Determinants of Poverty Status among Small Scale Catfish Farmers in Ikorodu Local Government Area of Lagos State, Nigeria

Adeleke O. A[1]; Ajiboye Abiodun[2]; R. O. Akintola[1]; Fajobi, D. T[1]; Adeleke, H. M[1]

[1]Department of Agricultural Economics, Ladoke Akintola
University of Technology, Ogbomoso, Oyo State, Nigeria
[2]Department of Agricultural Economics and Extension Services, Ekiti State University, Ado Ekiti, Nigeria

ABSTRACT

This study investigates determinants of the poverty status among fish farmers in Ikorodu local government area of Lagos state. A multistage random sampling technique was used in selecting a total of 80 small scale catfish farmers in the study area. The data was analyzed by descriptive statistics such as frequency count, percentages and mean values. Logit regression model was used to analyze the determinants of the poverty status of the respondents in the study area. The study revealed that 71.25% of the fish farmers were male; 43.75% of the fish farmers had a household size of between 6-10; 67.50% of the fish farmers got credit from their personal funds; the poverty line adopted for this study is N 4465.30 per month; and 71.25% of the fish farmers are below the poverty line and thus they present the poor fish farmers in the study area. From the logit regression analysis, age, household size and years of experience were the major determinants of poverty status of the respondents in the study area. The result further revealed that some of the selected socio economic characteristics exhibited a significant relationship with the poverty status of the fish farmers. Hence, there is significant relationship between the poverty status of the fish farmers and their selected socio-economic characteristics. The study therefore recommends the need for campaign and sensitization of rural households on family planning and child spacing techniques, so as to curtail excessive population growth.

KEYWORDS: Poverty Status, Poverty Line, Per Capita Expenditure, Catfish Farmers, Logit Regression

INTRODUCTION

In Nigeria, Agriculture provides between 80 to 90 percent of the country's food needs (Odife, 2002). It however has diverse aspects and this includes fish farming which involves the rearing of fish for the purpose of consumption or sale. Fish is acclaimed to be the principal source of animal protein for over one billion people globally and provides many important nutritional and health benefits. Fish has the highest level of easily metabolisable proteins; it is reputed for its high quality proteins, fats, vitamins, calcium, iron and essential amino acids. Aquaculture can be seen as an aspect of agricultural practices, mainly to increase the production of food above the level that would be produced naturally. Today, aquaculture is responsible for an ever increasing share of global aquatic food production, which has increased from 3.9 percent in 1970 to 31.9 percent in 2003 (FAO, 2005). Fisheries constitute an important sector in Nigerian agriculture, providing valuable food and employment to millions and also serving as a source of livelihoods mainly for women in coastal communities. Nigeria has a coastline of 3,122km (Earth trends, 2003) shared by 8 states (Lagos, Ogun, Ondo, Delta, Bayelsa, Rivers, Akwa-Ibom and Cross River) out of a total of 36 states in the country. Coastal fisheries are important and contributed at least 40 percent of fish production from all sources in Nigeria between 1995 and 2008 (FAO, 2010).

In Nigeria, the first trace of aquaculture was the practice by some missionaries in the early 1920's in Ilora, Oyo state, where fish was raised to supplement the protein intake of pregnant women. Conventional fish farming in Nigeria, however, falls into two distinct periods; between 1950–1970 and 1970–1992. The first period popularized fish farming while the second phase concentrated on expansion and establishment of demonstration of fish farms in addition to bold attempts at reducing the major constraints for rapid aquaculture development (Omitoyin, 2007). Aquaculture the farming of aquatic organisms in controlled environment was introduced to Nigeria in the early 1950's and fish production through aquaculture has risen steadily from a few hundred kilograms to over 45,000 metric tonnes in 2004 (FAO, 2007).

Prior to the 1990s, aquaculture development in Nigeria was driven by socioeconomic objectives including, nutrition improvement of rural communities, generation of additional family income, creation of employment and diversification of income generating activities; and was promoted by

international organization and agencies and the government at Federal, State and Local Governments levels. Today, aquaculture is the fastest growing livestock production sector in Nigeria, with a growth of about 29% in 2006 alone, and with prospects of continued growth. This is because demand for fish is on the increase line with population growth, while catches from fisheries are on the decline, even globally. (Delgado *et al.,* 2003).

Lagos state has great potentials to develop fish farming to absorb a sustainable fraction of the Nation fish product deficit. Based on World Health Organization (W.H.O) minimum recommendation of 34kg animal protein per output, Lagos state requires a minimum of 380,000 metric tonnes annually (LAMAC, 2010). The state is endowed with inland and coastal waters plus adequate infrastructure, of which there is a high demand for fish and its sale price are favorable. What is lacking is hence the technical know-how, while exploring ways to ameliorate the performance of the sector. The contribution of the fisheries sector to the state and National economy at large is highly positive (if well propelled).

Presently, fish as an important component of the population's diet in many parts of the world has increased rapidly over the past hundred years due to improved technology. Apart from its nutrition effect on man, fish is also a major source of income for many developing countries as well as less developed countries in which Nigeria is not an exception (William et al, 2010). In the same vein, and been more specific, fish is also consumed in a variety of forms including fresh, smoked, dried, fried or steamed (Maidala and Dantata, 2011).

Amienghene (2005) reported that fish has a nutrient profile superior to terrestrial meat being an excellent source of high quality animal protein, sulphur and essential amino acid. Supporting this view, Nzeka (2003) asserted that for Nigerians, fish is an affordable source of protein, and the most popular imported species includes croaker, herring, mackerel and catfish. Mackerel fills 65 percent of the domestic market and is preferred by most Nigerians.

A publication by FAO (2007) put fish supply at 400,000 tonnes in comparison to 800,000 tonnes of demand. To meet this local demand, government imports fish worth ₦50 billion yearly. Fish farming is believed to be a profitable business based on various literatures on empirical work available, and it is also becoming an area of interest by some individuals who are now becoming aware of its potentials. Corroborating this view, Raufu *et al*; (2009) reported that fish farming is a profitable venture and its rapidly expanding and it will continue to be profitable if the planning and management are well taken care of.

The Nigerian government has recognized the importance of the fishery sub-sector and it has made several attempts over the years to increase their productivity through institutional reforms and the various economic measures. Some of these measures provided subsidy for inputs and exemption from tax for fishermen. Despite the efforts of government, there is still a deficit in the supply and demand for fish by the population (Dada, 2004). Most of the fish farming in Nigeria is carried out by small scale operators in small fresh water ponds (UNDP, 2009). Poor people are facing new barriers in

both their production and returns on fish. Even by the standards of developing countries, artisanal fishers and fish workers are often among the poorest people and they generally operate on a small scale and use traditional fishing practices yet new technologies and environment requirement favour large scale capital intensive operation at the expense of traditional and small scale commercial fishing (Delgado *et al*; 2003).

Nigeria is one of the most resource endowed nations in the world. But socio-economically, Nigerians are also among the poorest in the world (Etim *et al.*, 2009). Hence, there is a persisting paradox of a rich country inhabited by poor people, which has been the subject of great concern for many years, but more especially in the last decade (Etim and Patrick, 2010).

The Nigerian government has recognized the importance of the fishery sub-sector and it has made several attempts over the years to increase their productivity through institutional reforms and the various economic measures. Some of these measures provided subsidy for inputs and exemption from tax for fishermen. Despite the efforts of government, there is still a deficit in the supply and demand for fish by the population (Dada, 2004). Most of the fish farming in Nigeria is carried out by small scale operators in small fresh water ponds (UNDP, 2005). Nigeria has a population of over one hundred million people and has her national fish demand at over 1.5 million metric tonnes. The current annual aquaculture production hovers around 500,000 metric tonnes. These combined with ever decreasing catch (due to over exploitation) from the capture fisheries have not been able to meet the ever-increasing protein demand of the country.

Thorpe et al (2004) noted that the sub sector harbours an above average relative quotient of the poor. The growing aquaculture industry has attempted to fill the gap between supply and demand, but as the global appetite for fish continues to increase, current trends in the fish sector pose serious risks to the environment, to the well-being of poor people, and to the viability of fish sector itself (Delgado *et al*, 2003). In spite of the potentials of aquaculture there are lots of problems militating against its development. The major constraint to increased fish production in Nigeria is poor rate of capital formation and lack of credit facilities amongst other (FAO, 2005). In the less developed countries, the rate of credit is closely related to providing needed resources which farmers cannot source from their own capital (Rahji, 2000).

Olagunju et. al. (2007) reported that the major constraints to fish farming were identified to be those of environmental impact of aquaculture operation, that is, water pollution, inadequate supply of fingerlings, inadequate information and feeds supply. In Nigeria, the incidence of poverty is on the increase with rural households being the worst hit (HDR, 2007/2008). UNDP, (2009) reported that a whopping 70.8 per cent of the Nigerian populace lived below $1.25 in 2005.

Poverty is also more pronounced in agricultural sector than other sectors of the economy (FAO, 2009). Poverty is a plague that has persistently affected the world for long, even as about 1.4 billion of the world's people lived on $1.25 a day in 2005. The world's increase in rural and urban poor is

exacerbated by the world's food and economic crisis which together with other factors make food unavailable to a significant portion of the world population. And this, in absolute terms has increased the proportion of the world poor (FAO, 2009). Omonona *et. al.* (2006) observed that poverty in Nigeria is an overwhelmingly grave problem and has been on the increase for many decades, being endemic to rural areas where the main occupation is farming.

In recent times, technological advancement especially in agriculture has been very instrumental in reducing the poverty problem. The study is thus directed at analyzing the determinants of poverty status among fish farmers in Ikorodu local government area of Lagos State. Based on the statement of problem above, this study will provide answers to the following research questions: what are the socio-economic characteristics of the fish farmers in the study area?; what are the categories of fish farmers based on the poverty line estimate?; and what are the factors that influence poverty status (correlates) among the respondents?

The broad objective of this study is to analyze the determinant of poverty among fish farmers in Ikorodu Local Government Area of Lagos State. In order to achieve the broad objective, the specific objectives are to: identify the socio-economic characteristics of fish farmers in the study area; categorize the fish farmers into poverty status based on the poverty line estimate; determine the factors that influence poverty status (correlates) among the respondents. The hypothesis of the study is that there is significant relationship between the poverty status of the fish farmers and their selected socio-economic characteristics.

MATERIAL AND METHODS
This study was carried out in Ikorodu local government area of Lagos State. The climate in the study area is of tropical type with two distinct rainfall patterns. The rainy season, which marks the agricultural production season is normally between the months of April and October. The heaviest rainfall is recorded between the months of June and August while driest months are November to March. The average total annual rainfall ranges between 1000mm and 1500mm with high daily temperature ranging between 28^0C and 30^0C (FAO, 2004). The population of this study was all the selected fish farmers in the study area.

A multistage random sampling technique was used in selecting the respondents for this study. The first stage involved the selection of four wards. The second stage involved the purposive selection of eight streets from the block based on the concentration of fish farmers in the area from each of the selected wards. The third stage involved the random selection of ten registered fish farmers from the chosen streets to arrive at a total sample of 80 respondents. A well structured questionnaire was developed based on the objectives of the study to collect information from the selected respondents through one on one interview approach.

The data that was collected include the socio economic characteristics of fish farmers such as age, gender, years of formal education or educational level, marital status, household size, years of experience in fish farming, income

level, off-farm activities, income sources and amount of farm credit and loans, expenditure and problems encountered in fish farming. Input-output data will also be collected. Output data will include quantity and values of fish output, market prices while input data will also include quantity and cost of inputs such as pond size, hired labour, family labour and feeds.

The major analytical tools that were used in this study are: Descriptive statistics such as frequency count, percentages and mean values; Analysis of Poverty Line Using Per Capita Expenditure Method; Logit regression model was used to estimate the effect of selected socio economic variables on the poverty status of the respondents.

Analysis of Poverty Line Using Per Capita Expenditure:
The per capita expenditure is the ratio of family expenditure to the size of the family. The total per capita expenditure is the sum total of per capita expenditure. After this, the mean of the output is achieved by dividing the total per capita expenditure with the number of respondents (fish farmers). To derive the poverty line, two third of the mean of the output was used to categorize the fish farmers into poor and non poor, anyone who lives less than 2/3 is said to be poor and whoever lives above 2/3 is non poor.

Logit Regression Model: Logit model estimates the probability of your dependent variable to be 1 (Y = 1). This is the probability that some event happens. According to Hazoor *et al;* (2006), it is expressed as: $Y_i = X_i \beta + u_i$. In this model, the response variable was binary, taking values as one if the household was poor, zero otherwise. Assuming that the cumulative distribution of u_i was logistic; a logistic model was employed. In this case, the probability of being poor was estimated by using the logistic probability model given as:

$$\text{Pr } ob\ (Y_i = 1) = \frac{\exp (X'_i \beta)}{1 + \exp (X'_i \beta)}$$

Where:
Y_i = dependent variable that indexes the status of poverty
X_i = explanatory variables (i =1, 2, 3……….…8); these are defined as follow:
X_1 = Sex,
X_2 = Age (years),
X_3 = Marital status,
X_4 = Level of education,
X_5 = Household Size (Actual number),
X_6 = Years of experience in primary occupation (years),
X_7 = Type of fish pond,
X_8 = Size of fish pond(m^2)
u_i = the stochastic error term which is independently distributed
$\beta$is= are the parameters to be estimated.

RESULTS AND DISCUSSION
Gender of Respondents: 71.25% of the respondents were male while 28.75% were female from the result in Table 1. This implies that males are more involved in fish farming than their female counterparts. The fewer numbers of the female respondents may be due to the fact that most of their time is spent in caring for home hence may have little or no time to participate in fish farming.

Age of Respondents: 33.75% of the respondents were about 50 years of age and the rest 66.25% of them were above 50 years of age from the result in Table 1. This reveals that most (66.25%) of the fish farmers were not in their active age and hence they will be less productive and agile may not be able to devote time and energy to the production and management of the cultured fish. The mean age of the respondent is 54 years.

Religion of Respondents: 62.50% of the respondents were Christians, 36.25% were Muslims while 1.25% practiced other religion from the result in Table 1. This implies that there were more Christians than Muslims in the area.

Marital status of Respondents: 23.75% of the respondents were single, 66.25% of them were married, 2.50% of them were divorced while 7.50% of them were widowed from the result in Table 1. As there are larger numbers of married farmers, they are tending to have a large family size. This agreed with finding of Ayanwale and Adisa (2012), in which 99% of the respondents in the study area were married.

Level of Education of Respondents: 31.25% of the respondents have no formal education, 12.5% of them have vocational education, 5% of them have primary education, 42.5% of the respondents have secondary education while 8.75% of the respondents have tertiary education from the result in Table 1. This agreed with finding of Ayanwale and Alimi (2004), in which 45.13% of the respondents in their study area had secondary education with.

Household size of Respondents: 42.5% of the respondents have a household size ranging from 1-5, 43.75% have a household size ranging from 6–10, while 13.75% of the respondents have a household size above 11 from the result in Table 1. It is observed that the fish farmers have a large household size. Much of their income would be expended on responsibilities associated with their large family sizes, which may increase the likelihood of the respondents being poor.

Years of Fish Farming Experience: 53.75% of the respondents had about 10 years of experience in fish farming while 37.5% had between 11-20 years of experience and about 8.75% of the respondents have between 21 and above years of experience from the result in Table 1. This shows that majority of the respondents do not have enough fish farming experience to bring about sufficient fish production.

Income from fishing activities per year: 5% of the total respondents earn less than ₦100,000 per year, 58.75% earns between ₦ 100,000 and ₦500,000 per year and 36.25% of them earn above ₦500,000 per year from the result in Table 1.

Type of pond used by respondents: 18.75% of the fish farmers use earthen ponds, 80% of them use the concrete ponds while 1.25% of the fish farmers use other type of pond from the result in Table 1.

Number of ponds of the respondents: 48.75% of the fish farmers have between 1-5 ponds, 42.5% of them have between 6-10 ponds while 8.75% of the fish farmers have 11 and above fish ponds from the result in Table 1. Most of the fish farmers have fewer numbers of ponds which result to low productivity.

Type of feeds used by respondents: 60% of the fish farmers feed their fishes on concentrates, 1.25% of them feed their fishes with kitchen waste while 16.25% of them feed their fishes on both concentrates and kitchen waste from the result in Table 1.

The number of time fishes fed on per day by respondents: 1.25% of the fish farmers feed their fishes once per day, 70% of them feed their fishes twice a day while 28.75% of them feed their fishes thrice daily from the result in Table 1.

Impact of available information received from extension agents on the respondents' production level: 25% of the catfish farmers received very high information from the extension agents, 51.25% of them received high information, 21.25% of them received moderate information, and 1.25% of them received low information while 1.25% of the fish farmers received very low information from the extension agents. High available information received by the fish farmers had a great impact on their production level from the result in Table 1.

Stocking rate of respondents: 23.75% of the catfish farmers stock less than 2000 fingerlings, 75% of the fish farmers stock between 2000-5000 fingerlings and 1.25% stock above 5100 fingerlings from the result in Table 1.

Source of water available for the respondents: 18% of the fish farmers make use of borehole water while 62% of them make use of well water from the result in Table 1.

Purpose of harvested fish: 92.50% of the fish farmers harvested fish for sales while 7.50% of them harvested fish for consumption from the result in Table 1.

Source of credit: 1.25% of the total respondents got credit from the bank, 30% of them got credit from cooperatives and 1.25% of them got credit from money lenders while 67.50% of them got credit from their personal funds from the result in Table 1. This finding corroborates Ikotun (2002) work in Oyo State where only 5 per cent of the sampled fish farmers had access to bank credit while 73.2 percent used personal savings. This may be the outcome of their low level of income and poor record keeping, as they would not be bold to approach banks for loans, being poor and not having collateral and proper documentation of their business activities.

Cost of initial capital: 8.75% of the total respondents initial capital was less than ₦500,000, 53.75% of them used between ₦500,000 - ₦900,000 while 37.5% of the fish farmers used ₦1,000,000 and above as the cost of their initial capital from the result in Table 1.

Cost Incurred
Fixed cost: 11.25% of the respondents incurred less than ₦500,000 on fixed items, 62.5% of them incurred between ₦ 500,000 and ₦900,000 and 26.25% of the fish farmers incurred above ₦1,000,000 on fixed items from the result in Table 1.

Variable cost: 15% of the fish farmers incurred less than ₦300,000 on variable items, 58.75% of them incurred between ₦300,000 and ₦500,000 on variable items while 26.25% of the fish farmers incurred above ₦500,000 on variable items from the result in Table 1.

Constraints faced by the fish farmers: Lack of adequate power supply was ranked 1st with mean score (2.00), lack of credit was ranked 2nd with mean score (1.41), land availability was ranked 3rd with mean score (1.10), lack of technical knowledge was ranked 4th with mean score (0.89), lack of experience was ranked 5th with mean score (0.86), inadequate facilities was ranked 6th with mean score (0.84), inadequate infrastructure was ranked 7th with mean score (0.81), poor storage facilities was ranked 8th with mean score (0.76), poor road network was ranked 9th with mean score (0.49), lack of market was ranked 10th with mean score (0.48) and environmental pollution was ranked 11th with mean score (0.59) from the result in Table 2. This is an indication that all the fish farmers in the study area faced one problem or the other which contributed to their poverty status.

Monthly expenditure: 56.25% of the fish farmers spent less than ₦5000 per month, 33.75% of them spent between ₦5100 and ₦10000 per month while 10% of the respondents spent above ₦10000 on food and non food items per month from the result in Table 1.

Poverty Analysis
Analysis of Poverty Line Using Per Capita Expenditure:
The per capita expenditure is the ratio of family expenditure to the size of the family. The total per capita expenditure is the sum total of per capita expenditure. After this, the mean of the output is achieved by dividing the total per capita expenditure with the number of respondents (fish farmers). To derive the poverty line, two third of the mean of the output was used to categorize the fish farmers into poor and non poor, anyone who lives less than 2/3 is said to be poor and whoever lives above 2/3 is non poor.

Total per capita expenditure = ₦535, 896.00
Mean per capita expenditure = ₦535, 896.00 /80= ₦6, 698.70
Poverty line = 2/3 of ₦6, 698.70 = ₦4, 465.30

The poverty line adopted for this study is ₦ 4,465.3 per month. This was obtained by finding two-thirds of the mean household expenditure value for the survey respondents. Result of the estimates on poverty shows that 71.25% of fish farmers are below the poverty line. 71.25% of the farmers are poor while 28.75% of them are non poor from the result in Table 1.

Logit regression model: The determinants of poverty status in the study area were examined using Logit Regression model. The result in Table 3 revealed that age, household size and years of experience respectively were significant factors in determining poverty status of the respondents in the study area. Age had a direct relationship with the poverty status of the respondents and it is significant at 5% level. By implications, as the respondents aged, the probability of being poor becomes greater. This is because the farmer's strength is reduced as he/she gets older and this affect the income due to low productivity. Household size had a direct relationship with the poverty status of the respondents, and it is also significant at 5% level. By implications, the higher the household size, the higher the probability of becoming poor in the fish farming enterprise in the study area, as the household size becomes larger, the more the farmer becomes poorer. This is because when the household size is large, the farmer will procure lots of food and non food expenditure which reduces the farmer's income from fishing activities. Years of experience had an inverse relationship with the poverty status of the respondents, and it is significant at 1% level. By implications, the lower the years of experience, the poorer the farmer becomes. All of the findings above are congruent with the findings of Idowu *et al* (2011), where age, literacy level and family size were the determinants of the level and extent of poverty among rural farm households.

Table 1: Socioeconomic Characteristics of the Respondents

Variable	Frequency	Percentage
Sex		
Male	57	71.25
Female	23	28.75
Age		
≤ 30	-	-
31 – 40	12	15.00
41 – 50	15	18.75
51 – 60	30	37.50
≥ 61	23	28.75
Religion		
Christianity	50	62.50
Islamic	29	36.25
Others	1	1.25
Marital Status		
Single	19	23.75
Married	53	66.25
Divorced	2	2.50
Widowed	6	7.50

Level of Education		
No formal education	25	31.25
Vocational education	10	12.50
Primary education	4	5.00
Secondary education	34	42.50
Tertiary education	7	8.75
Household Size		
≤ 5	35	43.75
6 – 10	34	42.50
>10	11	13.75
Years of Experience		
≤ 10	43	53.75
11 – 20	37	46.25
Income/Annum		
≤ 500,000	51	63.75
≥ 501,000	29	36.25
Type of Pond		
Earthen	15	18.75
Concrete	64	80.00
Others	1	1.25
Number of ponds		
≤ 5	39	48.75
6 – 10	41	51.25
Time of Feeding		
Once daily	1	1.25
Twice daily	56	70.00
Thrice daily	23	28.75
Impact of information received		
Very high	20	25.00
High	41	51.25
Moderate	17	21.25
Low	1	1.25
Very low	1	1.25
Stocking Rate		
≤ 5000	79	98.75
≥ 5001	1	1.25
Source of water		
Borehole	18	22.50
Well	62	77.50
Source of credit		
Bank	1	1.25
Cooperative	24	30.00
Money lender	1	1.25
Personal fund	54	67.50
Purpose of harvested fish		
Sales	74	92.50
Consumption	6	7.50
Monthly expenditure (₦)		
≤ 5000	45	56.25
5,100 - 10,000	27	33.75
≥ 10,100	8	10.00
Poverty Profile Analysis		
Poor	57	71.25
Non poor	23	28.75

Table 2: Distribution of respondents according to production constraints

Problems	Serious constraints	Mild constraints	Not a constraint	Mean score	Rank order
	Freq %	Freq %	Freq %		
Lack of adequate power supply	80 100	- -	- -	2.0	1st
Lack of credit	44 55.00	25 31.25	11 13.75	1.41	2nd
Land availability	29 36.25	30 37.50	21 26.25	1.1	3rd
Lack of technical knowledge	13 16.25	45 56.25	22 27.50	0.89	4th
Lack of experience	14 17.50	41 51.25	25 31.25	0.86	5th
Facilities	10 12.50	47 58.75	23 28.75	0.84	6th
Inadequate infrastructure	9 11.25	47 58.75	24 30.00	0.81	7th
Poor storage facilities	11 12.66	40 50.63	29 36.71	0.76	8th
Poor road network	4 5.00	31 38.75	45 56.25	0.49	9th
Lack of market	1 1.25	36 45.00	43 53.75	0.48	10th
Environmental pollution	4 5.00	39 48.75	37 46.25	0.59	11th

Table 3: Parameter Estimates of Logit Regression Model for the Fish Farmers

Variable	Coefficient	Standard error	Z	P-value	Decision
Constant term	0.747	2.43	0.31	0.758	
Sex	-0.799	0.669	-1.2	0.232	NS
Age	0.083	0.034	2.46	0.014**	Significant
Marital status	-0.018	0.434	-0.04	0.967	NS
Educational level	0.095	0.085	1.12	0.261	NS
Household size	0.282	0.134	2.11	0.035**	Significant
Years of experience	-0.196	0.067	-2.94	0.003***	Significant
Type of pond (X_7)	-0.354	0.66	-0.54	0.592	NS
Size of pond	0.045	0.003	0.07	0.941	NS

*** Significant at 1%; ** Significant at 5%

Source: Data Analysis, 2015

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study investigates determinants of the poverty status among fish farmers in Ikorodu local government area of Lagos state. A multistage random sampling technique was used in selecting a total of 80 small scale catfish farmers in the study area. The data was analyzed by descriptive statistics such as frequency count, percentages and mean values. Logit regression model was used to analyze the determinants of the poverty status of the respondents in the study area. The study revealed that 71.25% of the fish farmers were male; 43.75% of the fish farmers had a household size of between 6-10; 67.50% of the fish farmers got credit from their personal funds; the poverty line adopted for this study is ₦ 4465.30 per month; and 71.25% of the fish farmers are below the poverty line and thus they present the poor fish farmers in the study area. From the logit regression analysis, age, household size and years of experience were the major determinants of poverty status of the respondents in the study area. The result further revealed that some of the selected socio economic characteristics exhibited a significant relationship with the poverty status of the fish farmers. Hence, there is significant relationship between the poverty status of the fish farmers and their selected socio-economic characteristics. The study revealed that there is a high level of poverty in the study area among the fish farmers. The study therefore recommends the need for campaign and sensitization of rural households on family planning and child spacing techniques should also be made a priority so as to curtail excessive population growth, and poverty alleviation packages for the fish farmers should also include provision of credit facilities for the respondents.

REFERENCES

[1] Amienghene, P. (2005): The importance of fish in human nutrition. *A paper delivered at a fish culture forum.* Federal Department of Fish Farmers, Abuja, Nigeria.

[2] Ayanwale, A. B. and Adisa, O. D (2012) Assessment of Poverty among Arable Crop Farmers: A Case Study of Farmers Empowerment Programme (FEP) in Osun State, Nigeria. *Asian Journal of Agriculture and Rural Development, 2(3), pp. 366-372*

[3] Ayanwale, A. B and Alimi, T (2004): Micro financing as a Poverty Alleviation Measure: A Gender Analysis. *Journal of Social Science, 9(2): 111-117 (2004)*

[4] Dada, B. F. (2004): Fisheries development in Nigeria. The challenges and prospect of assessing fund. The chairman address delivered by Otunba Bamidele Dada, OON at the public lecture organized by FISON in Lagos.

[5] Delgado, C. L., Wada, N., Rosegrant, M. W., Meijer, S. and M. Ahmed, (2003). Fish to 2020: Supply and Demand in Changing Global Markets. *International Food Policy Research Institute,* Washington D.C, World Fish Center, Penang, Malaysia P 223.

[6] Etim, N. A., G. E. Edet and B. B. Esu, (2009): Determinants of poverty among peri-urban Telfera occidentals farmers in Uyo, Nigeria. J. Agric. Soc. Sci., 5: 49-51. *Cur. Res. J. Soc. Sci., 4(3): 201-206, 2012* 206

[7] Etim, N. A. and I. V. Patrick, (2010): Estimating the determinant of poverty among fishing households in Akwa Ibom State, Nigeria. J. Agric. Soc. Sci., 6: 61-63.

[8] FAO (2004): The state of World Fisheries and Agriculture, 2004. FAO, Rome.

[9] FAO (2005): Review of the state or world fishery resource in 2003: Marine fisheries resources in 2003: marine fisheries, by S.M Garcia, I. DELEIRA Moremo& R J R Granjer. FAO. Fisheries Technical paper No. 457 Rome

[10] FAO (2007): Fisheries development in Nigeria; the current challenges. Paper presented by the honorable of state for agriculture to the fisheries society of Nigeria (FISON) Lagos State 23pp.

[11] Food and Agricultural Organization of the United Nations- FAO (2009): The State of Food Insecurity in the World 2009: Economic Crises- Impacts and Lessons Learned, Rome, Italy. *European Journal of Social Sciences – Volume 28, Number 3 (2012)* 376

[12] Hazoor, M. S., Zakir, H., Abdul, S. (2006). Determinants of small scale farmers' poverty in the central Punjab (Pakistan). *Journal of Agriculture and Social Sci., 2(1), 11*.

[13] Human Development Report- HDR (2007/2008): Fighting Climate Change: Human Solidarity ina Divided World. Palgrave Macmillan, New York.

[14] Ikotun, O.O. 2002. Economic Analysis of Fresh Fish Production in Ibadan metropolis, Oyo State. An unpublished B.Sc. Thesis in the Department of Agricultural Economics, University of Ibadan, Nigeria.

[15] LAMAC (2010): Lagos State Ministry of Agriculture and Cooperative Fisheries Development in Lagos State bulletin (2007 - 2010).

[16] Maidala, A. and Dantata, I. J. (2011): Field Survey of Fish Pond Management Practices in Central Agricultural Zone of Benue State. Proceeding of the 24th Annual National Conference of Farm Management Association of Nigeria. Adamawa State University, Mube, 11th – 14th Oct. 2010. Pp. 218-220.

[17] Nzeka, U. (2003): Nigeria Demand for Sea Food is high. US Department of Agriculture.

[18] Odife, N. (2002):"Financing Agricultural venture" A report on Agricultural Financing by the Nigerian Agricultural Cooperative and rural Development Bank. P. 4-10.

[19] Olagunji, F. I., Adesiyan, I. O. and Ezekiel, A. A. (2007): Economic Viability of Catfish Production in Oyo State, Nigeria. *J. Hum, Ecol.*, 21(2): 121-124 Nigerian Agricultural Cooperative and rural Development Bank. P. 4-10.

[20] Omitoyin, O. (2007): Fisheries department in Nigeria, Problems and prospects. A presentation by the federal Director of Fisheries, in the Federal Ministry of Agriculture.

[21] Omonona B. T., Oni O. A. and Uwagboe A. O. (2006): "Adoption of improved cassava varieties and its welfare impact on Rural Farming Households in Edo State, Nigeria". *Journal of Agriculture and Food Information*. 7(1) 39-55.

[22] Rahji, M. A. Y. (2000): "An analysis of the Determinant of Agriculture Credit Approval/Loan Size by Commercial Banks in Southwestern Nigeria "Journal of Nigeria Development Studies 1(1):6-25.

[23] Raufu, M. O., Adepoju, M. O. ,Salau, A. S. and Adebiyi, O. A. (2009): Determinant of Yield Performance in Small Scale Fish Farming in Alimosho Local Government Area of Lagos State. *International Journal of Agric Economics and Rural Development*. 2(1): 9-14.

[24] Thorpe, A., C. Reids., R. Van Anrooy, and C. Brugere. 2004: African poverty reduction strategy programmes and the fisheries sector: current situation and opportunities. African Development Bank Project funded by FAO Sustainable Fisheries Livelihood Programme

[25] UNDP (2009): Keeping Our Commitment to Development. Annual Report, 2009 [25] Williams, B. S., Kareem, R. O. and Eneh, N. M. (2010): Profitability Analysis of Fish Farming: An Attitude to Economic Meltdown. *Journal of Sustainable Development* 7(1): 15-18.