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SOURCES AND USES OF MICRO-CREDIT IN POVERTY ALLEVIATION AMONG FISH FARMERS IN OSUN STATE, NIGERIA

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ABSTRACT

Aquaculture is one of the fastest growing food production systems in the world, Nigeria inclusive with the bulk of its output currently being produced within developing countries and with expectations for aquaculture sustainable food security and poverty alleviation. However, poverty which is a social condition characterised by the inadequacy of access to basic human needs for the maintenance and socially acceptable minimum standards of living is still prevalent. One of the major obstacles to achieving the objectives of poverty reduction through aquaculture is the inadequate credit facilities to boost production. The study therefore, investigates the sources and uses of micro-credit in poverty alleviation among fish farmers in Osun state, Nigeria.

A two stage random technique was used to select 137 respondents from the three Osun State Agricultural Development Programme (ADPs) zones. Structured questionnaire was used to collect data on demographic characteristics, Micro-credit sources and use, occupational, income and fish

production data. Data was analysed using descriptive statistics, FGT and logit model.

The result shows that both formal and informal micro-credit sources were used in the area studied with high interest rate militating against the adequate use of some of the micro-credit sources.

Poverty alleviation through micro-credit use will increase efficiency through the use of modern effective and efficient technology leading to greater production. The policies aimed at making micro-credit readily available should be focused on to alleviate poverty among fish farmers

Keywords: Micro-credit, poverty alleviation, fish farmers, Osun State

INTRODUCTION

Fisheries and aquaculture contribute significantly to food security and livelihoods. Fish provides essential nutrition for 3 billion people and at least 50% of animal protein and minerals to 400 million people from the poorest countries (World Fish Center 2008). Over 500 million people in developing countries depend directly or indirectly on fisheries and aquaculture for their livelihoods thus making aquaculture the world's fastest growing food production system, growing at 7% annually. Fish products are also among the most widely traded foods, with more than 37% (by volume) of world production traded internationally (FAO 2009).

African fisheries and aquaculture according to NEPAD (2005) are at a turning point (Nigeria inclusive). The fish sector makes vital contributions to the food and nutrition security of 200 million Africans and

RESULTS AND DISCUSSION

The analysis of the socio-economic characteristics of the sampled households (Table 1) showed that 79.3% of the respondents were male while 20.7% were female. The marital status showed that 7.4% of the respondents were single, 85.9% were married, 3.0% were widow and 3.7% divorced. The age distribution showed 3% under 30 years of age, 19.3% between 31 – 40 years, 25.9% falls between 41 – 50 years while 51.9% were 51 years and above. The educational status shows that only 3.7% do not have any form of education at all while 31.1%, 19.3%, 43.7% and 2.2% had primary, secondary, tertiary and quranic education respectively. This is in line with the submission of Govinda (2008) that investment in education is an important key to break the cycle of poverty and UNESCO 2006 which affirms that Literacy is a key aspect of human development with important benefits for people's livelihoods and capabilities, influencing their ability to access information and resources and to manage change. The literacy and numeracy abilities of fishing communities play a significant role in the management of aquatic resources as well as in the maintenance and diversification of livelihoods. The household size was grouped into small (1 – 5 members) 50.4%, medium (6 - 10 members) 37.8% and large (>10 members) 11.9% while the religious profile of the respondents showed 73.3% were Christians and 26.7% were Muslims. The other occupation engaged in the study area showed fishing as having 63.7%, hunting 1.5%, trading 19.8% and artisans 15%.

The sources of micro – credit used (Table 2) showed that cooperative society had the highest patronage with 37%, followed by commercial bank (20%), micro finance institution (17%), friends and relatives (11.9%) and rotational savings (5.2%). This is similar to the observation of Tietze *et al*

(2007) and Omitoyin (2008) that through actively promoting self-help groups and cooperatives among women in coastal fishing communities and through linking these associations with financial institutions, investment and working capital needs of their members can be met. The result of the cross tabulation shows that more male fish farmers use the various micro-credit sources than their female counterparts and the married patronized the various sources than the single, divorced or widowed. Fish farmers with tertiary education were also seen to have higher patronage of all the micro-credit sources. The micro-credit was used for various activities which include fish production (40.7%), payment of debts (5.9%), family matter (22.2%), socials (11.9%) and school fees (19.2%) while the problems militating against micro-credit use were interest rate (44.4%), asset or collateral (26.7%), educational status (13.3%), administrative bottle necks (8.9%) and location or distance to micro-credit source (6.7%). The timeliness of release of micro-credit showed that 58.5% did not receive their money as at when due while 41.5% were positive about the time of release. This could be a reason why the credit was diverted to other purposes.

The Foster Greer and Thorbercke (FGT) analysis reveals that 60% of the fish farmers fall below the poverty line which was set at ₦3010.35. Twenty nine percent (29%) of farmers below poverty line required about ₦1063 to reach the poverty line (poverty gap) while 23.26% of them require ₦1452 to reach the poverty line (poverty severity). Twenty three percent (23%) of the fish farmers that do not use micro-credit belong to the core poverty group. This shows that a greater percentage of fish farmers that do not use micro-credit belong to the core poverty class as compared with those that use credit (Table 3). Tietze *et al* (2007) also found that poverty has remained

a serious problem in fishing communities in Orissa and Maharashtra. The value of poverty line is much

The maximum likelihood result of the logistic regression (Table 4) shows that marital status, number of wives and occupation were significant at 1%, 5% and 10% and were all positively related to the poverty status of fish farmers. This means that an increase in number of wives also increased the likelihood of being poor while for married fish farmers and those who have farming as their major occupation are more likely to be poor than their counterpart.

The result of the final maximum likelihood of the stochastic frontier shows a log likelihood of -160.73 and the log likelihood ratio of 128.38 significant at 1% which

shows that the model is fitted. The mean technical efficiency was found to be 52.35% which means the fish farmers were 47.65% inefficient. Increase in age and micro-credit increased the level of efficiency of fish farmers. The observation tallied with the opinion of Yinus (1997) which necessitated the formation of village banking to cater for the rural poor. Example is the Greeman bank. Tietze .U and L.V. Villareal (2003) also recognised the importance of microfinance as a crucial development tool for poverty reduction.

Also, married people tend to be more efficient than single. Another fact here is that year of schooling does not increase the level of efficiency of the fish farmers.

Table 1: Socio-economic characteristics of fish farmers in Osun State, Nigeria

Frequency (%)	
Gender	
Male	107(79.3)
Female	28(20.7)
Marital Status	
Married	116(85.9)
Single	10(7.4)
Divorced	5(3.7)
Widowed	4(3.0)
Age Group	
<30	4(3.0)
31-40	26(19.3)
41-50	35(25.9)
51 – above	70(51.9)
Educational Level	
No formal education	5(3.7)
Primary	42 (31.1)
Secondary	26 (19.3)
Tertiary	59 (43.7)
Quranic	3(2.2)
Household Size	
1-5 (small)	68(50.4)
6-10 (medium)	51(37.8)
10 – above (large)	16 (11.8)
Religion	
Christians	99(73.3)
Muslims	36(26.7)
Occupation	
Fishing	86(63.7)

Hunting	2(1.5)
Artisan	20(15.0)

Table 2: Micro-Credit data**Timeliness of Micro-credit**

Yes	56(41.5)
No	79(58.5)

Sources of Micro-Credit	Rate of patronage	Mean Interest rate	Time lag (months)	Loan duration (months)
Relatives & friends	16(11.9)	3.5	2	4
Cooperative society	50(37)	7.7	4	12
Commercial banks	27(20)	21	12	18
Rotational savings	7(5.2)	3.4	3	4
Money lenders		60	>1	<1
Personal saving	12(8.9)	3	>1	<1
MFI	23(17)	15	1	<1
Total	135			

Uses of Micro – Credit	Frequency
Fish production	55(40.7)
Payment of Debts	8(5.9)
Family matter	30(22.2)
Socials	16(11.9)
School fees	26(19.2)
Total	135

Problems of Micro-credit

Location	9(6.7)
Educational status	18(13.3)
Asset or collateral	36(26.7)
Interest rate	60(44.4)
Administrative bottle necks	12(8.9)
Total	135

Table 3 : Poverty Analysis

Non poor	54(40)
Poor	81(60)

Table 4: The maximum likelihood estimate of the logit model

Variables	Coefficient	Z-statistics	Marginal effect
Age	0.012	0.55	0.002
Sex	-0.503	-0.84	-0.104
Marital status	1.012***	1.79	0.233
Number of wives	0.893**	1.91	0.185
Years of education	-0.212	-0.86	-0.044
Years of experience	-0.003	-0.15	-0.001
Occupation	1.268*	2.99	0.273
Farm size	0.074	0.86	0.015
Fish pond size	0.113	1.09	0.023
Output	-0.000	-0.46	-0.000

Constant	-1.837	-0.97
Log likelihood	-54.66	
LR chi2(11)	72.40*	
Pseudo R ²	0.40	

*,**and *** denotes level of significance at 10%, 5% and 1%

CONCLUSION

RECOMMENDATION

Higher productivity, made possible by technological changes, and the associated reduction in production costs have been the main drivers of growth in modern aquaculture production

In poor countries, aquaculture contributes to poverty alleviation and food security through employment and income generation for several million people.

There is therefore significant potential for further growth in productivity and reduction of production costs. As lower production costs increase profitability, this will lead to increased production and lower prices. There will certainly be boom-and-bust cycles as production at times will increase faster than the productivity growth, but the underlying trend is clearly one of sustained growth

Capacity needs to be strengthened at all level for research, technology transfer and policy development.

There is therefore an urgent need to develop guidelines and policies that would create a conducive aquaculture Investment climate and at the same time provide safeguards against environmental and social risks.

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