
EDULEVEL	-0.10	0.051	-1.99**
FLOCKSIZE	-0.0004	0.00025	-1.73*
HHSIZE	-0.118	0.085	-1.39
HOME DIST.	0.0010	0.053	0.019
INCOME	1.71E-05	8.61E-06	1.98**
INTRATE	-0.0029	0.035	-0.082
LOAN SIZE	7.68E-06	8.70E-06	0.88
MSTATUS	0.565	0.527	1.07
OCCUPATION	0.076	0.276	0.27
OUTLET	-0.22	0.168	-1.30
PREFERENCE	0.082	0.126	0.65
RATION	-4.23E-06	8.86E-06	-0.47
SEX	-0.958	0.617	-1.55

Mean dependent variable = 0.298969   S. D. dependent variable = 0.460184
S. E. of regression = 0.430819
Log likelihood   = -45.70794
Restr. log likelihood = -59.16886
LR. Statistic (14df) =   26.92184   Probability (LR stat) 0.019709

a priori expectation but it is statistically significant at 1 percent. The flock size has a negative coefficient and it is statistically significant at 10 percent. This also indicate that there is an indirect relationship between flock size and loan default. An increase in the flock size by one unit will result in a decrease in the probability of defaulting in loan repayment. The sign of the income of the poultry farmers did not comply with a priori expectation but it is also statistically significant at 5 percent. The coefficient of household size is negative (indirect relationship) and it is not significant. This indicates that the farmers household size will reduce the probability of defaulting in loan repayment. The distance of financial outlets from home has a coefficient with an expected positive sign but it is not significant. This result indicates that as distance of financial outlets from home increases, the probability of defaulting in loan repayment will increase. The sign of the coefficient of interest rate is negative as expected; however it is not significant. This is an indirect relationship indicating that the higher the level of interest rate charged by the lending institution, the lower the probability of farmers defaulting in repayment of loan. The coefficient of loan size has a positive sign as expected but it is not significant. This indicates that the greater the loan size, the greater the probability of farmers defaulting in repayment of loan. The financial outlets has a coefficient of negative sign and it is not significant. This is an indirect relationship indicating that the financial outlet has a tendency of increasing the probability of farmers defaulting in repayment of loans. The loan preference has a positive coefficient but it is not significant. The result indicates that the higher the loan preference, the greater the probability of poultry farmers defaulting in loan repayment. The result of the model also indicate that the different between amount of loan applied for and the amount of loan received, has an indirect relationship with the loan default and it is significant. So that the farmers may be considered a worthwhile long-term partner. This may increase incentives to default. The coefficient carries expected sign indicating that the higher rationing, the lower the probability of the farmers defaulting when loan repayment is due.

CONCLUSION

Arising from the findings of this study, it concludes that Poultry farmers within the study area sourced their credit from both formal and informal credit institution with formal sources of credit being the main source of credit in the study area. The socio-economic characteristics of the respondents, made the study to conclude that majority of the poultry farmers are educated and that nearly all of the respondents are in their active working age. Results of the probit model also made the study to conclude that the level of farmers education, farmers income, age of the farmers and flock size significantly influence the poultry

farmers of being defaulting in loan repayment. The study recommends that the use of improved practice of poultry production among the farmers should be encouraged, since findings from the study has confirmed that flock size is a major factor that significantly influence default in loan repayment. Government and other stakeholders in Agriculture should also ensure that the farmers have access to formal education since findings from their study has shown that educational level of farmers significantly influence default in loan repayment. The farmers in the study area should encourage informal sources of credit. Finding have shown that most farmers depend extensively on formal sources of credit. Therefore, informal sources should be encouraged, so that farmer can have alternative source of access to other sources of credit in the study area.

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