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**LABOUR ALLOCATION AMONG SMALL-SCALE POULTRY FARMERS IN ONDO-EAST
LOCAL GOVERNMENT AREA OF ONDO STATE, NIGERIA**

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ABSTRACT

The study investigated factors influencing labour allocation among small-scale poultry farmers in Ondo-East local government area (LGA) of Ondo State, Nigeria. Multistage sampling techniques was used to select 55 poultry farmers for the study and the mean age of poultry farmers was 48.5±7.5 years, with 56.7% male dominance and 57.5% married with mean household size of 5 members. The result of the logistic regression indicated that, age, sex, marital status, household size, education of household heads, among others significantly influenced labour allocation among poultry farmers. The relevance of labour allocation in poultry production cannot be over-emphasized; hence, more female household heads should be encouraged, farmers should be given access to education and credit.

INTRODUCTION

Labour is the major asset of the smallholder farming households in the rural areas of developing countries. Labour allocation among farming households has been fundamental to agricultural transformation and continues to play an important role in sustaining agricultural production both in developed and developing countries (Kimhi and Lee, 1996). Several studies have analysed impacts of labour allocation on agricultural production (Zhou *et al.*, 2019), relationship between labour allocation and off-farm employment in agriculture (Matshe and Young, 2004). However, Kousar and Abdulai (2016) found that labour participation in off-farm work tends to increase investment. However, there are limited empirical evidences on labour allocation to activities in poultry production. Poultry production is an important sector in agriculture. It provides food/protein in the diet of average homes, generates income, and provides employment, sustaining industries with raw materials and as a source of livelihood to the people (Iwena, 2010). Despite the importance of poultry to the households and the economy, production and productivity has been very low. This may not be unconnected with the ways labour allocation to poultry production among small-scale farmers and various operations the poultry sector. Studies revealed that several activities in small-scale poultry production compete for labour resources which are inadequate in the households. It is observed that off-farm employment reduces the labour available for farm including the poultry production sector and, thus, lowers productivity. The stock and quality of labour in terms of size, educational attainment constitute human capital which can be allocated to different sectors of the labour market to meet livelihood (Takane, 2008).

Studies have shown that there is decreasing availability of labour for farm activities that can cope with the task of farm operations in Nigeria without exception to poultry production (Ibekwe *et al.*, 2010; Amsalu *et al.*, 2013a). This assertion does not just underscore the importance of shortage of labour on the farm it goes further to elicit concern and research interest on factors influencing labour supply among poultry farmers to activities in poultry production. Labour allocation decisions of farmers on farm and non-farm activities has been investigated by scholars using different methods such as; probit and tobit models (Abdulai and Delgado, 1999; Isgut, 2004; Amsalu *et al.*, 2013a) without recourse to poultry production, hence, the study seeks to examine labour allocation among small-scale poultry farmers in Ondo-East LGA of Ondo State, Nigeria and specifically examine the socio-



economic characteristics of the small-scale poultry farmers and determine factors influencing labour allocation to poultry production in the study area..

METHODOLOGY

This study was carried out in Ondo-East local government area of Ondo State with estimated population of about 78,896 people (NPC, 2017). The major occupation in the study area is farming however, poultry production is also practiced. Multistage sampling technique was used to select respondents for the study. Stage one entailed the purposive selection of small-scale poultry farmers (with less than one hundred birds) from the list of registered poultry farmers association in the LGA. Stage two consisted of the random selection of fifty-five (55) poultry farmers for the study. Primary data were collected using semi-structured questionnaire and data collected were analysed using descriptive statistics and logit regression model to determine factors influencing labour allocation to poultry production in the study area. The logistic regression model is used to predict a dependent variable on the basis of continuous and/or categorical independent variables and to estimate a linear relationship between the dependent variable and multiple independent variables (Gujarati, 1992). The value of 1 is assigned to farmers who allocate labour to poultry production and 0 otherwise, (those who do not allocate labour to poultry production). The logit regression is modelled as follows:

$$Y_i = \beta X_i + u_i \dots\dots\dots 1$$

Y_i = (1 = household head allocates labour to poultry production; 0 = household head do not allocate labour to poultry production), β = estimated parameter; X_i = vector of independent variables; and u_i = error term. The probability of household heads i allocate labour to poultry production or otherwise, is postulated to depend on the vector of individual, farm and household characteristics. X_1 = Age of household head (years); X_2 = Sex of household head (1 = male, 0 = otherwise); X_3 = Marital status of household head (1 = married, 0 = otherwise); X_4 = Household size (numbers); X_5 = Education of household head (completed years education); X_6 = Number of birds (number); X_7 = Capital outlay (₦); X_8 = Total income from poultry (₦); X_9 = Access to credit (1 = yes, 0 = otherwise); X_{10} = Distance to poultry farm centre (kilometre);

RESULTS AND DISCUSSION

The results of the descriptive statistics revealed (Table 1) that the mean age of respondents was 48.5 years with 56.7% male dominance and 56.5% were married. The mean household size was 5 members

Table 1: Socio-economic characteristics of respondents in the study area

Variables	Major Indicators	Mean/Stad. Deviation
Age of household head (years)	63.4% were below 60 years	48.5(7.5)
Sex of household head	56.7% were male	
Marital status of household head	57.5% married	
Household size (numbers)	52.4% had less 7 members	5.4(3.5)
Education of household head	53.8% with primary education	6.7(3.2)
Number of birds	51.3% with less than 100birds	30.7(9.8)
Capital outlay (₦)	55.2% had less than (< ₦120000)	₦54,065(₦27,453)
Total income from poultry	52.8% realised (< ₦105,000)	₦62, 345(₦22,520)
Access to credit	57.0% without access to credit	
Distance to poultry farm centre (kilometre)	50.8% travelled (< 10Km)	5.6(2.5)

Source: Field Survey, 202. Values in parenthesis are standard deviations.

and 53.8% had primary education with 51.3% of respondent having less than 100 birds and 55.2% with average capital outlay of ₦54,065. Average income was ₦62, 345 while majority were without access to credit. The mean distance travelled to poultry farm was less than 10 kilometres by respondents.



The results of the logistic regression on factors influencing labour allocation among poultry farmers in the study area (Table 2) showed that the log likelihood value for the model was -130.9773, the LR Chi² was 152.01 while the Probability Chi² (Pro>Chi²) was 0.0000 significant at 1% level of significance thus indicating the good fitness of the specifications of data for the model. The results indicated that eight variables significantly influenced labour allocation in poultry production this included; age, sex, marital status, household size, education of household head, cultivated farm size, income from poultry, and access to credit. The coefficient of age, sex, household size, education and total income from poultry and access to credit had positive and significant effect on labour allocation to poultry production at 5%, 10%, 1%, 5% and 1% levels of significance, respectively. This implied that an increase in age, being male, household size, more years of education, and total income from poultry and access to credit by household head will increase the likelihood of labour allocation to poultry production by 8.4%, 6.3%, 1.6%, 17.0% 7.3% and 20.5%, respectively. This is consistent with the findings by Amsalu *et al.* (2013a). The coefficient of marital status and capital outlay of household heads showed negative and statistically significant effect on labour allocation in poultry production at 1% and 5% level of significance, respectively in the study area. This suggested that as being married and capital outlay increased the labour supply to poultry production decreased by 1.4% and 4.5% respectively. This means that being married reduces household heads time on poultry production to home chores or other responsibility outside poultry production and a naira increase in capital outlay will reduce household heads labour allocation to poultry production. This is consistent with *a priori* expectation. This finding is in agreement with Keija (2008) and Khoza *et al.* (2020).

Table 2: Logistic regression on factors influencing labour allocation in poultry production

Variables	Coefficient	Z	P> z	Marginal Effect
Age of household head (years) X ₁	0.598(0.275)	2.17	0.030	0.084**
Sex of household head X ₂	0.045(0.246)	1.81	0.071	0.063*
Marital status of household head X ₃	-1.033(0.246)	-4.20	0.000	-0.014***
Household size (numbers) X ₄	1.145(0.274)	4.18	0.000	0.016***
Education of household head X ₅	1.194(0.357)	3.34	0.001	0.170***
Number of birds X ₆	-0.289(0.303)	-0.95	0.341	-0.040
Capital outlay (₦) X ₇	-0.438(0.332)	-3.21	0.036	-0.045**
Total income from poultry X ₈	0.514(0.245)	2.10	0.036	0.073**
Access to credit X ₉	1.450(0.439)	3.30	0.001	0.205***
Distance to poultry farm X ₁₀	0.401(0.427)	0.94	0.347	0.056
Constant	-15.339(5.397)	-2.84	0.004	
Number of Observation	55			
LR Chi ²	152.01			
Pro>Chi ²	0.0000			
Pseudo R ²	0.4267			
Log likelihood	-130.9773			

Source: Author’s Computation, 2021 Values in parenthesis are standard deviations, ***, **&* significant at 1%, 5% and 10%

CONCLUSION AND RECOMMENDATIONS

Labour is an important resource in agricultural production both in crop and livestock sectors of the farm. Despite the importance of poultry production to the households and the economy of the developed and developing countries, labour allocation to poultry production have not been investigated by scholars particularly in the study area. Hence, it is recommended that labour allocation to poultry production should be encouraged among the female household heads, education should be provided to farmers in poultry production since the more educated the farmer the better for their poultry production work and more accessible credit schemes should be encouraged to guarantee poultry farmers access to credit to promote production.



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