ASSESSMENT OF POVERTY STATUS AMONG FISH FARMERS IN OGUN STATE, NIGERIA

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ABSTRACT

Despite the potential of fish farming as a means of livelihood in Nigeria, poverty is still a challenge among farmers. This study was thus conducted to assess poverty status of fish farmers in Ogun State, Nigeria. Multistage sampling technique was used for the selection of 120 respondents and primary data were collected through the use of well structured questionnaire. Data were analysed using descriptive, FGT and Logit regression. A typical fish farmer was 43years old, married (53.3%), had household size of between 6-10 members (46.0%) and had tertiary education (45.0%). Farmers that earned below N10,000 per production were considered poor, the incidence of poverty (P_0) was 27.7% and Poverty depth was 0.0417. The regression result shows that level of education and household size ($P<0.10$); marital status and capital invested ($P<0.05$), income ($P<0.01$) were significant determinant of poverty. Lack of technical know-how (65%), lack of access to credit (58.3%) and difficulty in land acquisition (55%) were identified as major challenges. It is recommended that fish farmers in the study area should be trained by extension workers to improve them on technical know-how in fish enterprise and credit should be provided to fish farmers by government through financial institution.

KEYWORDS: Enterprise, Poverty, Farmers, Income, Institution.

INTRODUCTION

Agriculture is the major source of livelihood for most developing countries like Nigeria. It is the mainstay of Nigerian economy, providing the food needs of the teeming population and employing close to 75% of the people who are mostly rural dwellers (NBS,2005). Agriculture is subdivided into: food, livestock and aquaculture (fishery) subsector. Aquaculture is the beneficial and sustainable use of water as a medium to farm organisms such as fish, molluscs, crustaceans and aquatic plants (Rouhani&Britz, 2004). It is often cited as one of the means of efficiently increasing food production in food-deficit countries (Inoni, 2007) and improving livelihood and poverty status among farming households.

Fish production through aquaculture has risen steadily from a few hundred kilograms to over 45,000 metric tones in 2004 (FAO, 2007) and fisheries sector accounts for about 25% of national GDP, 40% of the animal protein intake and substantial proportion of employment, especially in the rural areas as 38 million people worldwide are employed in fisheries, 95% of whom are in developing countries; the sector is a principal source of livelihood for more than 3million people in Nigeria (Williams, 2008; Ekunwe and Emokaro,2009)

Aquaculture development in Nigeria is driven by socioeconomic objectives including nutrition improvement of rural communities, generation of additional family income, creation of employment and diversification of income generating activities. It is promoted by International

Organizations, agencies, government at Federal, State and Local Government levels due to the wide acknowledgment that small-scale fishing can generate significant profits, prove resilient to shocks or crises and make meaningful contributions to poverty alleviation and food securityparticularly for many poor people in developing countries living close to coastal areas with major river systems (FAO 2003 and FAO, 2005). However, despite this wide acknowledgement about fishery sector, most fish farmers are still regarded as being poor and not food secure. Thus, this study attempt to provide answer to the following research questions: What are the socio-economic characteristics of fish farmers in the study area?, What is the poverty status of fish farmers in the study area?, What are the factors that influence poverty among fish farmers in the study area?, What are the problems facing fish farmers in the study area?and the finding of this research work help to find out the extent to which engagements in fish-based enterprise can contribute to household welfare. This will be useful to agricultural policy maker as well as government and non-government agencies whose focus is on rural poverty alleviation.

The broad objective of this study is to assess poverty status of fish farmers in Ogun State, South-Western Nigeria. The specific objectives of the study are to describe socio-economic characteristics of fish farmers in the study area, examine the level of poverty among fish farmers in the study area, determine factors that influence poverty among fish farmers in the study area and identify problems facing the fish farmers in the study area.

METHODOLOGY

The study was carried out in Abeokuta south local government area of Ogun State and the population targeted were fish farmers. The sample frame of fish farmers in fifteen (15) wards under the study area was drawn. Eight (8) fish farmers were randomly selected from each of the ward making a total of 120 respondents used for the study. Primary data were obtained through the use of structured questionnaire and data collected were subjected to descriptive, FGT and Logit regression.

The FGT index was used to determine the threshold which was used to categorize the level of poverty among fish farmer in the study area. The FGT index is computed with the mathematical formula stated below:

$$P_\alpha = \frac{1}{n} \sum_{i=1}^{H} \left(\frac{Z - Y}{Z} \right)^\alpha \quad \ldots\ldots\ldots \quad \ldots\ldots\ldots \quad \ldots\ldots\ldots \quad \ldots\ldots\ldots \quad \ldots\ldots\ldots \quad \ldots\ldots\ldots \quad ..eqn \ 1$$

Where Z = poverty line, N = total Sample, H = the number of poor (below poverty line), Y = average income per production and α = poverty index which takes value of 0, 1 and 2.

The logistic regression in this study is however specified as:

$$Yi = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \mu \ldots\ldots\ldots\ldots\ldots\ldots eqn \quad 2$$

where, Yi = the dependent variable defined as farmer not poor = 1 and 0 otherwise; α = constant and intercept of the equation; X_1 = age of farmers in years; X_2 = marital status of farmers, 1 = single, 2 = married, 3 = divorced and 4 = widow/widower ; X_3 = educationin years; X_4 = income per production in naira; X_5 = capital in naira; X_6 = experience in years; X_7 = household size; X_8 = credit in naira and U_k = error term.

RESULTS AND DISCUSSIONS
Demographic and Socioeconomic Characteristics of Respondents

Table 1 shows that the mean age of fish farmer in the study area was 43 years but specifically, 29.2% were in the age range 30 years or less and 55% were above 40 years. This indicates that majority of the respondents were in their active productive year. More than half (53.3%) of the respondents in the study area were married, 38.3% were single and 8.4 were widow/widower. This indicates that married people look for more ways of making money to cater for their families. Approximately 46% of the respondents in the study area had household size between 6-10 members, 39% between 1-5 members while 8.3% had 11-15 members. The mean household size was estimated to be 7 members and Agbamu (2000) stated that the large number of persons in a family pave way for use of family labour in fishery enterprise. Majority (45%) of the respondents had tertiary education while 35% had primary education. This means that all the fish farmers in the study area were literate and this help in understanding the technicalities involves in fish farming. Table 2 reveals that 55% were Yoruba's, 33.3% were Igbo and 7.5% were Hausas. This means that Yoruba's dominate fish farming in the study area. Most (65.0%) of the respondents had less than six years of experience and 17.5% had six to ten years of experience. The mean year of experience was seven years. This implies that the farmers were relatively not new in the fish production business and fish farming is not a new means of livelihood to the people in the study area as about three quarter (72.5%) had less than N200,000 per production while others (27.5%) had above N200,000.

Poverty Status of Fish Farmers in the Study Area
Poverty line was constructed to determine poverty status of the respondents. The per capital income of the fish farmers was used in the classification of farmers into poor and non-poor through the poverty line. Results show that any farmer falls below N10,000 is considered poor, while those with higher values are considered non-poor. Given this poverty line, table 3 indicates that the incidence of poverty (P_0) was 27.7% and Poverty depth was 0.0417. This shows that the poor fish farmers require 4.17% of the poverty line to escape from poverty group. The sensitivity to income redistribution among the poor is not captured by poverty gap or depth. To detect this, the need to estimate the severity of poverty among the study sample becomes exceptionally imperative. Poverty severity value was 0.0137. This implies that the severity of poverty among the poor fish farmers in the study area was 1.37%.

Table 1: Demographic Characteristics of Respondent

Variable	Frequency	Percentage
Age		
<30	35	29.2
31-40	19	15.8
41-50	33	27.5
>50	33	27.5
Total	120	100.0
Mean	43	
Marital Status		
Single	46	38.3
Married	64	53.3
Widow/widower	10	8.4
Total	120	100.0
Household Size		
1-5	47	39.2
6-10	55	45.8
11-15	10	8.3
>15	8	6.7
Total	120	100.0
Mean	7	
Education		
Primary	42	35.0
Secondary	24	20.0
Tertiary	54	45.0
Total	120	100.0

Source: Field Survey, 2016.

Table 2: Socioeconomic Characteristic of Respondent

Variable	Frequency	Percentage
Ethnicity		
Hausa	9	7.5
Yoruba	66	55.0
Igbo	40	33.3
Others	5	4.2
Total	120	100.0
Experience		
1-5	78	65.0
6-10	21	17.5
11-15	11	9.2
>15	10	8.3
Total	120	100.0
Mean	7	
Income per production		
≤50,000	20	16.7
51,000-100,000	15	12.5
101,000-150,000	40	33.3
151,000-200,000	12	10.0
>200,000	33	27.5
Total	120	100.0
Mean	135,000	

Source: Field Survey, 2016.

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Table 3: Poverty Status of Fish Farmers

Variables	Value
P_0	0.2770
P_1	0.0417
P_2	0.0137

Source: **Field Survey, 2016.**

Logit Estimates of the Determinants of Poverty among Fish farmers

The significant determinants of poverty among fish farmers as shown in table 4 were level of education and household size ($P<0.10$); marital status and capital invested ($P<0.05$). Income from fishing activities was also significant ($P<0.01$). The results show that higher education reduced the likelihood of being poor. Income from fishing that was significant indicates that it is an important variable in determining poverty among fish farmers. The overall model for fish farmers is significant also at one percent.

Table 4: Logit Estimates of the Determinants of Poverty among Fish Farmers

Variable	Coefficient	Standard Error	t-values
Age	0.1470	0.1110	0.1320
Marital status	7.5510**	3.9410	1.9160
Education	-0.4920*	0.2710	-1.8160
Income	-0.0000***	0.0000	-3.3000
Capital	-0.0000**	9.10e.05	-2.2640
Experience	-0.1470	0.0950	1.5400
Household size	7.2620*	4.3710	1.6610
Credit	0.8020	0.6270	0.1280

Source: Field survey, 2016.R Square = 0.7370*** Significant at 1 per cent level
** Significant at 5 per cent level   * Significant at 10 per cent level.

Problem of Fish Farmers in the Study Area

Table 5shows the challenges faced by fish farmers which contributed to their poverty status in the study area. Lack of technical know-how (65%), lack of access to credit (58.3%), difficulty in land acquisition (55%) were identified as major challenges while lack of visitation by extension worker (45.8%), lack of fund (40.8%) and damages of fish products (35.8%) were identified as minor challenges.

Table 5: Problem of fish farmers in the study area

	Yes	No
Lack of technical know how	78 (65.0%)	42 (35.0%)
Lack of access to credit	70(58.3%)	50 (41.7%)
Difficultly in land acquisition	66 (55%)	54 (45.0%)
Lack of visitation by extension workers	55 (45.8%)	65 (54.2%)
Lack of fund	49 (40.8%)	71 (59.2%)
Damages of fish product	43 (35.8%)	77(64.2%)
Seasonality of product	37(30.8%)	33 (69.2%)
Fluctuation in market price	18 (15.0%)	102 (85.0%)

Source: **Field survey, 2016.**

CONCLUSION

The overall result of this research work showed that mean age of fish farmers was 43 years dominate fish farming in the study area. It was revealed that 27.7% of the fish farmers were poor with poverty depth of 4.17% and poverty severity of 1.37%. Poverty status of the fish farmers was explained by education, household size, marital status and capital invested. Base on the study therefore, fish farmer in the study area should be trained by extension workers to improve them on technical know-how in fish enterprise and credit should be provided to fish farmers by government through financial institution.

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